



Appendix M:

**Elsinore Valley Water  
District Reference Materials**



Appendix M1:

**2005 Urban Water  
Management Plan**



---

# **Elsinore Valley Municipal Water District**

Final Report

---

## **Urban Water Management Plan**

December 2005



**MWH**



**ELSINORE VALLEY  
MUNICIPAL WATER DISTRICT**

# **Urban Water Management Plan**

**FINAL REPORT**

**December 2005**





# Table of Contents

---

## SECTION 1 – INTRODUCTION

1.1 Project Authorization.....	1-1
1.2 Report Overview .....	1-1
1.3 Urban Water Management Planning Act.....	1-2
1.4 SB 610 .....	1-3
1.5 Plan Submittal Requirements.....	1-4
1.5 Acknowledgements .....	1-4
1.6 Project Staff .....	1-4
1.7 List of Abbreviations.....	1-4

## SECTION 2 – AGENCY COORDINATION

2.1 EVMWD’s 2005 UWMP .....	2-1
2.2 Inter-Agency Coordination.....	2-2
2.3 Resource Maximization and Import Minimization Plan .....	2-3
2.3 City and County Notification and Participation.....	2-3

## SECTION 3 – CONTENTS OF THE UWMP

3.1 Appropriate level of Planning for EVMWD.....	3-1
3.2 Service Area Information with 25-Year projections .....	3-1
3.2.1 EVMWD Service Area .....	3-1
3.2.2 History of EVMWD.....	3-2
3.2.3 Population.....	3-3
3.2.4 Climate .....	3-4
3.3 Water Sources .....	3-5
3.3.1 Existing Potable Water Supplies .....	3-6
3.3.2 Existing Non-Potable Water Supplies.....	3-19
3.3.3 Projected Potable Water Supplies.....	3-22
3.3.4 Projected Non-Potable Water Supplies.....	3-26
3.4 Reliability of Supply.....	3-28
3.4.1 Imported Water Supply Reliability.....	3-28
3.5 Transfer and Exchange Opportunities .....	3-30
3.6 Water Use by Customer Type.....	3-30
3.6.2 Existing Water Demands.....	3-31
3.7 Projected Potable Water Demands.....	3-34
3.7.1 Summary of Projected Demands .....	3-39
3.8 Planned Water Supply Projects and Programs.....	3-41
3.9 Development of Desalinated Water .....	3-42
3.10 Current or Projected Supply Including Wholesale Water .....	3-42

## Table of Contents (Continued)

---

### SECTION 4 – DETERMINATION OF DMM IMPLEMENTATION

4.1 DMM Implementation.....	4-1
4.2 Demand Management Measures.....	4-1
4.2.2 Review of Water Demands.....	4-2
4.2.3 List of Best Management Practices.....	4-2
4.3 Schedule of DMM Implementation.....	4-12
4.4 Conservation Savings.....	4-13
4.5 Coverage Compliance.....	4-13
4.6 Evaluation of DMMs Not Implemented.....	4-21

### SECTION 5 – WATER SHORTAGE CONTINGENCY PLAN

5.1 Intent of the Plan.....	5-1
5.2 Stages of Action.....	5-1
5.3 Estimate of Minimum Supply for the Next Three Years.....	5-2
5.4 Catastrophic Supply Interruption Program.....	5-3
5.5 Prohibitions, Penalties, and Consumption Reduction Methods.....	5-4
5.6 Analysis of Revenue Impacts of Reduced Sales During Shortages.....	5-5
5.7 Draft Ordinance and Use Monitoring Procedure.....	5-7

### SECTION 6 – RECYCLED WATER PLAN

6.1 Coordination.....	6-1
6.2 Wastewater Quantity, Quality and Current Users.....	6-1
6.2.1 Existing Recycled Water Supplies.....	6-1
6.2.2 Future Recycled Water Supplies.....	6-3
6.3 Potential and Projected Use, Optimization plan with Incentives.....	6-6
6.3.1 Wildomar Region.....	6-7
6.3.2 Lake Elsinore Region.....	6-7
6.3.3 Alberhill Region.....	6-8
6.3.4 Ramsgate Region.....	6-8
6.3.5 Canyon Hills.....	6-8
6.3.6 Temescal System.....	6-9
6.3.7 Lake Stabilization.....	6-9
6.3.8 Projected Recycled Water Demand.....	6-9

### SECTION 7 – WATER QUALITY IMPACTS ON RELIABILITY

7.1 Water Quality Impacts on Supply Reliability.....	7-1
7.1.1 Surface Water.....	7-1
7.1.2 Groundwater.....	7-1
7.1.3 Imported Water.....	7-2

**SECTION 8 – WATER SERVICE RELIABILITY**

8.1 Projected Normal Water Year Supply and Demand ..... 8-2  
 8.2 Projected Single-Dry-Year Supply and Demand ..... 8-3  
 8.3 Projected Multiple-Dry-Year Supply and Demand..... 8-4

**SECTION 9 – ADOPTION AND IMPLEMENTATION OF THE UWMP**

9.1 Plan Development and Public Participation ..... 9-2  
 9.2 Resolution for Adopting the Plan..... 9-2  
 9.3 Distribution of the 2005 UWMP..... 9-2

**SECTION 10 – MISCELLANEOUS PROVISIONS**

10.1 Miscellaneous Provisions .....10-1

**APPENDICES**

Appendix A: References .....A-1  
 Appendix B: Urban Water Management Plan Act.....B-1  
 Appendix C: BMP Activity Reports 2003 and 2004.....C-1  
 Appendix D: Water Conservation Details.....D-1  
 Appendix E: Public Comments.....E-1  
 Appendix F: Groundwater Management Plan (CD provided).....F-1

**LIST OF TABLES**

Table 1-1 List of Abbreviations ..... 1-5  
 Table 2-1 Coordination with Appropriate Agencies ..... 2-3  
 Table 3-1 Population and Employment Forecasts..... 3-4  
 Table 3-2 Climate Summary: Temperature and Precipitation ..... 3-5  
 Table 3-3 Climate Summary: Evapotranspiration..... 3-5  
 Table 3-4 Existing Potable Water Sources .....3-11  
 Table 3-5 Groundwater Supply (acre-ft/yr) .....3-15  
 Table 3-6 Amount of Groundwater Pumped from the Elsinore Basin (acre-ft/yr) .....3-15  
 Table 3-7 MWDSC Imported Water Rates.....3-17  
 Table 3-8 Historical Recycled Water Production (FY 1995-2004) (mgd) .....3-20  
 Table 3-9 Eastern MWD Disposal of Wastewater .....3-21  
 Table 3-10 Existing Potable Water Supply Projections During a Single Dry Year (acre-ft).....3-23  
 Table 3-11 Future Potable Water Sources.....3-23  
 Table 3-12 Amount of Groundwater Projected to be Pumped (acre-ft/yr) .....3-24  
 Table 3-13 Projected Wastewater Flows by Treatment Facility.....3-27  
 Table 3-14 Local Supply Reliability (acre-ft/yr) .....3-28  
 Table 3-15 Anticipated Surface Water Deliveries with Supplemental Imported Water.....3-30

## Table of Contents (Continued)

Table 3-16 Transfers and Exchanges (acre-ft/yr) .....	3-30
Table 3-17 Historic Water Use By Class .....	3-31
Table 3-18 Historic Potable Water Demands .....	3-33
Table 3-19 Historical Recycled Water Demands (by Fiscal Year).....	3-34
Table 3-20 Projected Potable Water Demands for Major Developments in EVMWD Service Area (2005-2030) .....	3-36
Table 3-21 Revised Potable Water Demand Projections .....	3-37
Table 3-22 Water Duties .....	3-38
Table 3-23 Summary of Committed Water Demand by Development Status .....	3-39
Table 3-24 Summary of Potable Water Demands – 2030.....	3-40
Table 3-25 Summary of Existing and Planned Future Water Demands – 2030.....	3-41
Table 3-26 Opportunities for Desalinated Water.....	3-42
Table 3-27 Average Demand Projections Provided to Wholesale Suppliers (acre-ft/yr) .....	3-43
Table 3-28 Wholesaler Identified and Quantified Existing and Planned Sources of Water Available to EVWMD via Western MWD (acre-ft/yr) .....	3-43
Table 3-29 Wholesale Supply Reliability – Percent of Normal Supply .....	3-43
Table 3-30 Factors Resulting in Inconsistency of Wholesaler’s Supply.....	3-44
Table 4-1 Best Management Practices with Targeted Customer Categories .....	4-3
Table 4-2 Implementation Schedule .....	4-12
Table 4-3 Estimated Actual Water Savings.....	4-13
Table 4-4 BMP Coverage.....	4-16
Table 4-5 BMP Implementation Plan.....	4-19
Table 5-1 Water Supply Shortage Stages and Conditions.....	5-2
Table 5-2 Three-Year Estimated Minimum Water supply and Average Demands (acre-ft/yr) .....	5-3
Table 5-3 Preparation Actions for a Catastrophic Supply Interruption.....	5-3
Table 5-4 Mandatory Prohibitions.....	5-4
Table 5-5 Consumption Reduction Methods .....	5-5
Table 5-6 Penalties and Charges .....	5-5
Table 5-7 Reduced Revenue Due to Water Shortage.....	5-6
Table 5-8 Reduced Expenses Due to Water Shortage.....	5-7
Table 5-9 Net Revenue Reduction by Stage .....	5-7
Table 5-10 Water Use Monitoring Mechanisms.....	5-8
Table 6-1 Historical Recycled Water Production (FY 1995-2004).....	6-2
Table 6-2 Eastern MWD Disposal of Wastewater.....	6-3
Table 6-3 Projected Wastewater Flows by Treatment Facility.....	6-4
Table 6-4 Recycled Water Supplies – 2030 .....	6-6
Table 6-5 Summary of Recycled Water Demands – 2030 .....	6-10
Table 6-6 Projected Recycled Supply Versus MDD for the Regional Area (mgd).....	6-11
Table 6-7 Projected Recycled Supply Versus MDD for Canyon Lake/Canyon Hills (mgd).....	6-11
Table 6-8 Projected Recycled Supply Versus MDD for Alberhill/Horsethief (mgd).....	6-12
Table 6-9 Projected Recycled Supply Versus MDD for the Wildomar Region (mgd) .....	6-12
Table 6-10 Projected Recycled Supply Versus MDD via Eastern MWD (mgd) .....	6-12
Table 6-11 Total Recycled Supply Versus Demand (mgd).....	6-13
Table 7-1 Current & Projected Water Supply Changes Due to Water Quality.....	7-2
Table 8-1 Projected Normal Water Year Supply.....	8-2

## Table of Contents (Continued)

Table 8-2 Projected Normal Water Year Demand.....	8-3
Table 8-3 Projected Normal Water Year Supply and Demand Comparison.....	8-3
Table 8-4 Projected Single Dry Year Water Supply.....	8-3
Table 8-5 Projected Single Dry Year Water Demand.....	8-4
Table 8-6 Projected Single Dry Year Supply and Demand Comparison.....	8-4
Table 8-7 Projected Supply During Multiple Dry Year Period Ending in 2010 .....	8-4
Table 8-8 Projected Demand during Multiple Dry Year Period Ending in 2010.....	8-4
Table 8-9 Projected Supply and Demand Comparison During Multiple Dry Year Period Ending in 2010 .....	8-5
Table 8-10 Projected Supply During Multiple Dry Year Period Ending in 2015 .....	8-5
Table 8-11 Projected Demand during Multiple Dry Year Period Ending in 2015 .....	8-5
Table 8-12 Projected Supply and Demand Comparison During Multiple Dry Year Period Ending in 2015.....	8-6
Table 8-13 Projected Supply During Multiple Dry Year Period Ending in 2020 .....	8-6
Table 8-14 Projected Demand during Multiple Dry Year Period Ending in 2020.....	8-6
Table 8-15 Projected Supply and Demand Comparison During Multiple Dry Year Period Ending in 2020.....	8-6
Table 8-16 Projected Supply During Multiple Dry Year Period Ending in 2025 .....	8-7
Table 8-17 Projected Demand during Multiple Dry Year Period Ending in 2025.....	8-7
Table 8-18 Projected Supply and Demand Comparison During Multiple Dry Year Period Ending in 2025.....	8-7
Table 8-19 Projected Supply During Multiple Dry Year Period Ending in 2030 .....	8-7
Table 8-20 Projected Demand during Multiple Dry Year Period Ending in 2030.....	8-7
Table 8-21 Projected Supply and Demand Comparison During Multiple Dry Year Period Ending in 2030.....	8-8

## LIST OF FIGURES

Figure 3-1 EVMWD Service Area.....	3-2
Figure 3-2 Projected Population and Employment Within the EVMWD Service Area.....	3-4
Figure 3-3 Quantities of Existing Water Supply Sources .....	3-6
Figure 3-4 Locations of Existing Potable Water Supply Sources .....	3-9
Figure 3-5 Elsinore Groundwater Basin.....	3-12
Figure 3-6 Historical Potable Water Demands.....	3-33
Figure 3-7 Comparison of Total Water Demand Projections.....	3-37
Figure 3-8 Existing and Projected Potable Water Demand 2000-2030 .....	3-40
Figure 3-9 Existing and Projected Average Day and Maximum Day Water Demand 2000-2030 .....	3-41
Figure 6-1 Projected Recycled Water Demand .....	6-13
Figure 8-1 Supply Availability to Meet MDD through 2030.....	8-2

**THIS PAGE INTENTIONALLY LEFT BLANK**

# Section 1

## Introduction

---

The Elsinore Valley Municipal Water District (EVMWD) was formed in 1950 under the Municipal Water District Act of 1911. Having a 96 square mile service area (EVMWD, 2004c), EVMWD provides water and wastewater services to the cities of Lake Elsinore, Canyon Lake, and the California Oaks area of Murietta. In addition, EVMWD serves the unincorporated communities of Wildomar, the Farm, Cleveland Ranch, Meadowbrook, Lakeland Village, Rancho Capistrano – El Cariso Village, Horsethief Canyon, and Temescal Canyon.

The purpose of this section is to explain the objectives of an Urban Water Management Plan (UWMP) and describe how this plan was developed.

### 1.1 PROJECT AUTHORIZATION

This UWMP has been prepared in accordance with the agreement for consulting services between the EVMWD and MWH dated September 12, 2005. This report was prepared under the scope of services of Phase I of this contract. The work related to the remaining phases are presented in separate reports.

### 1.2 REPORT OVERVIEW

This UWMP is divided into ten sections. This Section provides a brief description of the Urban Water Management Planning Act.

**Section 2** describes EVMWD's coordination with other water agencies in the development of this 2005 UWMP, along with a description on how this report was prepared and the steps taken to notify cities and counties in their service area regarding this UWMP update.

**Section 3** provides an overview of EVMWD's current and projected water demand and supply through the year 2030. Historical and projected populations are provided, along with the historical and projected potable and non-potable water demands. An overview of EVMWD's water supplies, the historical usage of supply sources, and the projected water supply mix through the year 2030 is provided.

**Section 4** describes each Demand Management Measure (DMM) that is currently being implemented or is scheduled for implementation. It also includes an implementation schedule, summary of water savings, and actions needed for EVMWD to meet the coverage requirements for each Best Management Practice (BMP).

**Section 5** summarizes the Water Shortage Contingency Plan, analyzes water shortage impacts, and describes activities to mitigate those impacts.

## Section 1 – Introduction

---

**Section 6** summarizes EVMWD’s recycled water plan, including historical and projected recycled water use through the year 2030.

**Section 7** describes the impact of water quality on the reliability of water supply.

**Section 8** discusses water supply reliability by comparing projected water demands with the available supplies as presented in **Section 3**. Normal Year, Single-Dry-Year, and Multiple-Dry-Year scenarios are evaluated through the year 2030.

**Section 9** discusses the actions taken to adopt and implement EVMWD’s 2005 UWMP.

**Section 10** presents a summary of miscellaneous provisions required by the Urban Water Management Planning Act.

The majority of tables presented in this report correspond with the sample table formats included in the *Guidebook to Assist Water Suppliers in the Preparation of a 2005 Urban Water Management Plan* prepared by the California Department of Water Resources (California Department of Water Resources (DWR), 2005).

### 1.3 URBAN WATER MANAGEMENT PLANNING ACT

The UWMP for the EVMWD is for the period of 2005 through 2009. This report has been prepared in compliance with California Water Code, Division 6, Part 2.6. The Urban Water Management Planning Act (Water Code Section 10610 et. Seq.) became effective on January 1, 1984. Many amendments have been added to the Act, the most recent occurring in 2004.

The Act requires that every urban water supplier providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually (acre-ft/yr) prepare and adopt an UWMP. The act requires urban water suppliers to prepare an UWMP that describes and evaluates sources of supply, reasonable and practical efficient water uses, recycling, and water demand management activities. The amendments require additional actions concerning urban water management plan preparation and considerations of such issues as metering, drought contingency planning, and water recycling. The Act requires that each water supplier prepares or updates its UWMP every five years before December 31, in years ending in five and zero. A copy of the Urban Water Management Planning Act is included in **Appendix B** (California Department of Water Resources (DWR), 2005).

The requirements for an UWMP set forth in the California Water Code Sections 10610 through 10656 are intended to provide assistance to water agencies in carrying out their long-term resource planning responsibilities to ensure that there are adequate water supplies to meet existing and future water demands. The need for the planning and management of urban water supplies are based on the following declaration of the State of California Legislature (Water Code 10610):

- The waters of the state are a limited and renewable resource subject to ever-increasing demands.

- 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.
- A long-term, reliable supply of water is essential to protect the productivity of California's businesses and economic climate.
- 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.
- Public health issues have been raised over a number of contaminants that have been identified in certain local and imported water supplies.
- Implementing effective water management strategies, including groundwater storage projects and recycled water projects, may require specific water quality and salinity targets for meeting groundwater basin water quality objectives and promoting the beneficial use of recycled water.
- 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.
- Changes in drinking water quality standards may also impact the usefulness of water supplies and may ultimately impact supply reliability.
- The quality of source supplies can have a significant impact on water management strategies and supply reliability.

### 1.4 SB 610

In 2001, the California Legislature enacted two laws that are intended to improve the linkage between water supply planning and new development. California Water Code (Water Code) Section 10910 *et seq.* (enacted as Senate Bill (SB) 610 (Costa) in 2001) requires water suppliers to prepare a water supply assessment (WSA) for certain new developments (referred to as “projects”). The WSA must address whether the projected water supply over the next 20 years is adequate to meet the demand projected for the project plus existing and planned future uses. Section 66473.7 of the California Government Code (enacted as SB 221 (Kuehl) in 2001) requires the agency approving a subdivision (as defined in the code) to include as a condition for approval written verification that a sufficient water supply is available. SB 610 and SB 221 are companion measures which seek to promote more collaborative planning between local water suppliers and cities and counties. Both statutes require detailed information regarding water availability to be provided to the city and county decision-makers prior to approval of specified large development projects.

As defined in Section 10912 of the Water Code, a “project” is a development that is subject to the California Environmental Quality Act (CEQA) and is defined as follows:

1. A proposed residential development of more than 500 dwelling units.
2. A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space.
3. A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space.

## Section 1 – Introduction

---

4. A proposed hotel or motel, or both, having more than 500 rooms.
5. A proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area.
6. A mixed-use project that includes one or more of the projects specified in this subdivision.
7. A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project.

A similar definition for a “subdivision” is included in Government Code Section 66473.7.

A SB 610 assessment is typically prepared as part of the CEQA process for approval of a new development. This UWMP for the EVMWD is prepared in accordance with SB 610.

### 1.5 PLAN SUBMITTAL REQUIREMENTS

According to the Act, this UWMP will be submitted to the DWR within 30 days of adoption by the Board of Directors of the EVMWD.

The plan will be submitted to the California DWR before December 31, 2005. If new requirements are put into place before that date, this report should be amended.

### 1.6 ACKNOWLEDGEMENTS

MWH wishes to acknowledge and thank all of the District’s staff for their support and assistance in completing this project with special thanks to Ronald Young, General Manager; Phillip Miller, District Engineer; and Joe Mouawad, Senior Engineer.

### 1.7 PROJECT STAFF

The following MWH staff were principally involved in the preparation of this UWMP:

Principal-in-Charge:	Ajit Bhamrah, P.E.
Project Manager:	Suad Cistic, P.E.
QA/QC Manager:	David Ringel, P.E.
Project Engineers:	Matthew Huang, P.E. Meha Patel Stephanie Sansom
Associate Engineers:	Jennifer Fan James Yoon

### 1.8 LIST OF ABBREVIATIONS

Abbreviations have been used in this report to conserve space and improve readability. Each abbreviation has been spelled out the first time it is used. Subsequent usage of the term is usually identified by its abbreviation. The abbreviations used are shown in **Table 1-1**.

**Table 1-1  
List of Abbreviations**

<b>Abbreviation</b>	<b>Description</b>
ac	acre
acre-ft/yr	acre-feet per year
Act	Urban Water Management Planning Act (Water Code Section 10610-10656)
ADD	Average Day Demand
AVP	Auld Valley Pipeline
BMP	Best Management Practice
CFD	community facilities district
CII	Commercial-Industrial-Institutional
CIP	Capital Improvement Program
CUWCC	California Urban Water Conservation Council
DMM	Demand Management Measures
DWR	California State Department of Water Resources
DU	dwelling unit
DYY	Dry Year Yield
EDU	Equivalent Dwelling Unit
ENR	Engineering News Record
EVMWD	Elsinore Valley Municipal Water District
EWD	Elsinore Water District
ET	evapotranspiration
ETo	average monthly reference ET
FY	Fiscal Year
GP	General Plan
gpd	gallons per day
gpd/cap	gallons per day per capita
HDR	High Density Residential
HECW	High-Efficiency Clothes Washers
HGL	Hydraulic Grade Line
HOA	Home Owners Association
INF	Infrastructure
LESJWA	Lake Elsinore and San Jacinto Watersheds Authority
LDR	Low Density Residential
MCL	Maximum Contaminant Level
MCLG	Maximum Contaminant Level Goal
MDD	Maximum Day Demand
MDR	Medium Density Residential
MFR	Multi Family Residential
MOU	Motion of Understanding regarding water conservation in California
NC	Neighborhood Commercial
OBMP	Optimum Basin Management Plan
POA	Property Owners Association
RCD	Riverside-Corona Resource Conservation District
RWQCB	Regional Water Quality Control Board
SCAG	Southern California Association of Governments
SFR	Single Family Residential
SPW	State Project Water
TDS	Total Dissolved Solids

## Section 1 – Introduction

---

<b>Abbreviation</b>	<b>Description</b>
TVP	Temescal Valley Pipeline
WDF	water demand factor
WFA	Water Facilities Authority
WMP	Water Master Plan
WRF	water reclamation facility
WTP	water treatment plant
MWDSC	Metropolitan Water District of Southern California
ULFT	Ultra Low Flush Toilets
UWMP	Urban Water Management Plan

# Section 2

## Agency Coordination

---

### 2.1 EVMWD'S 2005 UWMP

#### **Water Code Section 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 area wide, regional, watershed, or basin wide 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.*

**Water Code Section 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.*

## Section 2 – Agency Coordination

---

### *Water Code Section 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.*
- (b) *Every urban water supplier required to prepare a plan pursuant to this part shall 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).*

EVMWD prepared an UWMP in year 2000 in compliance with the Act which was adopted by EVMWD's Board of Directors on December 22, 1999 (Montgomery Watson/Maddaus Water Management/The Weber Group, 2000). This UWMP is an update of that document. It incorporates a number of significant changes in the region's water planning and management activities that have taken place in the last five years. These changes include, but are not limited to, the Dry Year Yield (DYY) program of Metropolitan Water District of Southern California (MWDSC), EVMWD's Distribution System Master Plan (MWH, 2002), and EVMWD's Recycled Water System Master Plan (Kennedy-Jenks Consultants, 2005b).

## **2.2 INTER-AGENCY COORDINATION**

*Water Code Section 10620.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.*

EVMWD coordinated the preparation of this UWMP with MWDSC, Western Municipal Water District (Western MWD), Eastern Municipal Water District (Eastern MWD), the Elsinore Water District (EWD), the County of Riverside Planning Department, the Cities of Canyon Lake, Lake Elsinore, Murietta, The Farm Mutual Water Company, and other interested parties. The actions EVMWD has taken to coordinate the preparation of this UWMP with these agencies are summarized in **Table 2-1**.

**Table 2-1  
Coordination with Appropriate Agencies**

Agency	Was contacted for assistance?	Was sent a copy of the draft plan?	Commented on the draft?	Attended public meetings?	Was sent a notice of intention to adopt?	Not Involved / No Information
MWDSC		X			X	
EMWD		X			X	
WMWD		X			X	
EWD		X			X	
The Farm Mutual Water Company		X				
County of Riverside Planning Department	X				X	
City of Canyon Lake	X				X	
City of Lake Elsinore	X				X	
City of Murietta	X				X	

**2.3 RESOURCE MAXIMIZATION AND IMPORT MINIMIZATION PLAN**

EVMWD has implemented several water management strategies in efforts to maximize local resources and minimize the need for imported water. Currently, EVMWD is pumping groundwater from local basins according to its entitled water rights in each of the basins (Elsinore, San Bernardino Bunker Hill, Rialto-Colton and Riverside North). In addition, EVMWD treats water from Canyon Lake according to an agreement with the Canyon Lake Property Owners Association (POA) that requires the maintenance of a minimum lake elevation. EVMWD also uses recycled water for irrigation use, and plans on identifying and implementing further opportunities for recycled use in the future. By implementing such a water management strategy, EVMWD aims to minimize imported water use to the extent that local water resources allow.

**2.4 CITY AND COUNTY NOTIFICATION AND PARTICIPATION**

A letter of notification was sent to the Cities of Lake Elsinore, Canyon Lake, Murrieta, and the County of Riverside Planning Department on October 6, 2005 pursuant to Section 10621(b) of the Water Code. This letter contained notification of the UWMP update and the request for comments during the update process.

**THIS PAGE INTENTIONALLY LEFT BLANK**

# Section 3

## Contents of the UWMP

---

### 3.1 APPROPRIATE LEVEL OF PLANNING FOR EVMWD

*Water Code Section 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.*

This UWMP contains all elements required by the Urban Water Management Planning Act. Information is provided at an appropriate level of detail for planning for the current water demands and for the expected increase in water demands over the next 25 years. Historical information is also included where available.

### 3.2 SERVICE AREA INFORMATION WITH 25-YEAR PROJECTIONS

*Water Code Section 10631: A plan shall be adopted in accordance with this chapter and 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.*

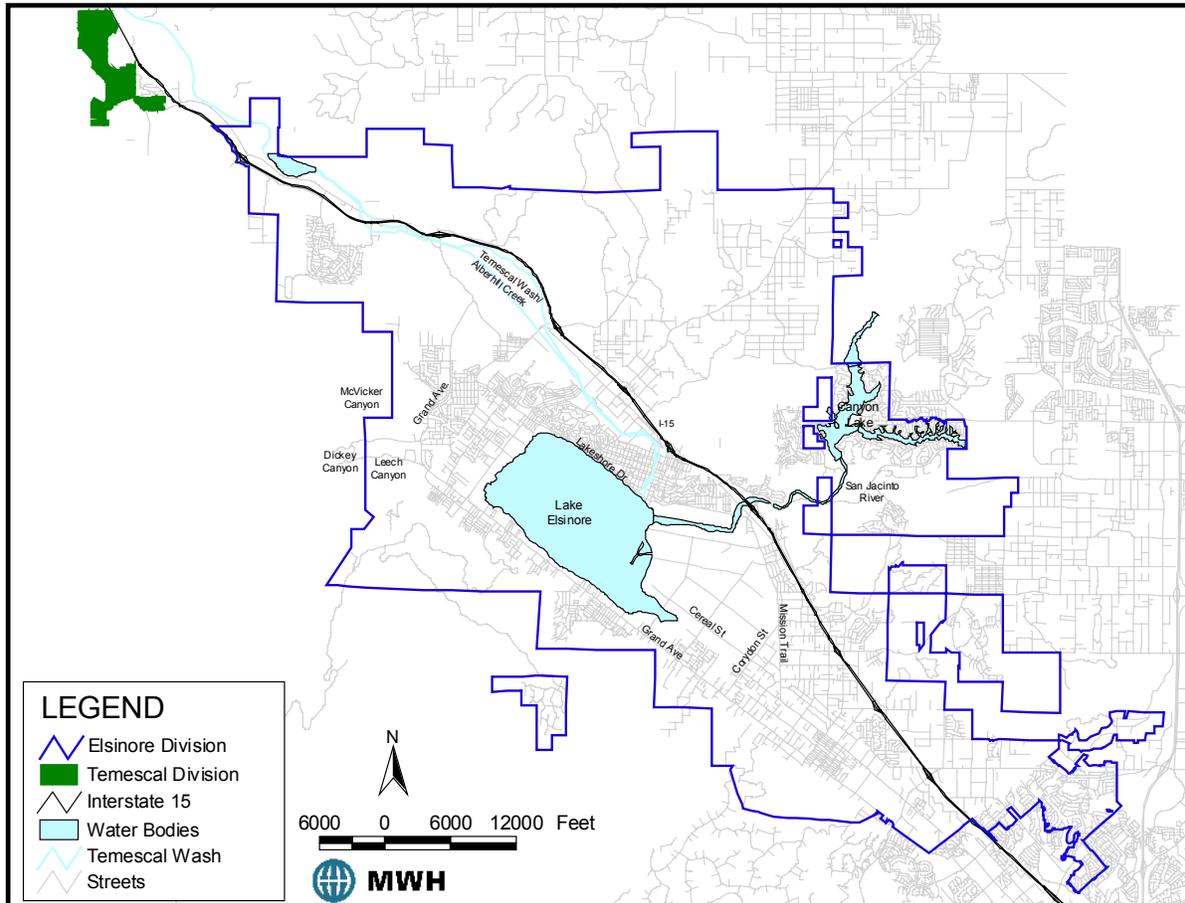
Demographic factors that may affect water use include current and projected population, climate, population density, and customer type. This information is covered in the following subsections and factored into the planning study.

A 25-year planning period is used in this UWMP to cover the period of 2005 to 2030. EVMWD chose this planning period so that prior to the next UWMP update (in 2010), this document can be used as a valid reference for water supply assessments and written verification of water supply for the 20-year period between 2010 and 2030.

#### 3.2.1 EVMWD Service Area

EVMWD's service area is divided into two divisions: the Elsinore Division and the Temescal Division. The map of the service area is in **Figure 3-1**. The Elsinore Division makes up the majority of the service area with more than 32,000 accounts, encompassing an area of 96 square miles. The Temescal Division is isolated from and located to the northwest of the Elsinore Division. It covers an area of approximately 2.5 square miles and has about 900 accounts.

Figure 3-1  
EVMWD Service Area



### 3.2.2 History of EVMWD

EVMWD was incorporated on December 23, 1950, under the provisions of the California Municipal Water District Act of 1911. The purpose of EVMWD is to finance, construct, operate, and maintain water and wastewater systems serving properties within EVMWD’s boundaries. EVMWD was formed to protect local water supplies and import supplemental water to alleviate water shortages. At the time of incorporation, EVMWD had too low of an assessed valuation to become a member of the Metropolitan Water District of Southern California (MWDSC). MWDSC was formed in 1928 by a legislative act to provide supplemental water for its member agencies in Southern California. Western MWD was formed in 1954 under the Municipal Water District Act of 1911 to bring supplemental water from MWDSC to growing western Riverside County. Following Western MWD’s annexation to MWDSC, EVMWD was annexed to Western MWD’s service area in 1954 (EVMWD, 2005a).

A bond election was held in 1955 that provided \$1,600,000 in capital funding for transmission, storage, treatment, and limited distribution facilities for the importation and distribution of MWDSC water within EVMWD. Subsequent negotiations with the Temescal Water Company

(TWC) resulted in the Railroad Canyon Storage Agreement (1955), which provided EVMWD with 3,000 acre-feet of storage in Railroad Canyon Reservoir (EVMWD, 2005a).

During 1956 and 1957, construction proceeded on the loop feeder system and Improvement District No. 1. Also during this period, several small mutual water companies petitioned EVMWD to accept their physical facilities and operate them. These were Elsinore Valley Mutual, Kilmeny Lot Owner's Mutual, Landowner's Mutual, Grand Avenue Mutual, Lakeview Mutual, and Clayton Mutual water companies. The first delivery of MWDSC water started on April 8, 1957 (EVMWD, 2005a).

In July 1962, Improvement District No. 2 encompassing the Meadowbrook area was formed, which increased the EVMWD service area by one-third. Services were extended to the El Cariso area by the formation of Improvement Districts 3A and 4, and to the Eucalyptus Grove area by the formation of Assessment District 65-1 under the Improvement Act of 1911. During 1967-68, Improvement District U-1 serving the Rancho Capistrano area was formed. The formation of Improvement District U-2 during 1967-68, serving the Canyon Lake Development, was the initial step to providing sewer service within EVMWD. In 1969, the assets of South Elsinore Mutual Water Company were purchased, and the services in that area were consolidated with regular operations. The acquisition of the TWC in 1989 increased the service area of EVMWD to the Temescal Valley. This portion of District's service area became the Temescal Division (EVMWD, 2005a).

Today, the residents within the EVMWD boundary are served by one of three water service agencies: EVMWD, EWD, and The Farm Mutual Water Company. The latter two are located entirely within EVMWD boundaries, and obtain most of their water wholesale from EVMWD. EVMWD also provides wastewater and recycled water service to customers. EVMWD is legally empowered to, but does not currently, provide services for storm water disposal facilities and fire protection facilities.

As a municipal water district, EVMWD has the authority to act in its own name to make and enter into contracts; to incur debts, liabilities, or obligations; and to issue bonds, notes, warrants, and other evidences of indebtedness. EVMWD also has the authority to collect revenues in the form of rates and charges for facilities and services provided. EVMWD has the power to levy *ad valorem* (property) taxes and acquire property and rights-of-way by eminent domain procedures.

### 3.2.3 Population

The Southern California Association of Governments (SCAG) has compiled historical population and employment by census tract every five years and projected them to 2030 as part of its 2004 Regional Growth Plan. Historical data and projections for portions of census tracts within EVMWD boundaries, in both the Elsinore and Temescal Divisions, from 2000 through 2030 are shown in **Figure 3-2**. Projections for 5-year intervals are summarized in **Table 3-1**.

The service area population was projected to increase from 80,603 in 2000 to 100,153 in 2005 (4.5 percent per annum). The projected overall growth rate from 2005 to 2030 averages 2.4 percent per annum. Employment is projected to increase from 13,746 in 2000 to 16,099 in

## Section 3 – Contents of the UWMP

2005 (3.2 percent per annum). The projected overall growth rate for employment from 2005 to 2030 is 2.9 percent per annum.

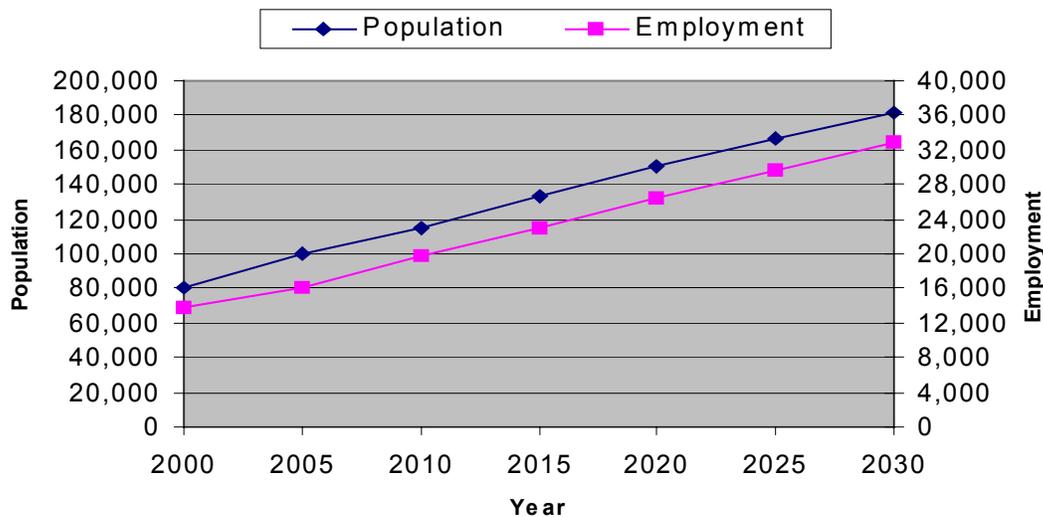
Population growth can be used to anticipate growth in future water demand, while employment growth is useful in projecting demands specifically related to certain classes of users (daytime, commercial and industrial, etc.). However, the recent SCAG projections have not been able to accurately reflect the actual population trends within the EVMWD service area, as the area has experienced extremely rapid growth and development.

**Table 3-1  
Population and Employment Forecasts**

Year	2000	2005	2010	2015	2020	2025	2030
Population	80,603	100,153	115,034	133,333	150,870	166,806	181,940
Employment	13,746	16,099	19,858	23,091	26,369	29,649	32,972

Reference: SCAG, 2004.

**Figure 3-2  
Projected Population and Employment Within the EVMWD Service Area**



### 3.2.4 Climate

The climatic character of the area is semi-arid, with warm, dry summers and mild winters. Areas to the west experience cooler summers due to onshore breezes. Upland areas have colder winters due to the surrounding low areas and higher elevations. Summer temperatures can exceed 100 degrees F, but nights are cool. Winters are also cool and wet and night temperatures rarely drop below 25 degrees F. Annual precipitation averages 8 to 12 inches and annual evapotranspiration (ET) averages about 55 inches. The average growing season is 250 to 300 days per year along the river bottom and valley areas and less than 250 days in the upland areas. **Table 3-2** presents a summary of monthly temperature and precipitation for Lake Elsinore based on data from the

last 57 years. **Table 3-3** presents a summary of the region’s average monthly reference ET, or ETo, levels based on historical data since 1986, taken from the nearest active station.

**Table 3-2  
Climate Summary: Temperature and Precipitation**

Month	Temperature - ° F			Precipitation - in		
	Mean	Avg Max	Avg Min	Avg	Max	Min
Jan	51.0	65.3	36.8	2.68	13.94	0.00
Feb	53.4	67.7	39.0	2.46	11.94	0.00
Mar	56.3	71.1	41.5	1.79	9.83	0.00
Apr	60.7	76.4	44.8	0.67	4.27	0.00
May	66.2	82.0	50.3	0.18	2.02	0.00
Jun	72.7	90.5	54.7	0.02	0.32	0.00
Jul	78.9	98.0	59.7	0.07	1.67	0.00
Aug	79.5	98.4	60.7	0.10	3.13	0.00
Sep	75.2	93.6	56.9	0.24	4.26	0.00
Oct	66.8	83.9	49.7	0.42	7.66	0.00
Nov	57.3	73.1	41.6	1.07	7.33	0.00
Dec	51.4	66.3	36.4	1.65	8.67	0.00
Annual	64.1	80.5	47.7	11.35	23.02	2.71

Reference: National Weather Service Cooperative Station 42805 – Elsinore, 1948-2005.

**Table 3-3  
Climate Summary: Evapotranspiration**

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
<b>ETo (in.)</b>	2.74	2.71	3.79	4.79	5.48	6.19	6.79	6.75	5.29	4.18	3.41	2.87	<b>54.99</b>

Reference: California Irrigation Management Information System: Station 62 – Temecula, 1986-2005.

Air quality is consistently better than that of surrounding communities.

### **3.3 WATER SOURCES**

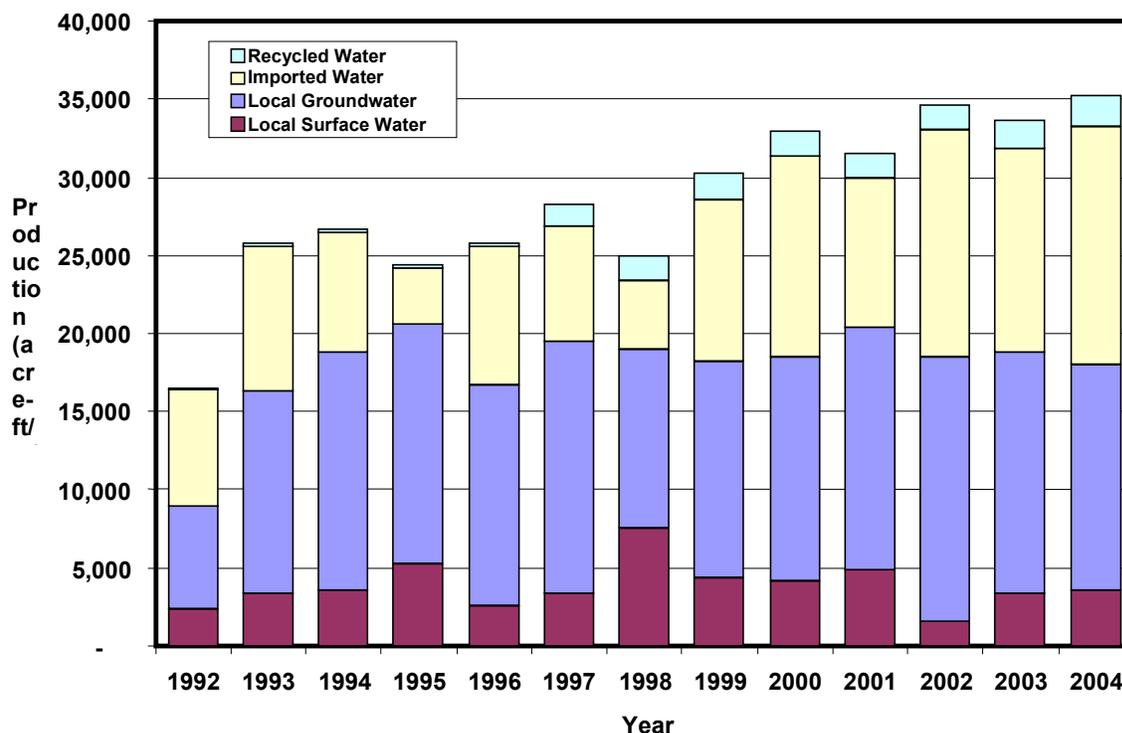
***Water Code Section 10631(b):** Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five-year increments described in subdivision (a).*

Except during droughts, the water supply has been adequate to accommodate the rapid growth in EVMWD’s service area, even during times of drought when customers curtailed their own water use. EVMWD relies on a combination of local groundwater, surface water, imported water, and recycled water supplies to meet potable and non-potable demands. As EVMWD becomes more dependent on imported water to meet future growth, it will be subject to the same potential for water shortages that may face Southern California. This section includes a description of water supply sources available to EVMWD.

## Section 3 – Contents of the UWMP

Figure 3-3 shows the annual production of each supply source for the period 1992 to 2004. (Potable supply data for Temescal Division in 1992 were not available.)

**Figure 3-3**  
**Quantities of Existing Water Supply Sources**



Total production from all sources over the period has averaged 28,500 acre-feet/year. Groundwater production has been relatively stable, averaging about 14,000 acre-ft/yr. Surface water supplies have been highly variable and dependent on local runoff conditions. Surface water production has ranged from a low of 1,600 acre-feet/year (when Canyon Lake was out of service) up to 7,500 acre-feet/year. Purchases of imported water supplies have increased significantly in the last five years in response to growth trends. Supply has been purchased from MWDSC via Eastern MWD and Western MWD when needed. This water is used as supplemental water because it is EVMWD's most expensive source. Imported water purchases over this period have averaged 9,600 acre-feet/year.

### 3.3.1 Existing Potable Water Supplies

EVMWD obtains its potable water supplies from local groundwater, local surface water from Canyon Lake, and imported water from MWDSC. The locations of these sources are presented in Figure 3-4.

### Groundwater

**Water Code Section 10631(b):** *...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:*

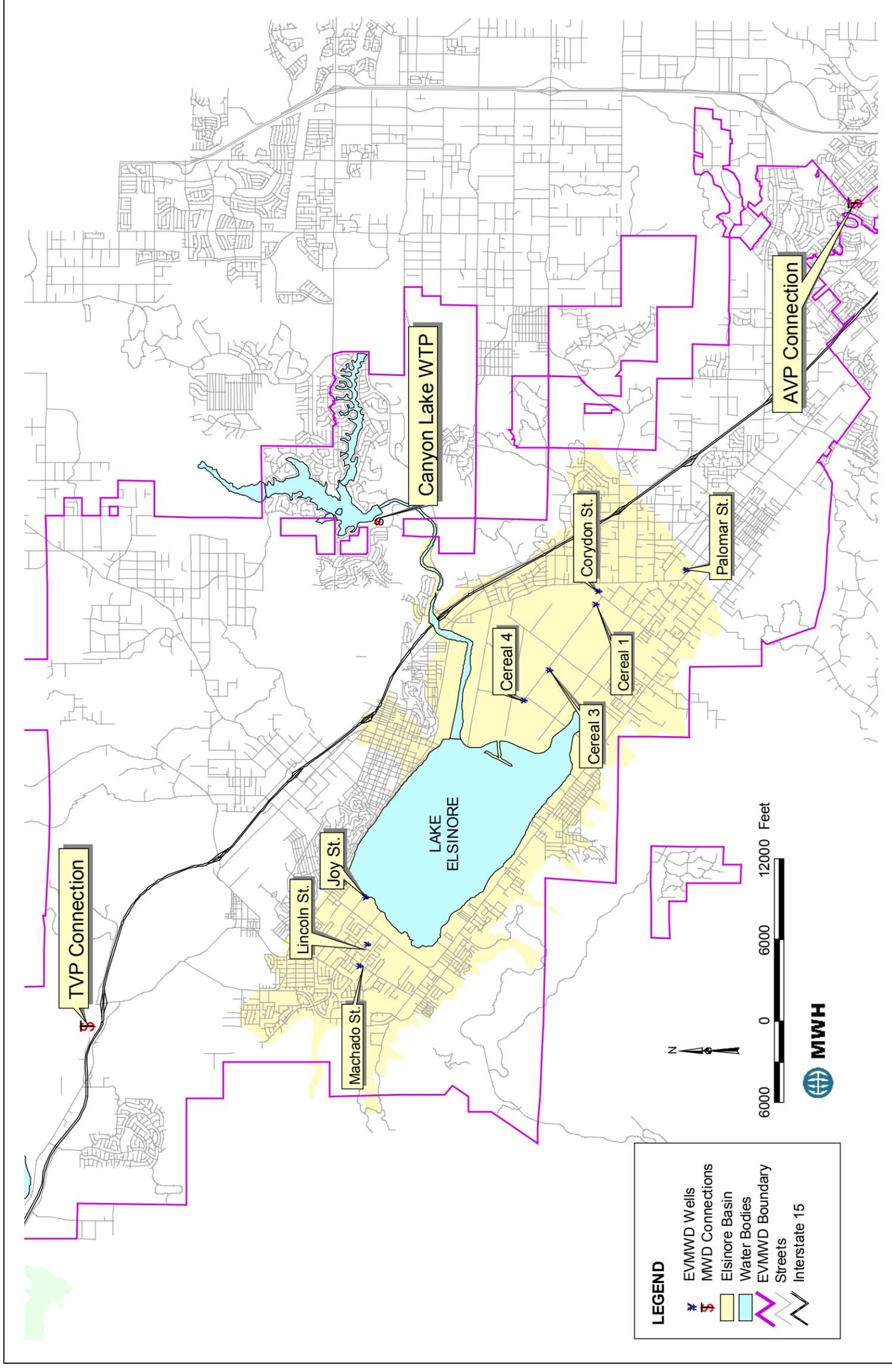
- (1) *A copy of any groundwater management plan adopted by the urban water supplier, including plans adopted pursuant to Part 2.75 (commencing with Section 10750), or any other specific authorization for groundwater management.*
- (2) *A description of any groundwater basin or basins from which the urban water supplier pumps groundwater. For those basins for which a court order or the board has adjudicated the rights to pump groundwater, a copy of the order to 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.*

**THIS PAGE INTENTIONALLY LEFT BLANK**

Figure 3-4  
Locations of Existing Potable Water Supply Sources



**THIS PAGE INTENTIONALLY LEFT BLANK**

## Section 3 – Contents of the UWMP

- (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, historical records.*

EVMWD has access to groundwater from Elsinore Basin, Temescal Valley basins, San Bernardino Bunker Hill Basin, Rialto-Colton and Riverside-North Basin, and Coldwater Basin.

EVMWD’s existing water supplies are surface water from Canyon Lake, groundwater pumping, and imported water from MWDSC via the TVP and Auld Valley Pipeline (AVP). A summary of supply capabilities of the existing water sources is presented in **Table 3-4**. Details on each supply source follows.

**Table 3-4  
Existing Potable Water Sources**

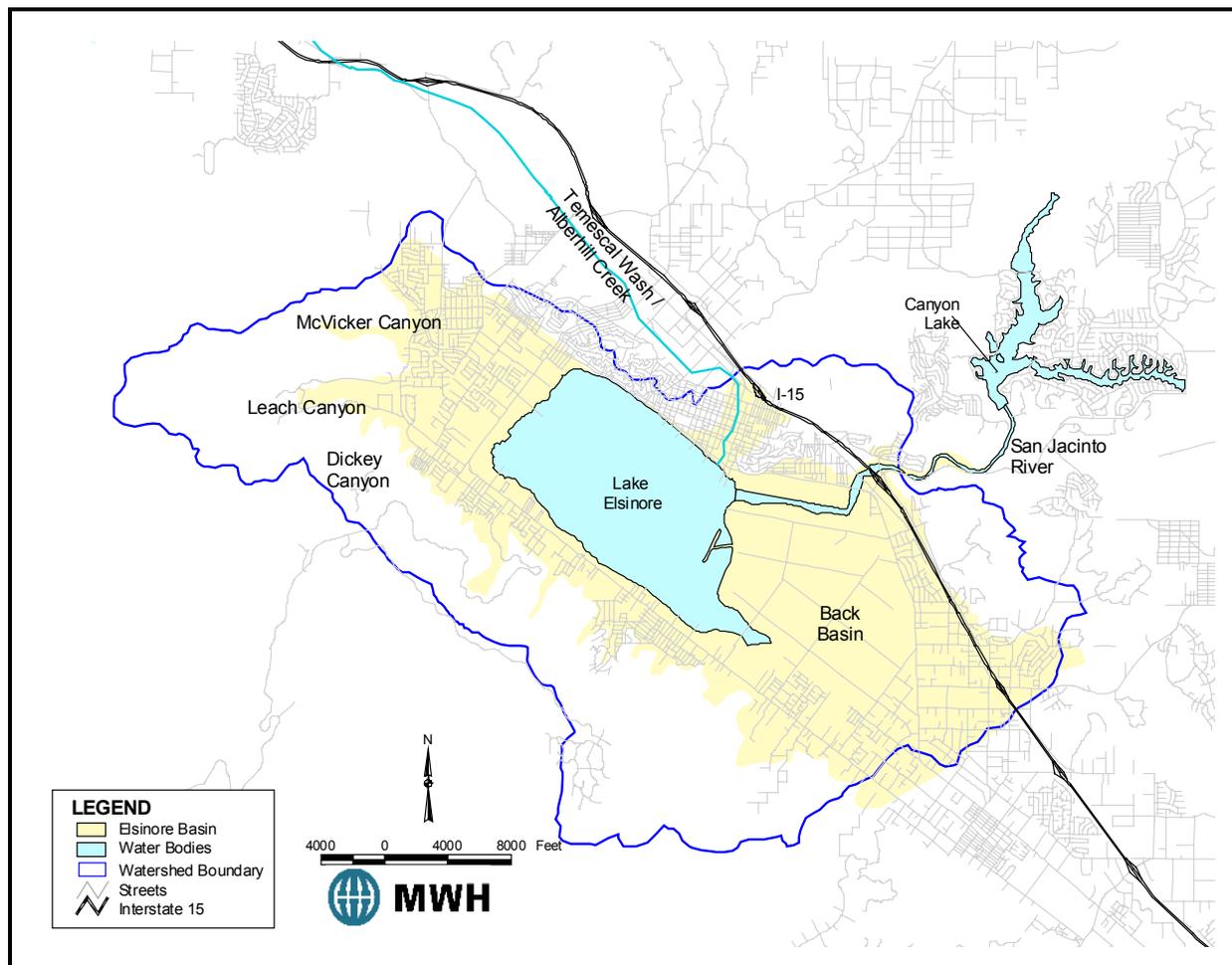
Water Supply Source	Capacity (mgd)	Average Year (acre-ft/yr)	Single Dry Year (acre-ft/yr)	Multiple-Dry Years (acre-ft/yr)	Single Wet Year (acre-ft/yr)
<b>Existing Supplies</b>					
Canyon Lake (Natural Runoff)	9.0	2,700	700	1,900	6,600
Canyon Lake (Purchased from MWDSC Connection WR-31)		5,400	7,400	6,200	1,500
Groundwater	13.7	5,500	5,500	5,500	5,500
TVP	12.7	14,190	14,190	14,190	14,190
AVP	24.2	27,100	27,100	27,100	27,100
Coldwater Basin <sup>1</sup>	1.3	700	700	700	700
<b>Total - Existing Supplies</b>	<b>60.9</b>	<b>55,590</b>	<b>55,590</b>	<b>55,590</b>	<b>55,590</b>

<sup>1</sup> – Limited by the existing demands in the TDSA. While additional supply and capacity exist, the flow is not available to the Elsinore Division without modifications to existing facilities.

### Elsinore Groundwater Basin

The Elsinore Groundwater Basin is the major source of potable groundwater supply for EVMWD, EWD, and other private groundwater producers. The Elsinore Basin is located in a graben (a down-dropped geologic block) created by two major fault zones: the Glen Ivy Fault Zone to the northeast and the Wildomar Fault Zone to the southeast. The groundwater basin encompasses approximately 25 square miles of valley fill including Lake Elsinore, which covers about 3,600 acres of the basin. The surface water drainage area tributary to the basin consists of 42 square miles of mountain and valley area. Major streams include McVicker Canyon, Leach Canyon, Dickey Canyon, and the San Jacinto River, which drain into Lake Elsinore and provide a portion of the basin recharge. **Figure 3-5** presents the location of the groundwater basin, the tributary watershed that drains into the basin, surrounding streams, and other bodies of water.

**Figure 3-5  
Elsinore Groundwater Basin**



The California Department of Water Resources has designated the Elsinore Basin as Basin No. 8-4 and is located within the Santa River watershed. Further information on the basin is presented in DWR Bulletin 118 California's Groundwater. (California Department of Water Resources (DWR), 2003).

EVMWD prepared a groundwater management plan (GWMP) for the Elsinore Basin pursuant to the California Water Code §10750 *et seq.* The EVMWD Board of Directors adopted this plan on March 24, 2005. The GWMP presents detailed information on the Elsinore Basin including a plan to reduce the overdraft and improve groundwater supply reliability. The GWMP concluded that the current sustainable yield of the Elsinore Basin is 5,500 acre-ft/year (MWH, 2003a).

EVMWD has nine operating potable groundwater wells with a total capacity of 13.7 million gallons per day (mgd). Groundwater supplied 35 to 45 percent of EVMWD demands in the past five years.

Water rights for the Elsinore Groundwater Basin are not adjudicated (MWH, 2003a). According to the GWMP, approximately 94 percent of groundwater produced by the basin is pumped by EVMWD. Other groundwater producers include EWD and private well owners. EWD, which supplies water to customers in two detached service areas, normally has capacity to pump approximately 5 percent of total groundwater produced by the basin. However, EWD does not currently produce groundwater. EVMWD currently supplies potable water to meet EWD's demands. Local pumpers with private wells only account for about one percent of basin production (MWH, 2003a).

### Coldwater Basin Groundwater

EVMWD pumps groundwater from wells located in the Temescal Valley to serve users in its Temescal Division. The wells draw from the Coldwater Basin, Lee Lake Basin, and the Bedford Basin. Only three wells, all in Coldwater Basin, are used for potable supply. The rest of the wells are used for non-potable purposes. (MWH, 2004a).

The Coldwater Basin is an unadjudicated basin located about 8 miles southeast of the City of Corona within the Temescal Valley southwest of Interstate 15. The basin covers about 1,680 acres. Major surface water drainages include Coldwater, Anderson, Bixby, Mayhew, and Brown Canyons, which surround the western and southern boundaries of the groundwater basin.

The Coldwater Basin lies within a down-dropped block between the North Glen Ivy and South Glen Ivy faults, which are associated with the right lateral strike-slip-dominated Elsinore Fault Zone (EFZ). The EFZ extends approximately 200 km from Baja California north to the Corona area. The Coldwater Basin is surrounded by the metamorphic, volcanic and granitic basement rocks of the Santa Ana Mountains to the south and west, and the Bedford groundwater basin, which is located to the north and east and is separated from the Coldwater Basin by the North Glen Ivy fault. In a recharge feasibility study, MWH reviewed and compiled available data to evaluate the geometry and update the hydrogeologic conceptual model for the Coldwater Basin (MWH, 2005a). Based upon the data compiled as part of that report, the Coldwater Basin watershed contains the following stratigraphic units: alluvium, Bedford Canyon Formation, volcanic rocks, and granitic basement rocks. Only the alluvium produces significant groundwater resources.

There do not appear to be any significant confining layers within the alluvium except in the northwestern portion of the basin where there is substantial clay. Currently, water levels are generally declining throughout the basin. However, historical records indicate that the basin is very responsive to changes in operational and climatic conditions. Recharge to the alluvium occurs along the margins of the basin through Mayhew, Coldwater, Anderson, Bixby and Brown Canyons. Faults within the basin appear to be complete barriers to subsurface flow except where gravel pits cross the faults.

The total basin storage volume is estimated to be approximately 74,800 acre-ft based upon a specific yield ranging from 7 to 9 percent. The estimated groundwater in storage as of September 2000 was 41,600 acre-ft (about 55 percent full). The estimated cumulative loss in storage in the Coldwater Basin between 1977 and 2000 was approximately 10,000 acre-ft (MWH, 2004b)..

## **Section 3 – Contents of the UWMP**

---

For the period between 1991 and 2000, an average of 6,300 acre-feet per year (acre-ft/yr) of groundwater was produced from the basin. The principal groundwater producers in the basin are the EVMWD and the City of Corona, which account for all but about 200 acre-ft/yr of the total average groundwater production in the basin. The remainder of the pumpers in the basin are agricultural users and the gravel pit owners. Approximately one-third of the total basin groundwater extraction from 1991 to 2000 was produced from EVMWD's wells, while two-thirds of the total groundwater production was produced from the City of Corona's wells. District wells serve agricultural and municipal users in the Coldwater Basin area (MWH, 2004b).

Since 1998, groundwater levels within the Coldwater Basin have been declining at a rate of about 50 feet per year throughout the basin. Groundwater levels in many wells are at or below the previous historic low levels of the mid-1970s. Most shallow groundwater wells, particularly in the center of the basin, are currently dry. This water level decline is the result of both an extended period of low rainfall and increased groundwater production in the basin. More groundwater is being extracted each year than is being replenished naturally causing groundwater to be taken from storage. Previous estimates of safe yield for the basin have ranged from 3,100 acre-ft/yr to 5,300 acre-ft/yr. Groundwater extraction over the past several years has exceeded these estimates. Because the groundwater basin is only 800 feet deep, this supply, if not augmented, will not be available in the future at current extraction rates. (MWH, 2004b)

A review of pumping records from 1991 to 2001 from the "Coldwater Basin Recharge Feasibility Study" (MWH, 2004b) shows that EVMWD has withdrawn about 25 percent of the total volume pumped. Assuming the total safe yield is about 5,200 acre-feet/year, EVMWD could expect to have about 1,250 acre-feet/year available.

The current source capacities of the Station 71, Station 72, and Mayhew Wells are 630, 450, and 330 gallon per minute (gpm) respectively. If all three wells were to run for 24 hours a day and 365 days a year, there is a total pumping capacity of 2.03 mgd and 2,274 acre-ft/yr (MWH, 2001a). Therefore, for estimating the supply availability, EVMWD's share of the safe yield is the limiting value at 1,250 acre-feet/year.

Since this combined well capacity supplying potable water is below safe yield estimates of the Coldwater Basin, the total pumping capacity is assumed as the projected supply availability for the Temescal Domestic Service Area (TDSA), defined as the portion of Temescal Division using potable supply.

### Other Groundwater Supplies

EVMWD's acquisition of TWC in August 1989 resulted in ownership of 51.9 percent of the stock in three mutual water companies: Meeks and Daley Water Company, Agua Mansa Water Company, and Alta Mesa Water Company. This stock provides water rights and production/conveyance capacity through the mutual water companies' facilities and water supply sources. The TWC acquisition also provided EVMWD entitlements to "canal carrying rights" located in the Gage Canal and the Riverside Canal, including rights to the Palm Avenue Well that is located in Grand Terrace.

## Section 3 – Contents of the UWMP

The San Bernardino-Bunker Hill Basin is located in San Bernardino County and covers about 92 square miles. The basin covers the entire City of San Bernardino, and extends west, north, and east of the city (Montgomery Watson/Black & Veatch, 1997).

The mutual water companies have rights to pump 7,833 acre-ft/yr of water from the San Bernardino-Bunker Hill Basin of which 7,515 acre-ft/yr may be exported to Riverside County (Western-San Bernardino Watermaster, 2003). Through its shareholder ownership, EVMWD's annual allotment from the San Bernardino-Bunker Hill Basin is approximately 3,900 acre-feet.

EVMWD's stock ownership also entitles it to groundwater in the unadjudicated Rialto-Colton and Riverside-North Basins. The Water Resources Development Plan (WRDP) estimated the total water available to EVMWD from these basins to be 7,152 acre-ft/yr (Montgomery Watson/Black & Veatch, 1997) based on the capacity of the Station 36 and Palm Avenue wells.

All of the water rights in these basins have been temporarily transferred or leased to Western MWD in exchange for capacity in the Mills Gravity Pipeline, which is further discussed in **Section 3.5**.

**Table 3-5** provides a summary of the available groundwater supply pumping per basin.

**Table 3-5  
Groundwater Supply (acre-ft/yr)**

Groundwater Basin	Supply (acre-ft/yr)
Elsinore Groundwater Basin <sup>1</sup>	5,500
San Bernardino Bunker Hill Basin	3,900
Rialto-Colton and Riverside North Basins <sup>2</sup>	7,152
Coldwater Basin <sup>3</sup>	1,250
<b>TOTAL</b>	<b>17,802</b>

1 – This basin is unadjudicated. The value here is based upon the current estimated safe yield of Elsinore Basin (MWH, 2003. "Elsinore Basin Groundwater Management Plan" prepared for Elsinore Valley Municipal Water District).  
 2 – This basin is unadjudicated.  
 3 – This basin is unadjudicated. The value here is based on the upper limit of the estimated safe yield and historical share of total withdrawal by EVMWD.

**Table 3-6** summarizes total groundwater pumped in the Elsinore Basin in the last five years.

**Table 3-6  
Amount of Groundwater Pumped from the Elsinore Basin (acre-ft/yr)**

Groundwater Basin	2000	2001	2002	2003	2004	Average (1998-2004)
Elsinore Groundwater Basin	7,675	9,495	9,441	9,555	12,328	9,163
<b>% of Total Water Supply</b>	<b>35</b>	<b>45</b>	<b>39</b>	<b>40</b>	<b>36</b>	<b>39</b>

Reference: EVMWD Monthly Production Sheets provided by EVMWD staff. All data shown are for calendar years.

## **Section 3 – Contents of the UWMP**

---

### **Surface Water**

Surface water for EVMWD's potable supply is obtained from Canyon Lake for the Elsinore Division. No surface water sources are used for potable supply to the Temescal Division.

#### Canyon Lake

Surface water is obtained for EVMWD customers from Canyon Lake, also known as the Railroad Canyon Reservoir. Canyon Lake was constructed in 1928 by TWC to store water for agricultural use in the area. Formed by Railroad Canyon Dam, Canyon Lake impounds water from the San Jacinto River, Salt Creek, and local surface runoff. With a spillway elevation of 1381.85 ft mean sea level (msl) (HDR, 2004), the reservoir originally had a capacity of about 12,000 acre-ft. However, siltation has decreased the capacity of the lake to 11,920 acre-ft. Canyon Lake's current normal operating storage capacity is approximately 4,766 acre-ft based on the minimum lake level for recreation (see below) (HDR, 2004). The lake is being dredged to restore a portion of the lost capacity as part of the Canyon Lake Improvement Project funded by Proposition 13.

The Railroad Canyon Storage Agreement between EVMWD and TWC that was approved in October 1955 allowed EVMWD to store approximately 3,000 acre-feet of water in Canyon Lake and treat that water at the Canyon Lake Water Treatment Plant (WTP) before distribution. In August 1989, EVMWD acquired the assets and water rights of the TWC including Canyon Lake.

The Canyon Lake Property Owners Association (POA) leases the surface rights to the lake and fringe land around the lake for recreational purposes under an agreement dating from 1968. The lease agreement between EVMWD and the Canyon Lake POA requires that the minimum lake elevation be kept at 1,372 ft msl (HDR, 2004). EVMWD typically discontinues operation of the Canyon Lake WTP if the lake level is expected to drop below 1,372 ft. If the level falls below 1,372 feet, EVMWD is required to purchase MWDSC water to maintain the minimum lake elevation. During the 2001-02 fiscal year, the EVMWD imported 1,055 acre-feet of water to maintain the level of the lake at the contractually-specified level.

There is limited hydrologic data documenting the inflows to the lake. The United States Geological Survey (USGS) maintains gauging stations on the San Jacinto River (and Salt Creek upstream of Canyon Lake). Both gauges have only been in place for five years. During periods of high runoff, Canyon Lake fills and spills into the San Jacinto River where it flows into Lake Elsinore. The USGS gauge on the San Jacinto River below Railroad Canyon Dam (No. 11070500) has an 89-year history (United States Geological Survey (USGS), 2005). Over the last 25 years, significant spillovers occurred in 1980, 1983, 1993, 1995, 1998 and 2005. Since October 1, 2004, almost 49,000 acre-ft of water spilled over Railroad Canyon Dam causing Lake Elsinore to rise nearly 20 ft.

Through the acquisition of the TWC, EVMWD has the rights to divert up to 12,000 acre-ft/yr of natural drainage from the San Jacinto River from about December 1 to about June 1 of each season and store that water in the Railroad Canyon Reservoir pursuant to Water Rights License 1533 (State Department of Public Works Division of Water Resources (SDPW-DWR), 1935). A subsequent license allows the diversion of 2.4 cfs of San Jacinto River water from about April 1

to about May 31 of each season pursuant to Water Rights License 6327 (State Water Rights Board (SWRB), 1961). In settlement of litigation regarding the release of water into Lake Elsinore, EVMWD and the City of Lake Elsinore agreed that EVMWD would not treat more than 8,000 acre-ft/yr (about 7.1 mgd continuous flow) of San Jacinto River flows in any water year at EVMWD’s Canyon Lake Water Treatment Plant. This 8,000 acre-ft/yr limit applies only to San Jacinto River runoff and excludes any imported water conveyed in the river channel to Canyon Lake.

Other sources of water for Canyon Lake include untreated imported water from MWDSC connections WR-18A (Colorado River water) and WR-31 (State Water Project water). Each of these imported water connections has a capacity of 69 cfs (44.6 mgd). EVMWD could purchase the imported water from MWDSC through Western MWD, which would be discharged into the San Jacinto River near Nuevo and flow downstream to Canyon Lake. EVMWD avoids purchasing water from the MWDSC connection WR-18A because the high total dissolved solids (TDS) in Colorado River supply adversely affects wastewater effluent quality. Construction of MWDSC connection WR-31 was completed in December 2003, but EVMWD has not taken any flows to date through this connection. Because the cost of treating raw MWDSC water is relatively expensive, it is typically more cost-effective to purchase treated water from the AVP or the Temescal Valley Pipeline (TVP). In addition, some water released into the San Jacinto River percolates into the intervening Lakeview and Perris groundwater basins before it reaches Canyon Lake. It is estimated that approximately 84 to 94 percent of any water purchased from these connections actually reaches the lake (MWH, 2002). Consequently, such releases are typically made in the wet season when the river has natural inflows to minimize losses. In spite of the lack of recent use, EVMWD still has the ability to supplement its Canyon Lake supply with untreated imported water in the event of a local water shortage.

**Treated Imported Water**

As a member agency of Western MWD, EVMWD purchases treated imported MWDSC water from Western MWD through the AVP and the TVP. The AVP and the TVP are located on the southeastern and northwestern end of EVMWD’s distribution system, respectively.

**Table 3-7** summarizes rates for purchasing imported water from MWDSC.

**Table 3-7  
MWDSC Imported Water Rates**

Type	Effective 1/1/2005		Effective 1/1/2006	
	Untreated	Treated <sup>1</sup>	Untreated	Treated <sup>1</sup>
Replenishment	\$238	\$325	\$238	\$335
Tier 1	\$331	\$443	\$331	\$453
Tier 2	\$412	\$524	\$427	\$549

Source: Metropolitan Water District of Southern California, 2005. *Budget 2005/2006*. Available: <http://www.mwdh2o.com/mwdh2o/pages/finance/finance01.html>. Accessed: October 25, 2005.

1 - Western Municipal Water District adds an administrative charge of \$5.00/acre-ft for water delivered through the Temescal Valley Pipeline. Eastern Municipal Water District adds an administrative charge of \$11.00/acre-ft for water delivered through the AVP.

## **Section 3 – Contents of the UWMP**

---

### Auld Valley Pipeline

EVMWD entered into the Water Facility Capacity Agreement for the AVP with Eastern MWD on November 21, 1986. Based on this agreement, EVMWD has the rights to purchase or acquire a maximum flow rate of 37.5 cubic feet per second (cfs) (24.2 mgd or approximately 27,100 acre-ft/yr if used continuously) from Eastern MWD through the MWDSC Connection EM-17. Eastern MWD sells imported water for the AVP to Western MWD, which in turn sells the water to EVMWD through an Interagency Water Sales Agreement (September 14, 1988). It is assumed that EVMWD will be able to obtain the full source capacity or 27,100 acre-ft/yr from the AVP on an annual basis. This imported water is a blend of State Water Project (SWP) and Colorado River Aqueduct water. Prior to conveyance to the AVP, the water is treated at MWDSC's R. A. Skinner Filtration Plant. It is then pumped into the Loop Zone and Cal Oaks Zone at the California Oaks Pumping Station located on Hancock Avenue.

### Temescal Valley Pipeline

Installation of the TVP was completed in February 2002. EVMWD obtains imported water from the TVP through Western MWD. The source of this water is SWP water that originates from MWDSC's Mills Filtration Plant in Riverside. The Mills Gravity Pipeline (also known as the Woodcrest Pipeline), which is owned, operated and maintained by Western MWD, runs westerly to its termination point near the intersection of Cajalco Road and Temescal Valley Road.

According to the Distribution System Master Plan (DSMP), the EVMWD connection at the pipeline terminus has a design capacity of 41 cfs (26.5 mgd or approximately 29,700 acre-ft/yr). Water is transferred to the TVP from the Mills Gravity Pipeline at the Woodcrest vault, located in Corona at the intersection of Temescal Canyon Road and La Gloria Street (MWH, 2002). The current hydraulic capacity of the TVP is 19.6 cfs (12.7 mgd or 14,190 acre-ft/yr) based on gravity flow from the Woodcrest Pipeline. The TVP was designed to convey up to 41 cfs (26.5 mgd or 29,700 acre-ft/yr) with the construction of a booster pumping station. Like the AVP, it is assumed that EVMWD can obtain up to the entire current hydraulic capacity, or 14,190 acre-ft/yr, from the TVP on an annual basis. The TVP project was developed to provide additional water supplies from sources located north of the EVMWD service area. It includes an 8 million gallon (mg) terminal storage reservoir, transmission mains, fill lines, and appurtenances.

On August 23, 2001, EVMWD entered into a reciprocal use agreement with Western MWD that provided EVMWD with a conditional right to use 9 cfs of capacity from the Mills Gravity Pipeline. In return for the imported water capacity, EVMWD granted Western MWD an entitlement to water acquired from the Meeks and Daley rights (EVMWD, 2001a; EVMWD, 2001c).

A separate lease agreement between EVMWD and Western MWD provides EVMWD with the ability to use up to 5 cfs (3.2 mgd or 3,620 acre-ft/yr) of additional capacity from the Mills Gravity Pipeline on a temporary basis (EVMWD, 2001b). On August 8, 2002, the EVMWD Board of Directors approved an amendment to the lease agreement to lease an additional 7 cfs (4.5 mgd or 5,068 acre-ft/yr) from the Mills Pipeline, increasing the total lease capacity to 12 cfs (7.8 mgd or 8,688 acre-ft/yr) (EVMWD, 2002a). Thus, EVMWD can currently obtain up to 21 cfs (13.6 mgd or approximately 15,200 acre-ft/yr) of water from the TVP.

### **3.3.2 Existing Non-Potable Water Supplies**

EVMWD serves non-potable demands for irrigation and to maintain water levels in Lake Elsinore during dry years. Non-potable irrigation demands are met through a combination of groundwater, surface water, and tertiary-treated recycled water.

#### **Groundwater**

Groundwater wells in Temescal Division are used to supply non-potable water for irrigation and industrial users. The supply comes from 12 wells: seven wells in the Elsinore Basin, two wells in the Coldwater Basin, and three wells in the Bedford Basin. About 4,000 to 5,000 acre-feet/year of non-potable supply are produced by wells for non-potable use in Temescal Division (MWH, 2004a).

#### **Surface Water**

Surface water diversions from Lee Lake, Temescal Wash, Horsethief Canyon, and Indian Canyon are used to supply non-potable irrigation and industrial uses in the Temescal Division (MWH, 2004a).

#### **Recycled Water**

EVMWD's recycled water supply comes from the Regional Water Reclamation Facility (WRF), Railroad Canyon WRF, and Horsethief WRF. EVMWD has typically used the treated effluent from Railroad Canyon WRF and Horsethief WRF for irrigation, except during storm events. Effluent from the Regional WRF is typically discharged into the Temescal Wash.

**Table 3-8** summarizes the reclaimed water production as reported in EVMWD's 2004 Comprehensive Annual Financial Report (EVMWD, 2004b). It should be noted that a portion of the wastewater flows collected by EVMWD is diverted to the Rancho California Water District for treatment and disposal at its Santa Rosa WRF.

#### Railroad Canyon WRF and Horsethief Canyon WRF

The effluent from Railroad Canyon WRF and Horsethief Canyon WRF meets Title 22 requirements for tertiary treatment. The current rated capacity for Railroad Canyon WRF and Horsethief Canyon WRF are 1.2 mgd and 0.5 mgd, respectively. Based on normalized trends in the number of service connections, the historical flows are 0.90 mgd to Railroad Canyon WRF and 0.43 mgd to Horsethief Canyon WRF in 2004. Most of the treated water from Railroad Canyon WRF is directed to the Canyon Lake Golf Course and the Canyon Hills development, with excess effluent bypassed to the Regional WRF. Treated recycled water from Horsethief Canyon WRF is distributed to local landscape irrigation users (MWH, 2005a).

## Section 3 – Contents of the UWMP

---

**Table 3-8**  
**Historical Recycled Water Production: FY 1995-2004 (mgd)**

Year	Horsethief Canyon	Railroad Canyon	Regional WRF	Total
1995	0.15	0.92	3.18	4.25
1996	0.15	0.89	3.24	4.28
1997	0.17	0.94	3.34	4.44
1998	0.19	0.97	3.73	4.89
1999	0.22	0.93	3.70	4.85
2000	0.26	0.95	3.71	4.92
2001	0.32	0.93	3.79	5.04
2002	0.38	0.91	3.73	5.02
2003	0.47	0.88	4.09	5.44
2004	0.43	0.88	4.46	5.77

Reference: EVMWD Comprehensive Annual Financial Report for the year ended in June 30, 2004 (EVMWD, 2004).

### Regional WRF

The Regional WRF was recently expanded and currently has a rated capacity of 8 mgd. The wastewater effluent is treated with tertiary treatment and is discharged to Temescal Wash. Flows to the Regional WRF in 2004 were approximately 4.5 mgd. As population and water demands increase, EVMWD anticipates future expansions to an ultimate capacity of 30 mgd (Kennedy-Jenks Consultants, 2003).

Beginning in June 2002, effluent from the Regional WRF and from Eastern MWD has been used for replenishing Lake Elsinore as part of a 2-year pilot test program. The purpose of this program was to evaluate the effects of using recycled water for lake replenishment as part of an overall lake management strategy. When the pilot program ended in December 2004, 10,043 acre-ft of total effluent had been discharged into the lake.

In March 2005, EVMWD received a revised National Pollutant Discharge Elimination System (NPDES) permit from the Regional Water Quality Control Board (RWQCB) to discharge effluent into the lake. This permit requires EVMWD to reduce the nutrient loading to the lake (Regional Water Quality Control Board, 2005). EVMWD is currently installing phosphorus removal treatment at the Regional WRF to comply with the permit.

### Eastern MWD and Rancho California WD

Eastern MWD currently operates the Temecula Valley Regional WRF. This facility was recently expanded to 12 mgd. Eastern MWD completed construction of the Temecula Valley Effluent Disposal Pipeline that would convey effluent from the Temecula Valley Regional WRF and Rancho California Water District's (RCWD) Santa Rosa WRF to Temescal Wash for disposal. This facility allows Eastern MWD and RCWD to avoid costly nutrient removal facilities required for discharge to the Santa Margarita River. This pipeline passes through EVMWD's service area. Since EVMWD currently contributes approximately 1.5 mgd of flow to RCWD, EVMWD is entitled to this amount of recycled water from this facility. In addition, effluent from the Temecula Valley Effluent Disposal Pipeline may be purchased by EVMWD to meet

future recycled water demands under existing agreements with Eastern MWD. Water from this facility may be used in the Wildomar and Canyon Hills regions and was evaluated as part of the *Wildomar Service Area Recycled Water Master Plan Study* (Kennedy-Jenks Consultants, 2004).

Eastern MWD currently (FY 2003-04) generates approximately 38 mgd of effluent at its four active regional water reclamation facilities. The amount of effluent is expected to grow to 48 mgd by the year 2013. Approximately 60 to 70 percent of the effluent currently generated is sold to agricultural and irrigation users (Eastern MWD, 2004). Consequently, about 10 to 15 mgd (11,200 to 16,800 acre-ft/yr) of effluent is available from Eastern MWD on an annual basis. Based on current operations, Eastern MWD retains as much recycled water as possible within its system, storing excess water for summer use. Once its storage ponds are full, Eastern MWD discharges water to Temescal Wash through the Effluent Disposal Pipeline, primarily in the winter months. **Table 3-9** presents Eastern MWD’s treated wastewater disposal amounts as projected in the draft version of their 2005 UWMP (EMWD, *Draft 2005 Urban Water Management Plan*, 2005). This treated wastewater is assumed to be available to EVMWD for supply of future irrigation demands.

**Table 3-9  
Eastern MWD Disposal of Wastewater**

<b>Disposal</b>	<b>Treatment</b>	<b>2000</b>	<b>2005</b>	<b>2010</b>	<b>2015</b>	<b>2020</b>	<b>2030</b>
Livestream Discharge in acre-ft/yr	Tertiary	0	8,842	7,911	15,433	21,256	26,956
Livestream Discharge in mgd	Tertiary	0	7.9	7.1	13.8	19.0	24.1

**Temescal System**

The water supply for the Temescal System is obtained from a series of wells. There are seven wells that draw from the Elsinore Basin, five wells that draw from the Coldwater basin, and three wells that draw from the Bedford basin. The water is pumped from these wells into the agricultural line, which consists of a series of enclosed gravity pipes, siphons and open canals.

There are four wells in the distribution system, Barney Lee #1 through #4, which are located adjacent to 13200 Temescal Canyon Road in Elsinore, California. These wells, located in the Elsinore basin, pump water directly into the Elsinore line. Station 70, which is also located in the vicinity of Barney Lee wells, just southeast of Lee Lake, pumps into the Elsinore line. Two wells located in Gregory Canyon, Gregory #1 and #2 pump into the Gregory Line, which carries the water to the Elsinore Line. Station 70 along with the two Gregory wells is located in Elsinore groundwater basin.

Station 71, Station 72 and Mayhew Well along the Maitri Road also pump water into the Elsinore Line. Water from these three wells which are located in the Coldwater Basin, is also used for domestic purposes after carrying out chlorination and pumping into the domestic water distribution system. Station 26 Well, also located along Maitri Road in the Coldwater Basin, can pump into the Elsinore Line. Station 26 Well is active, but is prone to frequent mechanical failure.

## Section 3 – Contents of the UWMP

---

Water pumped from these eleven wells listed above is transported through the Elsinore Line to Division Box where it mixes with water pumped from the Division Box Well and Warm Springs Well. The Division Box is located at 24391 Temescal Canyon Road. Both Division Box Well and Warm Springs Well are also located in the Coldwater Basin.

Sump Well (New Sump), Flagler #2, and Flagler #3 are the three wells located in Bedford Groundwater Basin. Sump Well pumps into TWC line, which carries the water to Elsinore Line. Flagler #2 and Flagler #3 pump into the No. 5 Line, which during normal operation carries water to the Division Box.

Both Elsinore Line and No. 5 Line deliver water to the Division Box. This water is further distributed to the customers at the northern end of the Temescal system through the No. 2 Line.

Water obtained from these wells is also supplemented with water received from the Indian Canyon Line and the Horsethief Line. Catchment areas for these lines are located in the Indian Canyon and Horsethief Canyon respectively. These catchment areas capture the surface water runoff from the canyons and transport the water to the Elsinore Line by gravity.

Any unused water in the Temescal System is carried to the No. 2 Reservoir. A pump installed at the reservoir can then pump the water back up the No. 2 Line and serve customers if needed. Water from the Temescal System can potentially serve future irrigation demands in the Elsinore Division, particularly in the Horsethief and Alberhill regions.

### 3.3.3 Projected Potable Water Supplies

Since EVMWD's population is expected to increase in the next 25 years, additional water supply sources are necessary to meet future potable water demands. **Table 3-10** provides a summary of current potable water supplies and projected availability of the current supplies through 2030.

Future water supplies include the construction of a pump station that would increase the TVP capacity and implementation of the Back Basin Groundwater Storage Project (BBGSP) as part of the Elsinore Basin GWMP. **Table 3-11** provides a summary of these water supply sources and their annual average and maximum day availability during average/normal, single-dry, multiple-dry, and wet years. In wet and average years, imported water will be injected for storage in the Elsinore Basin and withdrawn during dry periods. This creates additional water demand during wet and average years, and additional water supply during dry years.

### Groundwater

Due to increasing potable and non-potable water demands, current overdraft of the Elsinore Basin is projected to increase from approximately 4,400 acre-ft/yr to about 6,500 acre-ft/yr in year 2020 in the absence of groundwater management (MWH, 2003a). In addition to the overdraft, water levels are also expected to decline, which could adversely impact water quality and land subsidence in the EVMWD service area. The GWMP and the BBGSP were developed to address the basin's overdraft condition, enhance water quality, and improve water supply reliability by increasing EVMWD's available water supplies to meet future potable water demands. **Table 3-12** provides a summary of the amount of groundwater projected to be

## Section 3 – Contents of the UWMP

pumped from the basin through 2030. The summary does not include the BBGSP, in which groundwater would either be recharged or pumped depending on the variability between normal, wet, and dry years.

**Table 3-10  
Existing Potable Water Supply Projections During a Single Dry Year (acre-ft)**

Water Supply Sources	Capacity (mgd)	2005	2010	2015	2020	2025	2030
<b>Wholesale Water Provider</b>							
Eastern MWD – AVP	24.2	27,100	27,100	27,100	27,100	27,100	27,100
Western MWD – TVP	12.7	14,190	14,190	14,190	14,190	14,190	14,190
Elsinore Groundwater Basin	13.7	5,500	5,500	5,500	5,500	5,500	5,500
San Bernardino Bunker Hill Basin (Transfer to Western MWD) <sup>1</sup>		3,900	3,900	3,900	3,900	3,900	3,900
Rialto-Colton and Riverside North Basins (Transfer to Western MWD) <sup>1</sup>		7,150	7,150	7,150	7,150	7,150	7,150
<b>Supplier Surface Diversions</b>							
Canyon Lake (Natural Runoff)	9.0	2,700	2,700	2,700	2,700	2,700	2,700
Canyon Lake (Purchased from MWDSC Connection WR-31)		5,400	5,400	5,400	5,400	5,400	5,400
Groundwater (TDSA) <sup>2</sup>	1.3	700	700	800	800	800	800
<b>Total</b>	<b>60.9</b>	<b>55,590</b>	<b>55,590</b>	<b>55,690</b>	<b>55,690</b>	<b>55,690</b>	<b>55,690</b>

1. All of the water rights in these basins have been transferred to Western MWD for capacity in the Mills Gravity Pipeline. Since the amounts are already included in the TVP supply, they are not included in the total.
2. For reporting purposes, groundwater supply is limited here to the projected demands in the TDSA, since it is not certain whether this supply (total capacity of 2270 gpm) will be available to the rest of EVMWD.

**Table 3-11  
Future Potable Water Sources**

Water Supply Source	Capacity (mgd)	Average Year (acre-ft/yr)	Single Dry Year (acre-ft/yr)	Multiple Dry Years (acre-ft/yr)	Single Wet Year (acre-ft/yr)
BBGSP <sup>1</sup>	9.0	(800)	9,100	8,800	(6,900)
Terra Cotta Well <sup>2</sup>	1.4	--	--	--	--
TVP Pumping Station <sup>3</sup>	13.8	11,800	11,800	11,800	11,800
Additional Imported MWD water <sup>4</sup>	20.2	11,200	11,200	11,200	11,200
<b>Total</b>	<b>44.4</b>	<b>22,200</b>	<b>32,100</b>	<b>31,800</b>	<b>16,100</b>

- 1- The first half of the project is assumed to come online during 2007, the second half during 2009.
- 2- Yield is included in Elsinore Basin groundwater values (Table 3-10). Expected be online by 2007.
- 3- Expected to be online by 2008.
- 4- MWD is currently evaluating several alternatives to increase imported water treatment and conveyance to Riverside County (see imported water discussion). This supply will be used to meet MDD beyond 2020, at which time a capacity shortage would exist without this additional source.

## Section 3 – Contents of the UWMP

---

**Table 3-12**  
**Amount of Groundwater Projected to be Pumped (acre-ft/yr)**

<b>Groundwater Basin</b>	<b>2005</b>	<b>2010</b>	<b>2015</b>	<b>2020</b>	<b>2025</b>	<b>2030</b>
Elsinore Groundwater Basin	5,500	5,500	5,500	5,500	5,500	5,500
San Bernardino Bunker Hill Basin (Transfer to Western MWD) <sup>1</sup>	3,900	3,900	3,900	3,900	3,900	3,900
Rialto-Colton and Riverside North Basins (Transfer to Western MWD) <sup>1</sup>	7,150	7,150	7,150	7,150	7,150	7,150
<b>% of Total Water Supply</b>	<b>12</b>	<b>11</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>

Reference: MWH, 2003. "Elsinore Basin Groundwater Management Plan" prepared for Elsinore Valley Municipal Water District.

1. All of the water rights in these basins have been transferred to Western MWD for capacity in the Mills Gravity Pipeline. Since the amounts are already included in the TVP supply, they are not included in the % of Total Water Supply calculations.

### Groundwater Management Plan

MWH prepared a Final Draft GWMP for EVMWD in June 2003 (MWH, 2003a). This document was subject to public review for more than one year. Following the required public hearings, the EVMWD Board of Directors adopted the GWMP on March 24, 2005.

The main objective of the GWMP is to provide a guideline that resolves the overdraft problem in the Elsinore Basin. Four alternatives are identified based on analysis of current and projected water supplies and demands. These alternatives aim to achieve a balanced groundwater basin through: 1) a conjunctive use program using 14 dual-purpose injection-extraction wells; 2) spreading basins in Leach and McVicker Canyons with the installation of five new extraction wells; 3) a combination of in-lieu recharge and water conservation; 4) use of recycled water for lake recharge; and 5) a basin monitoring program. The alternatives evaluated are as follows:

- Alternative 1 – Groundwater recharge by dual purpose injection/extraction wells
- Alternative 2 – Groundwater recharge by surface spreading
- Alternative 3 – In-lieu recharge and water conservation
- Alternative 4 – Combination of dual purpose wells, in-lieu recharge, increased water recycling and conservation

Alternative 4 was selected as the recommended plan because it includes water conservation and increased recycled water use for replenishment of Lake Elsinore in addition to groundwater replenishment using dual-purpose (injection-extraction) wells through the BBGSP.

### **Treated Imported Water**

Additional imported water supplies would be obtained from the TVP through construction of the TVP pumping station. Water may also be obtained from the Riverside-Corona Feeder project.

### Temescal Valley Pipeline Pumping Station

The TVP was designed to deliver up to 41 cfs (26.5 mgd). However, achieving this capacity requires a pumping station to increase the hydraulic gradeline sufficiently to overcome

headlosses associated with the higher flow rate. EVMWD has budgeted for the preliminary design of the pumping station as part of its FY 2005-06 budget. Design is expected to begin at that time, with construction completed in FY 2006-07. EVMWD has not located a site for this pump station at this time; one possible site is on a portion of the future Alberhill WRF site.

EVMWD's total usage rights and lease capacity from the TVP connection on the Mills Gravity Pipeline is currently 21 cfs (13.5 mgd). There is currently unallocated capacity in the Mills Gravity Pipeline. EVMWD intends to contract for additional capacity in the Mills Gravity Pipeline with Western MWD when the capacity is required, but has already begun discussions with Western MWD about acquiring the needed capacity. This allows EVMWD to avoid the standby charge Western MWD imposes on unused pipeline capacity.

### Riverside-Corona Feeder

In addition to the TVP, EVMWD is working with Western MWD in the development of the Riverside-Corona Feeder. This project is being planned as a conjunctive use project. This project consists of groundwater production wells and a major feeder pipeline capable of delivering 40,000 acre-ft/yr of groundwater from the Bunker Hill Basin in San Bernardino to water purveyors in the northern part of Western MWD's service area. Such purveyors are primarily dependent on imported water from the MWDSC Mills Treatment Plant for water needed to support future growth. A major goal of the project is to reduce dependence on direct delivery of imported water and thereby contribute to the Upper Santa Ana Watershed effort of becoming self-sufficient under conditions of dry year hydrology.

Both local and imported water are available in the Bunker Hill Basin during periods of wet year hydrology. The project stores water available during wet periods for domestic and municipal purposes during dry years. Through agreement with San Bernardino Valley Municipal Water District (SBVMWD) and MWDSC, high-quality State Water Project water can be purchased during periods of surplus at reduced rates and recharged. In exchange, groundwater can be produced in the pressure zone to consistently meet demands irrespective of the periodic shortages due to dry hydrology. Similarly, abundant rainfall in the watershed can be recharged in replenishment basins or reservoirs when available and produced on demand from wells in the pressure area.

Because the Riverside-Corona Feeder is a long-term project that is in the early stages of development, its capacity is not included in this UWMP.

### Other Imported Water Projects

MWDSC is currently evaluating several alternatives to increase imported water treatment and conveyance capacity in Riverside County (Metropolitan Water District of Southern California, 2005c). Potential projects under consideration include:

- Expansion of the Mills Filtration Plant – This project would require paralleling the Box Springs Feeder to the plant and paralleling the existing Woodcrest Pipeline to Corona.
- Construction of a new Lakeview Filtration Plant – This plant would be located near the Lakeview Mountains between Lake Perris and Diamond Valley Reservoir. A pipeline would

## Section 3 – Contents of the UWMP

---

convey water south to the existing AVP and a lateral would be constructed along Newport Road to convey water to the Canyon Lake area. This plant would likely treat SWP water.

- Construction of a new Eagle Valley Filtration Plant – This plant would be constructed near Lake Mathews and would primarily treat Colorado River water unless MWDSC delivers SWP water to Lake Mathews. Water from this plant would be conveyed to Orange County either through a pipeline along the Santa Ana River canyon or a tunnel under the Santa Ana Mountains. This facility would cross the Temescal Valley Pipeline south of Corona.

MWDSC indicated that a new treatment plant is needed by 2018 to meet projected demands. Although this would not increase the short-term water supply of EVMWD, a new treatment plant would significantly improve EVMWD's long-term water supply. The Lakeview Filtration Plant with a pipeline to the AVP and Canyon Lake would provide EVMWD with access to additional SWP water, thus improving the long-term supply and water quality for EVMWD.

MWDSC has projected that adequate supplies will be available until 2030 for its member agencies, of which EVMWD's projected demands are accounted for through Western MWD. Conveyance of this additional supply of water will be an issue of future discussion for EVMWD.

### 3.3.4 Projected Non-Potable Water Supplies

This section describes EVMWD's plans for additional recycled water supplies to meet non-potable demands in the next 25 years, including the Alberhill WRF and the Regional WRF expansion. Analysis of historical per-connection water usage and wastewater production data shows that 44 percent of potable water usage becomes wastewater. Using the projected water demands, projected wastewater flows are shown in **Table 3-13**. Projected flows for the Alberhill WRF are based on projections from the Alberhill Water and Wastewater Facilities Phasing Study. Flows for the Horsethief Canyon, Railroad Canyon and Southern areas are based on revised projections prepared in 2005 for the EVMWD Wastewater Master Plan.

A portion of the EVMWD's service area is not sewerred. It is assumed that septic flow will be the same as the 2000-2004 average because existing septic areas will convert to sewers at the same rate that new land without access to sewers develops.

#### Regional WRF

The Regional WRF had flows of approximately 4.5 mgd in 2004. The majority of future customers, to whom EVMWD has given will-serve letters, are tributary to the Regional WRF. The additional wastewater flow to the Regional WRF coming from developments with will-serve letters is projected to be approximately 5.7 mgd. An additional 0.3 mgd of committed new wastewater flows would be tributary to RCWD, which may be conveyed to the Regional WRF through the Lakeshore Interceptor Sewer. Therefore, the combined existing and committed wastewater flow to the Regional WRF is projected to be 10.5 mgd by about 2018, which exceeds the existing plant capacity (MWH, 2005a).

Future developments without will-serve letters are expected to further increase the Regional WRF flows to about 14.8 mgd by 2030. To meet the increased flows, EVMWD will begin

planning for expansion of the Regional WRF when the average flow reaches 6 mgd, which is projected to occur in 2007 (MWH, 2005a).

**Table 3-13  
Projected Wastewater Flows by Treatment Facility**

Year	Alberhill WRF (mgd)	Horsethief WRF <sup>1</sup> (mgd)	Railroad Canyon WRF (mgd)	Southern Area <sup>2</sup> (mgd)	Regional WRF (mgd)	Total Treated Flow (mgd)	Septic Flow <sup>2</sup> (mgd)	Total Wastewater (mgd)
2000		0.26	0.95	0.98	3.71	<b>5.9</b>	3.29	<b>9.19</b>
2001		0.32	0.93	0.98	3.79	<b>6.02</b>	2.59	<b>8.61</b>
2002		0.38	0.91	0.99	3.73	<b>6.01</b>	3.52	<b>9.53</b>
2003		0.47	0.88	0.99	4.09	<b>6.43</b>	3.33	<b>9.76</b>
2004		0.43	0.88	1.00	4.46	<b>6.77</b>	3.37	<b>10.14</b>
2005	0.05	0.42	1.15	1.00	5.16	<b>7.78</b>	3.31	<b>11.09</b>
2010	1.14	0.50	1.15	1.04	7.08	<b>10.91</b>	3.31	<b>14.22</b>
2015	1.23	0.50	1.15	1.06	9.33	<b>13.27</b>	3.31	<b>16.58</b>
2020	1.81	0.50	1.15	1.11	11.07	<b>15.64</b>	3.31	<b>18.95</b>
2025	2.40	0.50	1.17	1.14	12.67	<b>17.88</b>	3.31	<b>21.19</b>
2030	2.99	0.50	1.17	1.14	14.76	<b>20.56</b>	3.31	<b>23.87</b>

1- Flows may be treated at the Alberhill WRF in the future.

2- Historical flows are estimated.

The current NPDES permit for the Regional WRF requires that a minimum of 0.5 mgd of flow be discharged to Temescal Wash for environmental habitat needs (Regional Water Quality Control Board (Regional Board), 2005). Therefore, the total recycled water available from the Regional WRF will be approximately 14.2 mgd in 2030. When necessary, the treated effluent will be used to replenish Lake Elsinore to maintain a minimum lake level of 1,240 ft MSL. Otherwise, the water will be utilized for non-potable water uses or discharged to Temescal Wash. Discharges to the wash are expected to occur primarily during the winter months of wet years when water is not required for lake augmentation and non-potable demands are low.

### **Alberhill WRF**

The new Alberhill WRF will serve the Alberhill development and may ultimately replace the existing Horsethief Canyon WRF. The plant will be constructed in approximately 1 mgd increments, with a full capacity of 5.4 mgd. According to the Alberhill Water and Wastewater Facilities Phasing Plan, the plant is scheduled to be online in 2008 (Kennedy-Jenks Consultants, 2005b). Treated effluent from the plant will be used for irrigation in the Horsethief Canyon and Alberhill areas. Surplus water will be discharged to Temescal Creek or reused in EVMWD's Temescal Division. The projected flow to the Alberhill WRF is expected to be 3.0 mgd by 2030 (including flows above .5 mgd to Horsethief WRF that will be diverted to Alberhill WRF). Developments with will-serve letters represent 0.46 mgd of the projected flow in 2030.

## Section 3 – Contents of the UWMP

### Temescal Pipeline System

This system delivers non-potable water to users, primarily agricultural customers, in the Temescal Valley. EVMWD has plans to convert the Temescal Pipeline System to non-potable water use, which will free up groundwater for possible potable use.

### 3.4 RELIABILITY OF SUPPLY

*Water Code Section 10631(c): Describe the reliability of each of the water supply and vulnerability to seasonal or climatic shortage, to the extent practicable, and provide data for each of the following:*

- (1) *An average water year.*
- (2) *A single dry water year.*
- (3) *Multiple dry water years.*

*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.*

EVMWD's water supplies are surface water from Canyon Lake, groundwater pumping, and imported water from MWD via the TVP and AVP. Water supply from these sources is predicted to be fully reliable through 2030. **Table 3-14** summarizes the water supply reliability during average/normal, single-dry, multiple-dry, and wet years.

**Table 3-14**  
**Local Supply Reliability (acre-ft/yr)**

Water Year Type	Surface Water (acre-ft/yr)	Groundwater (acre-ft/yr)	Imported Raw Water (acre-ft/yr)	Treated Imported Water (acre-ft/yr)	% of Normal
Average/Normal Year	2,700	5,500	5,810	34,300	100
Wet Year	6,600	5,500	1,850	34,300	100
Single Dry-Year	700	5,500	7,650	34,300	100
Multiple Dry-Years	1,900	5,500	6,470	34,300	100

#### 3.4.1 Imported Water Supply Reliability

MWDSC and its member agencies utilize an Integrated Resources Planning (IRP) approach to determine the appropriate level of supply reliability and establish cost-effective approaches to achieve that reliability goal. The 1996 IRP process identified a Preferred Resource Mix that relied on a diverse mix of resources to achieve a goal of 100 percent reliability for full service water demands through 2020. The IRP established regional targets for conservation, local supplies, SWP supplies, Colorado River supplies, groundwater banking, and water transfers. In 2001, the IRP Update was completed which extended the reliability outlook and resources plan

to provide 100 percent reliability through the year 2030. As part of its update, MWDSC increased its targets for conservation, water recycling and groundwater recovery, SWP and Colorado River supplies, and Central Valley storage and transfers. The goal of these increased targets is to ensure a minimum 10 percent planning reserve or buffer between supplies and demands in the event that certain supplies cannot be developed as planned.

In 2003, MWDSC prepared a report on its water supply reliability for use in water supply assessments, which is incorporated into this Plan by reference. Based on MWDSC's reliability analysis, the existing Colorado River and SWP water supplies are sufficient to meet its projected demands in wet and normal years through 2030. In single and multiple dry years, existing MWDSC supplies are adequate through about 2019. However, MWDSC has an aggressive program to develop additional Colorado River and SWP supplies and local storage programs. These programs include water transfers such as the Imperial Irrigation District-San Diego County Water Authority transfer, the Palo Verde Irrigation District land management program, off-aqueduct storage in desert groundwater basins, Delta improvements, transfers with other SWP contractors, and southern California conjunctive use programs. Development of 25 percent of the planned capacity of these additional programs would be sufficient to meet the projected imported demands. Consequently, imported water is considered to be fully reliable through 2030 (Metropolitan Water District of Southern California, 2003). Summary tables from MWDSC's analysis are presented in **Appendix C**.

Since that report was prepared, MWDSC has continued to implement new projects and reassess its supply reliability. In September 2005, MWDSC issued its draft Regional UWMP (Metropolitan Water District of Southern California, 2005d). Although this document has not been finalized, it updates the reliability analyses presented in the 2003 report. MWDSC indicates that its existing supplies are now adequate to meet the projected demands in all hydrologic conditions through 2030. Implementation of planned supplies increases reliability and maintains an adequate reserve.

In addition to its supply planning activities, MWDSC developed the Water Surplus and Drought Management (WSDM) Plan (Metropolitan Water District of Southern California, 1999). The WSDM Plan is based on the strategy of storing surplus supplies in wet periods for use during drought periods. It consists of five water surplus stages and seven water shortage stages that define progressive actions to be taken depending on available supplies. For example, in a Stage 1 shortage, MWDSC would make withdrawals from Diamond Valley Lake storage. As the severity of shortage increases, MWDSC would withdraw water from out-of-region storage, suspend deliveries to local long term storage and replenishment programs, withdraw water from groundwater storage and SWP terminal reservoirs, and call for extraordinary conservation measures. Water allocations for full-service customers would not be implemented until a Stage 7 Shortage is reached. The overriding goal of the WSDM is to never reach a Stage 7 Shortage. MWDSC staff provides its board of directors with water supply and demand forecast reports throughout each year which help determine appropriate management actions. Based on its water supply development in conjunction with the WSDM Plan, MWDSC's supplies for full-service deliveries are expected to be fully reliable through 2030. **Table 3-15** presents the anticipated surface water deliveries from the Canyon Lake WTP.

## Section 3 – Contents of the UWMP

**Table 3-15  
Anticipated Surface Water Deliveries with Supplemental Imported Water**

Water Year Type	San Jacinto River Water (acre-ft/yr)	Imported Water – WR-31 (acre-ft/yr)	Total (acre-ft/yr)	Maximum Capacity (mgd)
Wet Year	6,550	1,850	8,400	9.0
Normal Year	2,590	5,810	8,400	9.0
Single Dry Year	750	7,650	8,400	9.0
Multiple Dry Years	1,930	6,470	8,400	9.0

### 3.5 TRANSFER AND EXCHANGE OPPORTUNITIES

*Water Code Section 10631(d): Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.*

On August 23, 2001, EVMWD entered into a reciprocal use agreement with Western MWD that provided EVMWD with a conditional right to use 9 cfs of capacity in the Mills Gravity Pipeline. In return for the imported water capacity, EVMWD granted Western MWD entitlement to water acquired from the Meeks and Daley rights (EVMWD, 2001a).

A separate lease agreement between EVMWD and Western MWD provides EVMWD with up to 5 cfs (3.2 mgd or 3,620 acre-ft/yr) of additional capacity from the Mills Gravity Pipeline on a temporary basis (EVMWD, 2001b). On August 8, 2002, the EVMWD Board of Directors approved a lease agreement amendment to lease an additional 7 cfs (4.5 mgd or 5,068 acre-ft/yr) from the Mills Pipeline, increasing the total lease capacity to 12 cfs (7.8 mgd or 8,688 acre-ft/yr) (EVMWD, 2002a). In addition to the lease capacity from the Mills Pipeline, EVMWD also has an “exchange of assets” with the Temescal Water Division to supply a capacity of 9 cfs (5.8 mgd or 6,516 acre-ft/yr) (EVMWD, 2002b). Thus, EVMWD contractually has the water rights for up to 21 cfs (13.6 mgd or approximately 15,200 acre-ft/yr) of water from the TVP.

**Table 3-16  
Transfers and Exchanges (acre-ft/yr)**

Transfer Agency	Transfer or Exchange	Short Term	Proposed Quantities	Long Term	Proposed Quantities
Western MWD	Exchange	Yes	15,200	Yes	15,200

### 3.6 WATER USE BY CUSTOMER TYPE

*Water Code Section 10631(e):*

- (1) *Quantify, to the extent records are available, past and current water use, over the same 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.*

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

This section discusses existing and projected potable water demands in EVMWD’s Elsinore service area.

**3.6.2 Existing Water Demands**

As of January 2005, EVMWD serves a total of 33,400 potable service connections. EVMWD also serves 30 non-potable connections with recycled water, meeting an annual demand of 254 acre-ft in 2004. EVMWD also uses recycled water to maintain the level of Lake Elsinore. **Table 3-17** presents the historical water use by class of user since 1999.

**Table 3-17  
Historic Water Use By Class**

<b>Year</b>	<b>Water Use Sectors</b>	<b>Single Family</b>	<b>Multi-family</b>	<b>Comm-ercial</b>	<b>Indus-trial</b>	<b>Instit. / Govt.</b>	<b>Dedicated Irrigation</b>	<b>Recycled Water</b>	<b>Total</b>
<b>1999</b>	# of accounts	24,739	395	820	30	53	693	6	26,736
	Deliveries (AF)	13,566	646	3,704	1,234	274	6,558	20	26,002
<b>2000</b>	# of accounts	25,639	406	851	30	55	716	6	27,703
	Deliveries (AF)	15,379	714	2,045	1,758	282	7,348	38	27,563
<b>2001</b>	# of accounts	26,577	407	893	30	60	747	12	28,726
	Deliveries (AF)	15,108	704	2,197	1,537	282	6,782	26	26,636
<b>2002</b>	# of accounts	28,038	408	935	31	68	780	26	30,286
	Deliveries (AF)	16,600	716	2,261	1,617	293	7,241	86	28,813
<b>2003</b>	# of accounts	29,647	410	969	31	67	828	29	31,981
	Deliveries (AF)	16,903	732	2,479	1,565	253	7,526	160	29,618
<b>2004</b>	# of accounts	31,262	412	1,021	31	70	916	30	33,742
	Deliveries (AF)	18,642	703	2,225	1,548	213	6,796	254	30,381

## Section 3 – Contents of the UWMP

---

### Existing Potable Water Demands

EVMWD’s historical potable water demands are presented in **Table 3-18**. The historical potable water demands are calculated using the total production from EVMWD’s potable water sources: groundwater wells, surface water treated at Canyon Lake WTP, and imported water purchased from MWDSC through Western MWD and conveyed through the TVP and from Eastern MWD through the AVP. The historical annual water demand was normalized to remove the effects of cool wet years and hot dry years by computing the normalized demand per service connection. Multiplying the normalized consumption per connection by the number of connections gives the “normal” demand for each year. The variation between the actual and normal water demands represents the range in demand due to weather variations. By identifying the maximum variations of the actual demands to the normal demands over the recorded 12 year period (1992-2004), it was estimated that dry year annual demands are at 9.2 percent above average year annual demands, and wet year annual demands are at 10 percent below average year demands. A maximum day demand (MDD) to average day demand (ADD) peaking factor of 2.0 is used based on previous studies. Based on the water usage trends, EVMWD’s existing (2004) average demand is estimated at 27,175 acre-ft/yr. **Figure 3-6** shows the historical potable water demand and the normalized demand.

EVMWD provides wholesale water to the Farm Mutual Water Company and the EWD. In 2004, EVMWD provided 421 and 594 acre-feet of wholesale water, respectively, to these two customers. Future build-out demand for the Farm Mutual Water Company is included with the projections in **Table 3-19**. The future demand for EWD is assumed to be the same as the existing demand.

### Existing Recycled Water Demands

EVMWD currently has non-potable water customers in the Canyon Lake, Horsethief Canyon and Lake Elsinore areas. Non-potable customers in Canyon Lake are served with tertiary-treated recycled water from the Railroad Canyon WRF. Non-potable customers in Horsethief Canyon are served with tertiary-treated recycled water from Horsethief Canyon WRF. All effluent from these two plants is used for non-potable irrigation demands, except during wet weather flows when influent to the Railroad Canyon WRF is bypassed to the Regional WRF for treatment and disposal. Historical recycled water use is summarized in **Table 3-19**. Dry year demands are assumed to be 9 percent above average year demands and wet year demands are assumed to be 10 percent below average year demands. Existing and future recycled water demands are discussed in detail in **Section 6**.

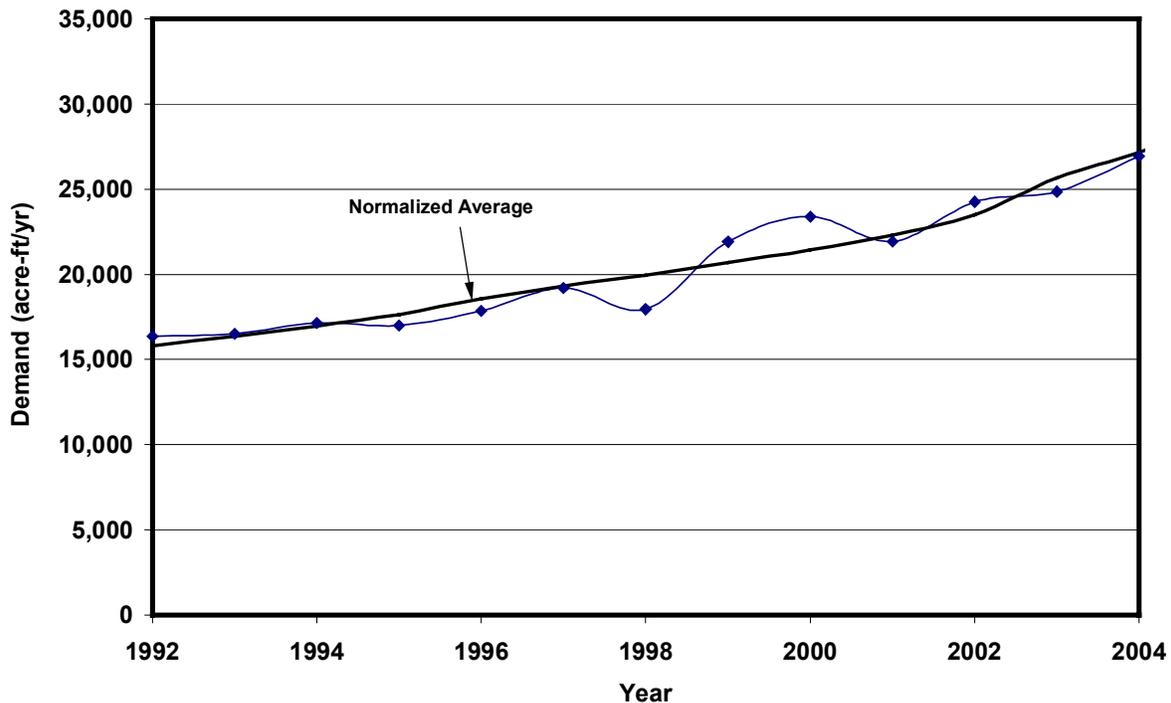
An additional water demand that impacts EVMWD’s water supply balance is lake stabilization. Based on a settlement agreement between EVMWD and the City of Lake Elsinore, EVMWD must release water into Lake Elsinore when the water surface elevation is less than 1,240 ft (Superior Court, 2003). Lake replenishment is only necessary in normal and dry years, as there is sufficient surface runoff in wet years to maintain adequate lake levels. Based on hydrologic analyses prepared for EVMWD and the Lake Elsinore-San Jacinto Watershed Authority (LESJWA), maintaining the Level of Lake Elsinore requires an average of about 5,900 acre-ft/yr of replenishment water and up to 10,300 acre-ft/yr during dry years (MWH, 2005b).

**Table 3-18  
Historic Potable Water Demands**

Year	Actual Potable Demands (acre-ft/yr)	Number of Service Connections	Demand per Connection (acre-ft/yr)	Normalized Demand per Connection (acre-ft/yr)	Normal Potable Demands (acre-ft/yr)
1992	16,365	19,499	0.839	0.810	15,793
1993	16,505	20,185	0.818	0.810	16,356
1994	17,137	20,923	0.819	0.811	16,961
1995	16,994	21,758	0.781	0.811	17,646
1996	17,848	22,868	0.780	0.811	18,555
1997	19,195	23,790	0.807	0.812	19,311
1998	17,953	24,576	0.731	0.812	19,958
1999	21,902	25,453	0.860	0.812	20,680
2000	23,392	26,358	0.887	0.813	21,424
2001	21,915	27,427	0.799	0.813	22,303
2002	24,251	28,861	0.840	0.814	23,480
2003	24,851	31,537	0.788	0.814	25,668
2004	26,939	33,374	0.807	0.814	27,175

Note: Flows are normalized based on the number of service connections in the Elsinore Division that year and the linear trend of usage per service connection.

**Figure 3-6  
Historical Potable Water Demands**



## Section 3 – Contents of the UWMP

**Table 3-19  
Historical Recycled Water Demands (by Fiscal Year)**

Fiscal Year	Canyon Lake <sup>1</sup> (acre-ft/yr)	Horsethief Canyon <sup>1</sup> (acre-ft/yr)	Regional WRF to Lake Elsinore <sup>2</sup> (acre-ft/yr)	Eastern MWD to Lake Elsinore <sup>2</sup> (acre-ft/yr)
1991	415.2	52.2	0	0
1992	352.9	54.3	0	0
1993	417.4	96.1	0	0
1994	500.3	112.0	0	0
1995	328.1	128.9	0	0
1996	375.4	129.2	0	0
1997	385.5	147.9	0	0
1998	256.6	181.7	0	0
1999	429.4	268.5	0	0
2000	352.9	293.7	0	0
2001	414.0	345.6	0	0
2002	379.3	379.6	0	0
2003	435.5	418.3	2,018	1,498
2004	529.1	435.2	1,101	4,999

References:

- 1- EVMWD, Comprehensive Annual Financial Reports, 2002 and 2004
- 2- Viega-Nascimento and Anderson, 2004

In January 2002, EVMWD was issued a NPDES permit to discharge up to 4,480 acre-ft/yr of recycled water from EVMWD’s Regional WRF and from Eastern MWD’s recycled water system into Lake Elsinore for lake stabilization under a two-year pilot project. The permit was extended until January 28, 2005 when the pilot project concluded. From program inception in June 2002 until its conclusion, over 10,000 acre-ft of recycled water was used for lake stabilization. In March 2005, EVMWD was issued a revised NPDES permit for the Regional WRF that allows it to treat up to 8 mgd and discharge up to 7.5 mgd into Lake Elsinore for lake stabilization, 0.5 mgd to Temescal Wash for wetland enhancement and any remaining effluent for non-potable use (Regional Water Quality Control Board (RWQCB), 2005).

### 3.7 PROJECTED POTABLE WATER DEMANDS

Water demand projections were developed as part of EVMWD’s previous UWMP (Montgomery Watson/Maddaus Water Management/The Weber Group, 2000) and the Distribution System Master Plan (DSWP) (MWH, 2002). These DSMP projections were based on a detailed evaluation of adopted and proposed specific plans for new development and anticipated in-fill development. These projections were further updated in District-Wide Water Supply Assessment (MWH, 2005a). In this report, the water demand projections were modified based on recent changes in the projected timing of some developments and projected demands were updated to reflect land use changes. The projections were also updated to reflect recycled water use for irrigation in future developments (discussed separately in **Section 6**). **Table 3-20** presents the current estimated potable water demands for future developments.

## Section 3 – Contents of the UWMP

---

Previous reports only projected demands out to the year 2025. For developments beyond 2025, the DSMP and WSA projections were extended to 2030 to include an additional 5 years of optional projection. In extending the demand projections, development plans were analyzed to determine whether development would occur into 2025-2030. For any such developments, facilities plan documents (if available) were consulted to determine demand projections for 2025-2030. In cases where such documentation was not available, the demand projections were extended to 2030 using the projection trend through 2025.

A demand projection for the Southerly (by John Laing Homes) at Lake Elsinore development was prepared in 2003 in conjunction with a water supply assessment (MWH, 2003b). Demand for the proposed Lumos development (East Lake Specific Plan Amendment No. 8) which is in the environmental review process has also been included based on proposed land use information (City of Lake Elsinore, 2005).

The anticipated timing and demand associated with development in the Alberhill community facilities district (CFD) was modified based on recent planning reports on the formation of the CFD (Kennedy-Jenks Consultants, 2005b). Projected potable demands for Alberhill Ranch were modified according to a Water Master Plan developed for the area (Hunsaker & Associates, 2003). From this report, potable demands were estimated by calculating total demand minus the demands for slopes and parks that could be met with recycled water. For the area surrounding Alberhill Ranch and CFD, acreage and duty factors were obtained from land use files in order to calculate projected demand. Development is projected to occur from 2005 to 2015 for Alberhill Ranch and CFD, and 2015 to 2030 for the Alberhill surroundings.

The projected potable demands for Ramsgate (including Rosetta Canyon) were modified according to a facilities plan performed for the region (Hunsaker & Associates, 2004). The study area for this report extends beyond the actual Ramsgate boundaries. This service area was generally determined to be that area tributary by gravity flow to the north side of the I-15 between State Route 74 (Central Avenue) and 2<sup>nd</sup> Street and extending north to Highway 74 and Ethanac Road. The entire region is included in the demand calculations.

Potable demand projections for the TDSA were included based upon information from the DSMP (MWH, 2001b). The demands from the DSMP were projected to 2020, which is assumed to be the buildout demand for the TDSA.

## Section 3 – Contents of the UWMP

**Table 3-20  
Projected Potable Water Demands for Major Developments in  
EVMWD Service Area 2005-2030**

Years	Area Description	Total Demand (acre-ft/yr)	% developed by 2030	Projected demand by 2030 (acre-ft/yr)
<b>Inside Current EVMWD Boundary</b>				
2005-2010	Canyon Hills	1,326	100%	1,326
2005-2030	East Lake <sup>4</sup>	6,999	69%	4,838
2005-2025	The Farm/Sunset Ridge	1,473	100%	1,473
2005-2030	Lake Edge	316	45%	128
2005-2015	Alberhill CFD <sup>1</sup>	2,296	100%	2,296
2005-2015	Alberhill Ranch <sup>2</sup>	871	100%	871
2005-2030	CFD 98-2	3,212	100%	3,212
2005-2025	West Lake	233	100%	233
2005-2030	La Laguna	688	100%	688
2005-2030	Wildomar	2,057	40%	823
2005-2010	Tuscany Hills	317	100%	317
2010-2030	Ramsgate and Surroundings <sup>3</sup>	4,239	100%	4,239
2005-2025	Canyon Lake Infill	427	100%	427
2005-2030	Murietta/Cal Oaks	347	100%	347
2010-2025	North Peak	678	100%	678
2015-2030	Alberhill Surroundings <sup>5</sup>	6,500	50%	3,250
2005-2030	Other Infill Locations	12,043	40%	4,817
2005-2015	Greer Ranch and Others	399	100%	399
2005-2020	TDSA	152	100%	152
<b>Subtotal</b>		<b>44,617</b>		<b>30,514</b>
<b>Outside Current EVMWD Boundary</b>				
2005-2010	Lusk	82	100%	82
2010-2030	Country Club Heights	2,077	30%	623
<b>Subtotal</b>		<b>2,159</b>		<b>705</b>
<b>TOTAL</b>		<b>46,776</b>		<b>31,219</b>

Reference: Except as otherwise noted, modified from MWH, 2002. *Distribution System Master Plan*, prepared for EVMWD, May 2002.

1. Kennedy Jenks, *Draft Technical Memorandum – Alberhill Water & Wastewater Facilities Phasing Plan*, June 2005.
2. Hunsaker & Associates, *Water and Sewer Master Plans for Alberhill Ranch*, May 9, 2003.
3. Hunsaker & Associates, *Water, Wastewater & Recycled Water Facilities Plan*, July 27, 2004.
4. Includes Southerly and LUMOS.
5. Calculated for this report from acreage and duty factors obtained from the District's land use files.

## Section 3 – Contents of the UWMP

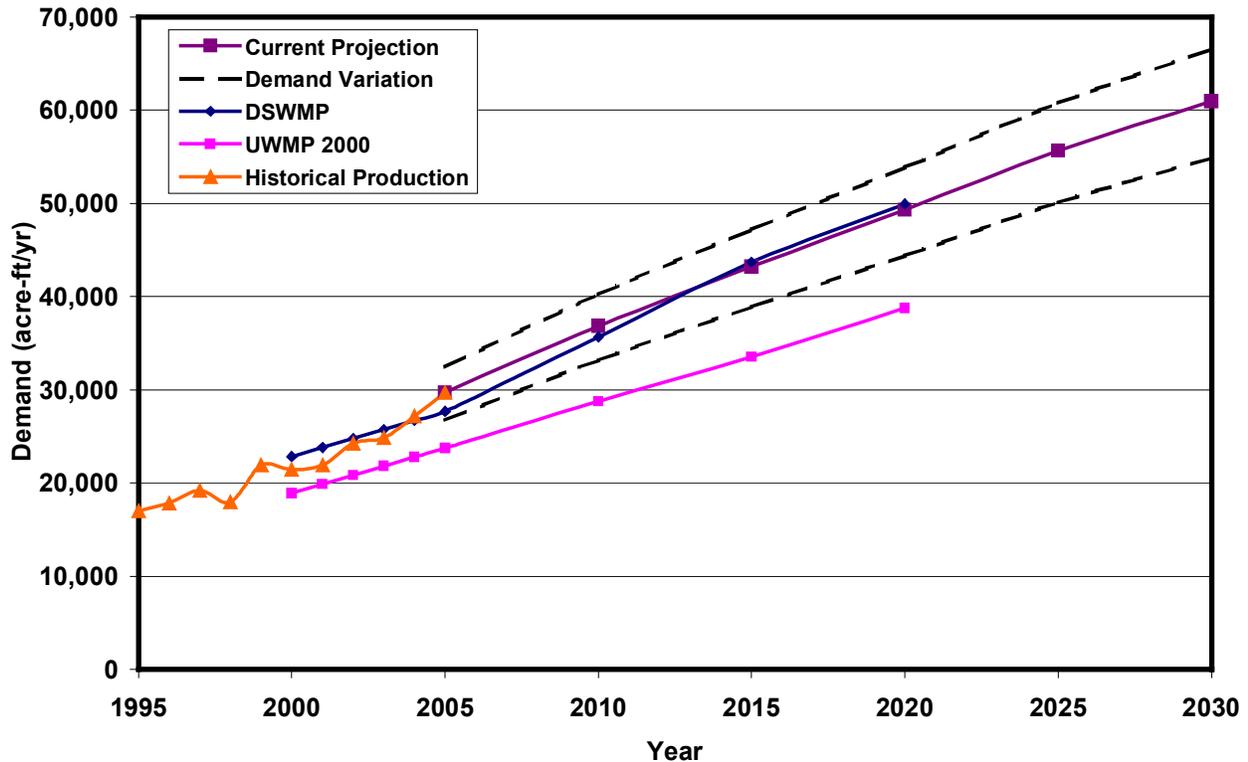
The revised potable water demand projections are shown in **Table 3-21** and **Figure 3-7**. The revision accounts for conversions from existing potable to recycled use (see **Section 6** for more detail). Total potable water demands are expected to nearly double between 2005 and 2030.

**Table 3-21**  
**Revised Potable Water Demand Projections**

Year	Average Annual Demand (acre-ft/yr)	Below Normal Annual Demand (acre-ft/yr)	Above Normal Annual Demand (acre-ft/yr)	Average Day Demand (mgd)	Maximum Day Demand (mgd)
2005	29,716	26,744	32,450	26.5	53.1
2010	35,833	32,250	39,130	32.0	64.0
2015	41,186	37,067	44,975	36.8	73.6
2020	47,305	42,575	51,657	42.3	84.5
2025	53,630	48,267	58,564	47.9	95.8
2030	58,923	53,031	64,344	52.6	105.3

Note: MDD is estimated to be 2.0 times ADD.

**Figure 3-7**  
**Comparison of Total Water Demand Projections**



Future water demands are projected for developments that EVMWD has already committed to serve through will-serve letters. The letters are valid for a fixed time period (normally one year)

## Section 3 – Contents of the UWMP

---

and are subject to a set of conditions. Water duties developed for the DSMP as shown in **Table 3-22** are used for demand projections and tracking future growth.

A typical single-family home is considered to be one equivalent dwelling unit (EDU). The demand of one EDU is 400 gal/day. Conversion factors for each land use category to EDU are also shown in **Table 3-22**.

**Table 3-22**  
**Water Duties**

Land Use Category	Water Duties	Duties Unit	Conversion to EDU	EDU Conversion Unit
Low Density Residential (less than 4 DU/acre)	500	gal/day/DU	1.25	DU/EDU
Medium Density Residential (4 to 12 DU/acre)	400	gal/day/DU	1.0	DU/EDU
High Density Residential (greater than 12 DU/acre)	300	gal/day/DU	0.75	DU/EDU
Commercial	3,000	gal/day/acre	8.0	acres/EDU
Parks/Irrigation	4,000	gal/day/acre	10.0	acres/EDU
Schools	60	gal/day/student	0.15	students/EDU

### Proposed Developments

EVMWD has already committed to serve 128 developments through will-serve letters (EVMWD, 2005b). Based on the water duties in **Table 3-22**, the projected total future average-year potable water demand for these developments is 14,244 acre-ft/yr (12.72 mgd). These demand projections represent the build-out demand for all developments that EVMWD has committed to serve. Proposed developments without will-serve letters are not included in this total, but are included in the 25-year projections. Under state law, developments having more than 500 units or the equivalent demand must have water supply assessments performed for them to confirm EVMWD's ability to meet their projected demand. EVMWD will perform a water supply assessment when new large developments are proposed that have not been issued will-serve letters, but their demand is included in the demand projections shown in **Table 3-21**. In order to perform the assessment, EVMWD would review the projected demand of the proposed development and make a finding that it is consistent with the projected demands and available supplies..

Projected demands for each of the developments with will-serve letters are calculated using the following methods:

- where development or region-specific water master plans have been developed, the demand projections were used directly from these documents
- where the number of lots was known, demand projections were calculated based on the density of the development (dividing number of lots by total acreage) and number of lots
- the Lake Elsinore Unified School District was contacted to determine the number of students for new schools or additional students for school expansions

- where no other data was available, the demand projections were calculated based on the number of acres and potential land use

When completed, these developments will add 12.72 mgd or 14,244 acre-ft/yr of new water demands in average-demand years.

As shown in **Table 3-23** over 38 percent of the committed demand (4.85 mgd or 5,433 acre-ft/yr) is under construction and over 23 percent (2.95 mgd or 3,305 acre-ft/yr) is in the design/plan check process. In addition to these committed demands, 17,064 acre-ft/yr (15.22 mgd) of additional new demand is expected to occur over the next 25 years as a result of developments that have not entered the planning process. The committed demands presented in **Table 3-23** are based upon EVMWD’s monthly engineering project status as of July 2005 and include those committed demands that will be converted to recycled demands in the future.

**Table 3-23  
Summary of Committed Water Demand by Development Status**

Development Status	Number of Developments	Acres	Total EDUs	Demand (gal/day)
Proposed	2	240	415	175,000
Planning	54	5,520	10,880	4,740,000
Design - Plan Check	18	2,140	4973	2,951,000
Under Construction	54	4,645	11,520	4,849,000
<b>TOTAL</b>	<b>128</b>	<b>12,546</b>	<b>27,788</b>	<b>12,715,000</b>

Reference: EVMWD Monthly Engineering Project Status, July 2005 (EVMWD, 2005a).

### 3.7.1 Summary of Projected Demands

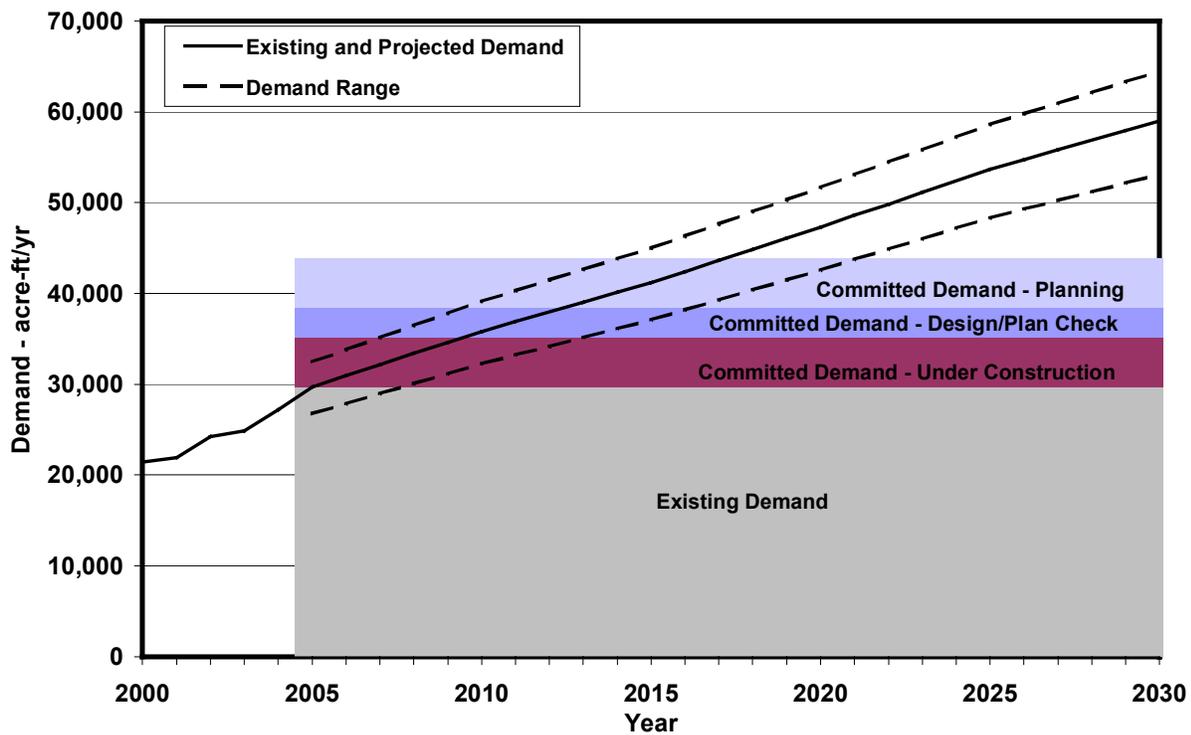
**Table 3-24** presents the projected potable water demand in 2030. By 2030, annual demands in average years are expected to be about 59,000 acre-ft/yr, which includes a demand reduction due to the conversion of existing users to recycled water (see **Section 6**). It is assumed that there is no reduction due to passive conservation. In dry years, the potable water demand may increase to about 64,300 acre-ft/yr. The MDD is based on 2.0 times the ADD in normal water years and is projected to be 105.3 mgd. This table shows that committed demands with will-serve letters represent about 24 percent of the future demand with additional planned growth representing about 29 percent of the future demand. The projected growth in demand is shown on **Figure 3-8**. **Figure 3-9** shows a comparison of the existing and projected average day and maximum day demands. Committed demand represents projected growth through about 2017. As mentioned before, it is expected that additional developments will enter the planning process over time, increasing future demands.

## Section 3 – Contents of the UWMP

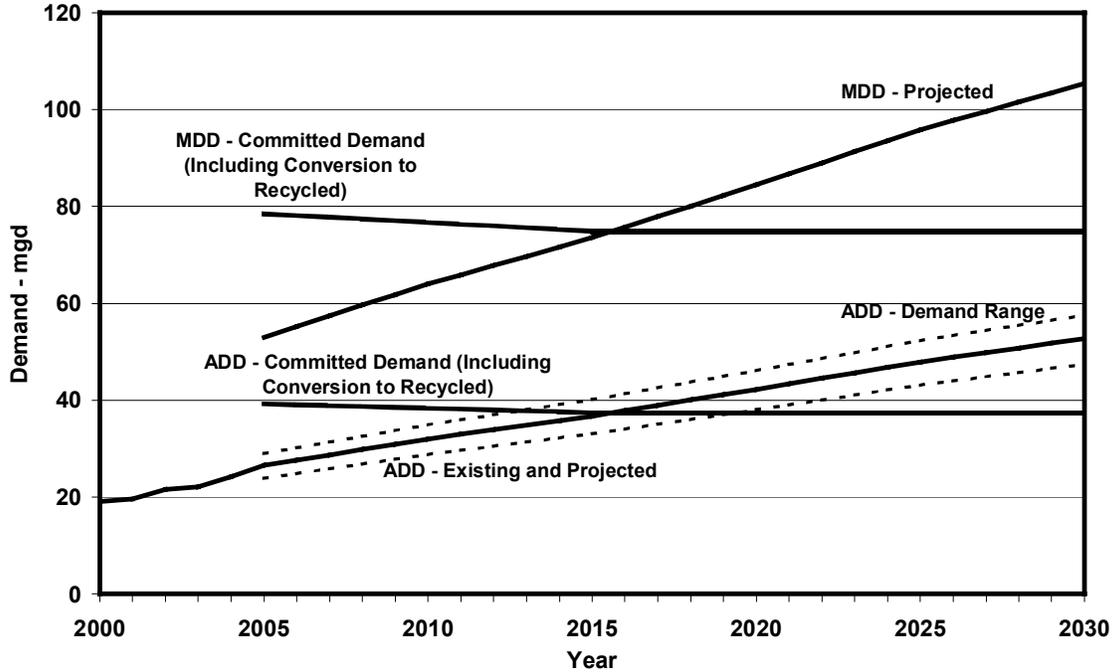
**Table 3-24**  
**Summary of Potable Water Demands – 2030**

Demand Category	Normal year (acre-ft/yr)	Below Normal Year (acre-ft/yr)	Above Normal Year (acre-ft/yr)	ADD (mgd)	MDD (mgd)
Existing Demands	29716	26744.4	32450	26.5	53.1
Conversion to Recycled	-2013	-1812	-2198	-1.8	-3.6
Committed Demands	14244	12820	15554	12.7	25.4
Remaining future Demand	16976	15278	18538	15.2	30.3
<b>Total Annual Demand</b>	<b>58923</b>	<b>53031</b>	<b>64344</b>	<b>52.6</b>	<b>105.3</b>

**Figure 3-8**  
**Existing and Projected Potable Water Demand 2000-2030**



**Figure 3-9  
Existing and Projected Average Day and Maximum Day Water Demand  
2000-2030**



The total projected demand in 2030 is shown in **Table 3-25**. See **Section 6** for a detailed discussion of non-potable demands.

**Table 3-25  
Summary of Existing and Planned Future Water Demands – 2030**

Demand Category	Average Year (acre-ft/yr)	Wet Year (acre-ft/yr)	Dry Year (acre-ft/yr)
Potable Demands	58,923	53,031	64,344
Non-Potable Demands	14,830	8,037	20,052
<b>Total Demand</b>	<b>73,753</b>	<b>66,378</b>	<b>80,538</b>

**3.8 PLANNED WATER SUPPLY PROJECTS AND PROGRAMS**

*Water Code Section 10631(h): 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 protected 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, other than the demand management programs identified pursuant to paragraph (1) of subdivision (f), that the urban water supplier may implement to increase the amount of the*

## Section 3 – Contents of the UWMP

---

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.

Planned water supply projects and programs for EVMWD were discussed earlier in this section. **Table 3-11** summarizes the water supply source, the capacity, and the projected available water supply for an average year, a single dry year, multiple dry years, and a single wet year.

### 3.9 DEVELOPMENT OF DESALINATED WATER

*Water Code Section 10631(i): Describe the opportunities for development of desalinated water, including, but not limited to, ocean water, brackish water, and groundwater, as a long-term supply.*

EVMWD has no plans for the development of desalinated water for use as a long-term water supply, as indicated in **Table 3-26**. EVMWD is not located near an ocean water supply, and the groundwater extracted from the EVMWD's wells does not have a high enough salinity content to require desalination.

**Table 3-26**  
**Opportunities for Desalinated Water**

Sources of Water	Yield (acre-ft/yr)	Start Date	Type of Use	Other
N/A	N/A	N/A	N/A	N/A

### 3.10 CURRENT OR PROJECTED SUPPLY INCLUDING WHOLESALE WATER

*Water Code section 10631(k): Urban water suppliers that rely 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).*

EVMWD currently receives imported water, as needed, for its retail service area from MWDSC through Western MWD. **Table 3-27** summarizes the demand projections provided to MWDSC from Western MWD for the period of 2005 to 2030.

**Table 3-28** summarizes the information provided to Western MWD from MWDSC on the planned sources and quantities in their Regional Water Management Plan (Metropolitan Water District of Southern California, 2005b). MWDSC's average supply capability for all its member agencies exceeds the estimated demand.

**Table 3-27  
Average Demand Projections Provided to Wholesale Suppliers (acre-ft/yr)**

<b>Wholesaler</b>	<b>2010</b>	<b>2015</b>	<b>2020</b>	<b>2025</b>	<b>2030</b>
Estimated Retail Demand	34,450	39,435	45,186	51,152	56,436
Estimated Wholesale Demand	1,383	1,751	2,119	2,478	2,487

1- Retail demand includes water loss (Western MWD, 2005. *Western MWD 2005 Urban Water Management Plan*, October 14, 2005.)

**Table 3-28  
Wholesaler Identified and Quantified Existing and  
Planned Sources of Water Available (acre-ft/yr)**

<b>Wholesaler Sources</b>	<b>2010</b>	<b>2015</b>	<b>2020</b>	<b>2025</b>	<b>2030</b>
<b>MWDSC</b>					
<b>Current Supplies</b>					
Colorado River	711,000	678,000	677,000	677,000	677,000
California Aqueduct	1,772,000	1,772,000	1,772,000	1,772,000	1,772,000
In-Basin Storage	0	0	0	0	0
<b>Supplies Under Development</b>					
Colorado River	0	0	0	0	0
California Aqueduct	185,000	185,000	240,000	240,000	240,000
Transfers to Other Agencies	0	0	0	0	0
<b>Maximum Supply Capability<sup>1</sup></b>	<b>2,688,000</b>	<b>2,600,000</b>	<b>2,654,000</b>	<b>2,654,000</b>	<b>2,654,000</b>

1- Represents expected supply capability for resource programs for all of MWD (Western MWD, 2005. *Western MWD 2005 Urban Water Management Plan*, October 14, 2005.)

As previously discussed, MWDSC can maintain reliable supplies under the conditions that have existed in past dry periods through the period of 2005 to 2030. **Table 3-29** summarizes MWDSC’s expected reliability for periods of drought. Potential inconsistencies in MWDSC supplies are summarized in **Table 3-30**.

**Table 3-29  
Wholesale Supply Reliability – Percent of Normal Supply**

<b>Wholesaler Source</b>	<b>Single Dry-Year</b>	<b>Multiple Dry Years</b>		
		<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>
MWDSC	100	100	100	100

Reference: Western MWD, 2005. *Western MWD 2005 Urban Water Management Plan*, October 14, 2005.

## Section 3 – Contents of the UWMP

---

**Table 3-30**  
**Factors Resulting in Inconsistency of Wholesaler's Supply**

<b>Name of Supply</b>	<b>Legal</b>	<b>Environmental</b>	<b>Water Quality</b>	<b>Climatic</b>
<b>MWDSC</b>	Competition for New Supplies	Endangered Species	<ul style="list-style-type: none"><li>• Contamination of Supply</li><li>• More Stringent Water Quality Standards</li></ul>	Drought Conditions

Reference: Western MWD, 2005. *Western MWD 2005 Urban Water Management Plan*, October 14, 2005.

# Section 4

## Determination of DMM Implementation

---

*Water Code Section 10631.5: The department shall take into consideration whether the urban water supplier is implementing or scheduled for implementation, the water demand management activities that the urban water supplier identified in its urban water management plan, pursuant to Section 10631, in evaluating applications for grants and loans made available pursuant to Section 79163. The urban water supplier may submit to the department copies of 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.*

### 4.1 DMM IMPLEMENTATION

EVMWD became a signatory to the California Urban Water Conservation Council (CUWCC) MOU regarding Urban Water Conservation in California on December 11, 2002. A copy of the 2004 Retail Best Management Practices Report, 2004 Wholesale Best Management Practices Report, 2003-2004 Coverage Report, and Total Savings Report are presented in **Appendices D** to provide documentation of Demand Management Measure (DMM) implementation.

### 4.2 DEMAND MANAGEMENT MEASURES

*Water Code Section 10631 (f & j):*

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

- (1) A description of each water demand management measure that is currently being implemented, or scheduled for implementation, including the steps necessary to implement any proposed measures, including, but not limited to, all of the following:*
  - (a) Water survey programs for single-family residential and multifamily residential customers.*
  - (b) Residential plumbing retrofit.*
  - (c) System water audits, leak detection, and repair.*
  - (d) Metering with commodity rates for all new connections and retrofit of existing connections.*
  - (e) Large landscape conservation programs and incentives.*
  - (f) High-efficiency washing machine rebate programs.*
  - (g) Public information programs.*
  - (h) School education programs.*
  - (i) Conservation programs for commercial, industrial, and institutional accounts.*
  - (j) Wholesale Agency Programs.*
  - (k) Conservation pricing.*
  - (l) Water conservation coordinator.*
  - (m) Water waste prohibition.*

## Section 4 – Determination of DMM Implementation

---

- (n) *Residential ultra-low-flush toilet replacement programs.*
  - (2) *A schedule of implementation for all water demand management measures proposed or described in the plan.*
  - (3) *A description of the methods, if any, that the supplier will use to evaluate the effectiveness of water demand management measures implemented or described under the plan.*
  - (4) *An estimate, if available, of existing conservation savings on water use within the supplier's service area, and the effect of the savings on the supplier's ability to further reduce demand.*
- (j) Urban water suppliers that are members of the California Urban Water Conservation Council and submit annual reports to that council in accordance with the "Memorandum of Understanding Regarding Urban Water Conservation in California," dated September 1991, may submit the annual reports identifying water demand management measures currently being implemented, or scheduled for implementation, to satisfy the requirements of subdivisions (f) and (g).*

### 4.2.2 Review of Water Demands

Conservation measures should target water use sectors that have the highest demand or where water savings can be achieved at low cost.

The major focus of the conservation program should be residential water use, both single and multi-family, because they comprise almost 64 percent of the total water use in EVMWD's service area in 2004 (EVMWD, 2004b). Many of the homes are now built with water-efficient plumbing fixtures to comply with state and local ordinances, so conservation of outdoor water uses should be emphasized.

### 4.2.3 List of Best Management Practices

The intent of the BMPs is to encourage water utilities to evaluate a number of measures and use those that are appropriate as the cornerstone of their conservation program. All customer classes are targeted by BMPs to make a comprehensive water conservation program.

The current list of BMPs in California contains 14 practices or measures. The list developed in 1991 by the California Urban Water Conservation Council contained 16 measures. The list was changed in 1997 when four measures were dropped, two new ones added, and revisions were made to others.

## Section 4 – Determination of DMM Implementation

**Table 4-1** lists the BMPs from the MOU with their targeted customer categories (EVMWD, 2004b).

**Table 4-1  
Best Management Practices with Targeted Customer Categories**

Measure	Targeted Customer Categories
1. Water Survey Programs for Single-Family Residential and Multi-Family Residential Customers	Single-Family and Multi-Family Residential
2. Residential Plumbing Retrofit	Pre-1992 Single-Family and Multi-Family Residential Dwellings
3. System Water Audits, Leak Detection, and Repair	System
4. Metering with Commodity Rates for all New Connections and Retrofit of Existing Connections	All
5. Large Landscape Conservation Programs and Incentives	Irrigation Accounts
6. High-Efficiency Washing Machine Rebate Programs	New & Existing Residential
7. Public Information Programs	All
8. School Education Programs	Residential
9. Conservation Programs for Commercial, Industrial, and Institutional (CII) Accounts	CII
10. Wholesale Agency Assistance Programs	All (not applicable to retail customers)
11. Conservation Pricing	All
12. Water Conservation Coordinator	All
13. Water Waste Prohibition	All
14. Residential ULFT Replacement Programs	Residential

EVMWD has had an active water conservation program ever since the 1986-92 drought. The program will continue to expand as staffing and budget allows. Further discussion of the above listed BMPs and the steps EVMWD is taking to implement them is provided below.

In addition to starting implementation on all BMPs, the MOU requires that signatories achieve a specified level of coverage for each of the BMPs (EVMWD, 2004a). For most of the BMPs, there are multiple criteria to be checked in order to meet coverage requirements. For instance in BMP 1 “Water Survey Programs for SFR and MFR Customers”, there are two conditions for evaluating coverage. One is that EVMWD must offer surveys to at least 20 percent of the number of all SFR and MFR accounts each reporting period. The second is that by the year 2012, surveys must be completed for at least 15 percent of all SFR and MFR accounts that existed in 2002. **Table 4-4** summarizes the criteria for coverage, whether coverage criteria are met, and required actions for EVMWD to achieve full compliance with the requirements of the MOU. If full coverage has already been achieved, “N/A” (not applicable) is indicated.

The duration allowed for achieving full coverage varies by BMP. The maximum duration is 10 years from the date that initial implementation is required. Since the latest year that implementation must start is 2005, the maximum duration for full implementation ends in 2015.

## **Section 4 – Determination of DMM Implementation**

---

However, the expiration of agencies' signatures on the MOU is 10 years from the date of signature, which is December 2012 for EVMWD. After that point, each agency is to renew its commitment to the MOU on an annual basis. Therefore, it is recommended that EVMWD plan to achieve full coverage of each BMP no later than fiscal year (FY) 2012.

### **BMP 1 – Water Survey Programs for Single-Family Residential (SFR) and Multi-Family Residential (MFR) Customers**

Implementation of BMP 1 was required to begin by December 10, 2004. The coverage requirements are: (1) Adopt a targeting and marketing strategy by December 10, 2004; (2) Offer surveys to 20 percent of SFR and 20 percent of MFR accounts each reporting period; and (3) Complete surveys for 15 percent of SFR and 15 percent of MFR accounts existing in the signatory year within 10 years of the implementation date, or by 2014. In 2002, there were 28,038 SFR accounts and 408 MFR accounts. EVMWD is considered on track if surveys are completed for 1.5 percent of accounts by 2005, 3.6 percent by 2006, 6.3 percent by 2007, 9.6 percent by 2008, 13.5 percent by 2009, and 15 percent by 2010.

EVMWD offers an indoor and outdoor water survey to existing single-family and multi-family residential customers with high water use through the services of the Riverside-Corona Resource Conservation District (RCD). The top 20 percent of water users are targeted for surveys to achieve the most significant water savings. Home water surveys have also been offered to attendees of EVMWD's annual landscape workshops. Surveys predominantly focus on outdoor water use, identifying water waste, improving water use efficiency, and preparing a customized lawn irrigation schedule. Indoor surveys are also routinely performed during the in-home verifications of the purchase of high-efficiency washing machines and ultra-low-flush toilets. In July 2004, a conservation brochure was designed and distributed to assist customers in performing their own home water survey.

EVMWD has also been successful in involving the community with home water surveys. In addition to school-based education programs, students are asked to complete a home water survey with their family and discuss the results. Service groups like the Boy Scouts have also participated in conducting water surveys as part of a community service program.

EVMWD implemented their targeting and marketing strategy in 1991 for SFRs only. They offered 150 and completed 8 surveys in 2004. In order to meet full coverage requirements, EVMWD must complete surveys for 4,151 more SFR accounts and 61 more MFR accounts.

### **BMP 2 – Residential Plumbing Retrofit**

Implementation of BMP 2 was required to begin by July 1, 2004. EVMWD must distribute or directly install low-flow showerheads to 10 percent of SFR accounts and 10 percent of MFR accounts constructed prior to 1992 during each reporting period. These showerhead conversion requirements continue until 75 percent is reached for both SFR and MFR accounts. In 1992, there were 19,729 SFR and 347 MFR accounts.

Homes built before 1980 generally do not have low-flow showerheads, low-flush toilets, or faucet aerators. Even some homes built prior to 1992 may not have these devices because of

## **Section 4 – Determination of DMM Implementation**

---

poor plumbing code enforcement. The U.S. Energy Policy Act of 1992 has required 1.6 gallons per flush (gpf) toilets, 2.5 gpm showerheads, and 2.5 gpm faucets since January 1, 1994. As homeowners remodel older homes or desire to replace plumbing fixtures, these older homes will, over many years, be brought up to code.

EVMWD implemented a targeting and marketing strategy for distributing low-flow devices in 1997. MWSDSC launched a showerhead give-away program and distributed toilet water displacement devices, which EVMWD assisted customers to participate in. In January 2004, EVMWD launched its own showerhead give-away program for all customers whose homes were built before 1994. Customer notification is achieved through press releases, flyers included with bills, cable TV public service announcements, and promotions at community outreach events. This program is totally funded by EVMWD.

Recently, EVMWD has sent a conservation letter and kits designed by Niagara Conservation to high water users. These kits include water-efficient gardening equipment retrofits, such as low-flow nozzles.

To-date, EVMWD has distributed 127 showerheads to SFR accounts and 19 to MFR accounts. In order to meet full coverage requirements, EVMWD must distribute 14,670 more showerheads to SFR accounts and 241 more to MFR accounts.

### **BMP 3 – System Water Audits, Leak Detection, and Repair**

Implementation of this BMP was required to begin by July 1, 2004. EVMWD must do the following: (1) Track and report unaccounted-for-water losses and take action if losses exceed 10 percent. (2) Maintain a leak detection program.

Some unmetered water uses that contribute to unaccounted-for-water are authorized by EVMWD. Unmetered uses include flushing hydrants by fire departments or water use in unmetered EVMWD buildings. The remainder of unaccounted-for water is caused by system leaks or meter inaccuracy. The purpose of this measure is to reduce leaks from older systems and from broken pipes, joints, or valves. This BMP requires no action if unaccounted-for water is less than 10 percent (other than studies to verify that it is). Starting in 1995 after system rehabilitation efforts by EVMWD, unaccounted-for water dropped below 10 percent and has remained below 10 percent since then. EVMWD monitors unaccounted-for water by comparing water produced with water sales system-wide on a monthly basis (EVMWD, 2004. *Comprehensive Annual Financial Report for the year ended June 30, 2004*, December 2004.). Should the unaccounted-for water exceed 10 percent on an annual basis, EVMWD will undertake a system water audit to identify leaks. If cost-effective, EVMWD will increase leak detection and repair efforts and a meter replacement program if not already in-place, until the unaccounted-for water is reduced below 10 percent.

EVMWD has included funds in its most recent budget to increase the budget for the leak detection program. It is anticipated that reducing unaccounted-for-water leak detection and improving repair efforts will be a major focus of EVMWD during 2006.

## **Section 4 – Determination of DMM Implementation**

---

Since EVMWD does not have an unaccounted-for-water loss of more than 10 percent, currently in compliance and not required to perform an audit.

Although EVMWD does not have an official leak detection program, it has equipment to detect leaks in selected areas on an as-needed basis. EVMWD plans to implement an official leak detection program in 2006.

### **BMP 4 – Metering with Commodity Rates for all New Connections and Retrofit of Existing Connections**

Implementation of BMP 4 was required to begin by July 1, 2005. EVMWD must meet the following conditions to comply with the coverage requirements: (1) Be on track to retrofit 100 percent of its unmetered accounts within 10 years of the implementation date; (2) Meter all new connections and bill by volume-of-use; and (3) Conduct feasibility study for retrofitting mixed-use CII meters.

EVMWD has no unmetered accounts aside from those authorized for usage. EVMWD also requires meters for all new connections and bills by volume-of-use. Therefore, they are in compliance with this requirement.

EVMWD has retrofitted 916 mixed-use CII accounts with irrigation meters in 2004. However, they report that they “have no method in place to identify the amount of CII accounts with mixed-use meters.” (EVMWD, 2004b). MWH recommends that EVMWD implement a survey of their CII accounts to identify mixed-use meters and perform the required feasibility study, although this is not required to maintain compliance.

### **BMP 5 – Large Landscape Conservation Programs and Incentives**

Implementation of BMP 5 was required to begin by July 1, 2005. EVMWD must meet the following conditions to comply with the coverage requirements: (1) Complete budgets for 90 percent of irrigation accounts by July 1, 2007; (2) Maintain an incentive program for retrofitting irrigation meters; and (3a) Offer surveys to 20 percent of CII accounts with mixed-used meters each reporting period. Since EVMWD has no method in place to identify the amount of CII accounts with mixed use meters, the total number of CII accounts was used in calculations; (3b) Complete surveys for 15 percent of CII accounts with mixed-use meters existing in the signatory year within 10 years (2015) of implementation date.

EVMWD will be on track if surveys are completed for 1.5 percent of accounts by the end of first reporting period (2006) following the implementation date, 3.6 percent by 2007, 6.3 percent by 2008, 9.6 percent by 2009, 13.5 percent by 2010, and 15 percent by 2011. Agencies can instead meet this requirement by maintaining a program to retrofit mixed-use accounts with dedicated irrigation meters. Agencies can also give mixed-use accounts irrigation water budgets that are based on evapotranspiration rates to serve as reference. EVMWD should provide notices during each billing cycle to these accounts comparing their budgets to actual use.

This measure is designed to reduce peak demand by improving outdoor irrigation efficiency. The MOU identifies all public and private irrigators of landscapes larger than one acre as

## **Section 4 – Determination of DMM Implementation**

---

candidates for this measure. EVMWD provides non-residential customer support and incentives to improve their landscape water use efficiency. The support varies depending on whether the account has a dedicated landscape meter, which is common for larger sites.

Large landscape water audits have been promoted through the local school district and through the City of Lake Elsinore. Audits were performed by the RCD upon request from EVMWD. Large landscape water users can take advantage of this water audit program, along with the six-course landscape professionals training program “Protector del Agua.” This course teaches water efficiency to landscape maintenance workers.

Most large landscape water users are public parks, schools, and locations with large public common areas. During 2005, the Tuscany Hills development was over-watering its large common areas because its standard irrigation controllers required users to calculate complex irrigation schedules and run-times that did not adjust to changing weather conditions. EVMWD offered a \$62,000 rebate to the development to replace its standard irrigation controllers with weather-based evapotranspiration (ET) controllers, which automatically adjust the amount of water applied to the landscape based on weather conditions. Replacing the standard irrigation controllers with weather-based ET controllers resulted in reduced irrigation in the Tuscany Hills development.

EVMWD implemented a marketing/targeting strategy for landscape surveys in 1994. They have offered 6 surveys and completed none. If the survey results indicate a need for ET-controller devices, EVMWD provides information on them. They also provide information on rebates for other recommended items if available. Large-landscape water audits are provided by RCD. EVMWD has 916 dedicated irrigation meters and they do not provide ETo-based water budgets.

In order to achieve compliance, EVMWD must develop ETo-based water budgets for 770 of its dedicated irrigation accounts and complete surveys for 79 more of its dedicated irrigation accounts.

### **BMP 6 – High-Efficiency Washing Machine Rebate Programs**

Implementation of BMP 6 was required to begin by July 1, 2004. EVMWD must offer a financial incentive (rebate) from July 1, 2004 to Jan 1, 2007. Agencies must achieve a coverage goal equal to the number of dwelling units in the service area multiplied by 0.048. Points are awarded based on the number of rebates awarded towards a certain type of washing machine. EVMWD is considered on track if they earn points as a percentage of the CG according to the following schedule: 10 percent by January 1, 2005, 30 percent by July 1, 2005, 50 percent by January 1, 2006, 75 percent by July 1, 2006, and 100 percent by January 1, 2007.

EVMWD encourages customers to purchase high-efficiency (side-loading) washing machines. These washing machines can reduce water usage by about one-third, but are currently more expensive than conventional washing machines. EVMWD works with MWD to promote these machines and pass through the \$110 MWDSC washing machine rebate to its customers. EVMWD also includes an additional \$15 rebate to their customers, resulting in a total rebate of \$125 per machine (EVMWD, 2004b). Availability of the rebate is advertised in water bill inserts twice per year. Large home improvement stores including Home Depot, Lowe’s, and Sears have

## **Section 4 – Determination of DMM Implementation**

---

all been informed about the appliance rebate program and are an integral part of promoting the rebate program to their customers.

The total number of dwelling units was obtained using GIS analysis of SCAG census projections in the EVMWD service area, resulting in an estimate of 32,822 households in 2007, which was used to calculate the coverage goal of 1,575 points. Using conservative assumptions for earning points, EVMWD would earn 1 point for each rebate for a High-Efficiency Washing Machines (HEW) with a water factor value between 8.5 and 9.5. EVMWD reported awarding 375 rebates as of June 1, 2004, equal to 375 points. In order to achieve full compliance, EVMWD needs to award 1,145 more rebates by 2007.

### **BMP 7 – Public Information Programs**

Implementation of BMP 7 was required to begin by July 1, 2004. EVMWD must implement and maintain a public information program to promote and educate customers about water conservation.

EVMWD has a program and therefore is in compliance. EVMWD will continue current programs, which include:

- Co-sponsoring the annual City of Lake Elsinore Neighborhood Prize Contest.
- Participating in the statewide Water Awareness Month.
- Putting additional and updated conservation information on EVMWD's web site.
- Continuing to promote water conservation with water bill inserts in the spring and summer.

The public information program consists of legislative and community outreach programs, including an extensive water education program directed to public schools, and conservation programs directed to residential, commercial, and institutional customers. Annual landscape design classes are given to residential customers, along with water audits to commercial and industrial customers. Monthly billing inserts, website access, tours, and outreach through community events are also provided. All of the residential rebate programs are promoted on a regular basis. Community outreach is also extended with a sponsorship program that includes donations of bottled water which carry the conservation message to thousands of customers per year.

### **BMP 8 – School Education Programs**

Implementation of BMP 8 was required to begin by July 1, 2004. EVMWD must implement and maintain a school education program to promote water conservation.

Long-term results to eliminate wasteful water-use habits are best achieved by the education of youth. EVMWD has had a school education program since 1987 and has a good relationship with the local school district. The program utilizes educational and theatrical presentations, poster contests, printed educational materials, and science fair support to target school-age children. They, in turn, inform their parents of the importance of water conservation in Southern

## **Section 4 – Determination of DMM Implementation**

---

California. Teaching children to respect the value of water helps them grow into responsible adults with a conservation ethic. Educational material meets state education frameworks and grade appropriate materials are distributed to grade levels K-3, 4-6, 7-8, and high school. EVMWD plans to continue its program at current levels and look for new material to keep the program current and interesting to students on an on-going basis with the pretext of expanding the program over the next few years. Thus, EVMWD is in compliance with the requirements of this BMP.

### **BMP 9 – Conservation Programs for Commercial, Industrial, and Institutional (CII) Accounts**

Implementation of BMP 9 is required to begin by July 1, 2005. EVMWD must do the following: (1) Identify and rank by use commercial, industrial, and institutional accounts and (2) EVMWD has an option to survey 10 percent of CII accounts within 10 years of the implementation date, to reduce CII water use by 10 percent of the 1997 CII water use within 10 years of the implementation date (by 2015), or do both. EVMWD is exempt from the part of this BMP requiring a 3-year-long CII ULFT program because it signed the MOU after July 1, 2001.

Based on EVMWD's reporting to the CUWCC, it has chosen to reduce water use. EVMWD has identified and ranked by use the CII accounts. EVMWD is considered on track if savings are 0.5 percent of baseline water use by 2006, 2.4 percent by 2007, 4.2 percent by 2008, 6.4 percent by 2009, 9.0 percent by 2010, and 10 percent by 2011.

EVMWD reports that this program is currently not being implemented due to the low CII development in EVMWD's service area. However, the employment growth rate is projected to be higher than the population growth rate over the next twenty years. Nearly all of these businesses have or are anticipated to have the low-flow plumbing fixtures and other water-saving equipment. Depending on the nature of the commercial establishments that develop into the area, the opportunities of implementing this BMP are expected to increase in the future. In the meantime, EVMWD plans to track the consumption of CII customers on a monthly basis and urge those with significant irrigation water use to install irrigation meters (BMP 4).

Current CII customers receive information about the availability of incentives. If CII customers are interested, EVMWD provides programs offered through MWDSC, including the "Save A Buck" program. MWDSC offers this program to help businesses become more aware of the water-saving technologies available, and to provide the necessary financial incentives to encourage their implementation. The "Save A Buck" program helps to lower water and sewer bills, reduces energy costs, results in environmental benefits, and improves water efficiency through rebates for replacing toilets, spray valves, cooling conductivity controllers, and commercial clothes washers.

EVMWD estimated that since 1991, it has saved 0.35 acre-ft/year from site-verified actions taken by EVMWD and 3.14 acre-ft/yr from non-site-verified actions. To achieve full compliance, it must reduce water use by a total of 127 acre-ft by 2010.

## **Section 4 – Determination of DMM Implementation**

---

### **BMP 10 – Wholesale Agency Assistance Programs**

Implementation of BMP 10 was required to begin by July 1, 2005. EVMWD must meet the following condition to comply with the coverage requirements: Offer financial support, technical support, staff resources, and regional programs to the retail end-users of its wholesale customers. EVMWD is in compliance.

EVMWD supplies a small amount of wholesale water to three retail water utilities. EVMWD implemented this BMP by allowing the water retailers' customers to directly participate in EVMWD's programs. For example, they are eligible for retrofit kits, audits, and rebates just as EVMWD's retail customers are. EVMWD is in compliance with this BMP.

### **BMP 11 – Conservation Pricing**

Implementation of BMP 11 is required to begin by July 1, 2004. EVMWD must implement a conservation pricing rate structure.

EVMWD has an increasing block structure in place for its residential customers, which use most of the water. All other customers pay for water on a uniform rate basis (EVMWD, 2004b). EVMWD is in compliance with this BMP and intends to keep this rate structure in place during the time horizon of this UWMP.

### **BMP 12 – Water Conservation Coordinator**

Implementation of BMP 12 was required to begin by July 1, 2004. EVMWD must staff and maintain the conservation coordinator position and provide support staff as necessary.

EVMWD has designated a part-time (50 percent) water conservation coordinator supported by administrative staff as needed. Duties of the coordinator are:

- Coordination and oversight of conservation programs and BMP implementation.
- Preparation and submittal of the progress reports to various parties.
- Communication and promotion of water conservation issues to senior agency management, coordination with operations and planning staff, preparation of an annual conservation budget, and preparation of water conservation plan updates.

EVMWD plans to hire a full-time conservation staff member by the end of 2005 to expand the conservation programs in EVMWD's service area. EVMWD hired O'Reilly Communications to assist with public notifications, billing inserts, and mass mail-outs, which has increased the water conservation budget.

EVMWD is in compliance with this BMP.

### **BMP 13 – Water Waste Prohibition**

Implementation of BMP 13 was required by July 1, 2004. EVMWD must enact and enforce measures prohibiting gutter flooding, single-pass cooling systems in new connections, non-

## **Section 4 – Determination of DMM Implementation**

---

recirculating systems in all new conveyor car wash and commercial laundry systems, and non-recycling decorative water fountains.

EVMWD has ordinances prohibiting water waste in times of declared water shortage, but it does not meet the requirements of this BMP. Currently, EVMWD requests customers to voluntarily install non-single pass cooling systems, recirculating conveyor car wash systems, and recirculating commercial laundry systems. There was a court case in Escondido whereby a resident challenged a city water softener ordinance and won. As a result, most water agencies in California, including EVMWD, cannot enforce such prohibitions.

EVMWD plans to enact and enforce the measures defined in this BMP in 2006 (EVMWD, 2004b).

### **BMP 14 – Residential Ultra-Low-Flush Toilet (ULFT) Replacement Programs**

Implementation of BMP 14 was required to begin by July 1, 2004. EVMWD must meet the following conditions to comply with the coverage requirements: (1) Implement a ULFT replacement program at least as effective as requiring replacement on resale within 10 years of the implementation date. (2) Achieve water savings from residential ULFT replacement programs equal to 90 percent of the Exhibit 6 (Assumptions and Methodology for Determining Estimates of Reliable Water Savings from the Installation of ULF Toilets) coverage requirement. EVMWD did not provide any data for Exhibit 6 calculations. The 2003-2004 Coverage Report “treats an agency with missing base year data required to complete the Exhibit 6 coverage requirement as out of compliance.” However, some of the required information could be estimated from data found on the web sites of Lake Elsinore, the US Census Bureau, and the California Department of Finance (see Appendix D). Reasonable assumptions were made for data that could not be obtained.

EVMWD has implemented a limited toilet replacement program offering incentives to existing residential customers who replace their high water-use toilets with typically ULF toilets. ULFTs reduce toilet-flushing water to about 1.6 gpf. This is a significant water saving from an average of 5-7 gpf for regular toilets and 3.5 gpf for low-water-use toilets. Since January 1, 1994, the federal Energy Policy Act of 1992 has required toilets to use 1.6 gpf. In 2004, EVMWD awarded rebates to 135 SF accounts and 4 MF accounts. To achieve full compliance, it needs to award more rebates to be as effective in achieving water savings as requiring replacement on resale.

Because the Energy Policy Act requires the sale of low-flow fixtures, there is a significant chance of so-called “free-riders” with this measure. Moreover, it is not cost-effective to buy a ULFT without the MWDSC rebate. This is especially true if the overlap with natural replacement is considered. Therefore, EVMWD will pass the \$60 MWDSC toilet rebate to its customers (EVMWD, 2004b). If customers install a dual-flush toilet, this rebate increases to \$80. Since the objective is to convince customers who were not planning to replace their toilet to do so, customers remodeling their homes by permit, who are already obligated to use the 1.6 gpf toilets, will not be eligible. There is some administration cost for EVMWD, including program administration, publicity, and rebate distribution tracking. The availability of rebates is

## Section 4 – Determination of DMM Implementation

promoted on local cable TV, via regularly issued press releases, at community outreach events, and in the lobby of EVMWD’s headquarters.

### 4.3 SCHEDULE OF DMM IMPLEMENTATION

**Table 4-2** presents the implementation schedule required by the MOU for each BMP, as well as the actual dates of implementation for retail and wholesale customers, if known.

**Table 4-2  
Implementation Schedule**

Measure	Required Implementation Date	Retail Implementation Actual Date	Wholesale Implementation Actual Date
1. Water Survey Programs for Single-Family Residential and Multi-Family Residential Customers	December 10, 2004	On Sept. 15, 1991	NA
2. Residential Plumbing Retrofit	July 1, 2004	On Jan. 1, 1997	NA
3. System Water Audits, Leak Detection, and Repair	July 1, 2004	To be Implemented in 2006	Not Implemented
4. Metering with Commodity Rates for all New Connections and Retrofit of Existing Connections	July 1, 2005	Implemented	NA
5. Large Landscape Conservation Programs and Incentives	July 1, 2005	Implemented Jan. 1, 1994	NA
6. High-Efficiency Washing Machine Rebate Programs	July 1, 2004	Implemented	NA
7. Public Information Programs	July 1, 2004	Implemented	Implemented
8. School Education Programs	July 1, 2004	Implemented Mar. 18, 1991	Implemented Mar. 18, 1991
9. Conservation Programs for CII Accounts (Exception: EVMWD is not subject to the 3-Year Interim CII ULFT Program because it became a signatory after July 1, 2001.)	July 1, 2005	Implemented	NA
10. Wholesale Agency Assistance Programs	July 1, 2005	N/A	Implemented
11. Conservation Pricing	July 1, 2004	Implemented	Implemented
12. Water Conservation Coordinator	July 1, 2004	Implemented Mar. 18, 1991	Implemented Mar. 18, 1991
13. Water Waste Prohibition	July 1, 2004	To be implemented in 2006	NA
14. Residential ULFT Replacement Programs	July 1, 2004	Implemented Jan. 2001	NA

Sources: (1) California Urban Water Conservation Council (CUWCC), 2004. Memorandum of Understanding Regarding Urban Water Conservation in California, March 10, 2004.  
(2) EVMWD, 2004. 2004 Best Management Practice Report, June 1, 2004.

## Section 4 – Determination of DMM Implementation

### 4.4 CONSERVATION SAVINGS

**Table 4-3** presents a summary of estimated savings-to-date in acre-feet for each of the BMPs, as reported by EVMWD to CUWCC in the Total Savings Report (EVMWD, 2005c). Water savings are estimated only for those BMPs for which savings can be quantified.

**Table 4-3**  
**Estimated Actual Water Savings**

BMP Measure	Water Savings (acre-ft/yr)
1. Water Survey Programs for Single-Family and Multi-Family Residential Customers	3
2. Residential Plumbing Retrofit	1
4. Metering with Commodity Rates for all New Connections and Retrofit of Existing Connections	0
5. Large Landscape Conservation Programs and Incentives	5
6. High-Efficiency Washing Machine Rebate Programs	14
9. Conservation Programs for CII Accounts	8
9a. CII ULFT Water Savings	0
14. Residential ULFT Replacement Programs	87
<b>Total</b>	<b>117</b>

Source: EVMWD, 2005. Total Savings Report, 2005.

### 4.5 COVERAGE COMPLIANCE

The initial term of the MOU commenced on September 1, 1991 and will be in effect for ten years, after which it is automatically renewed on an annual basis as to all signatories unless a signatory withdraws. EVMWD signed the MOU in December 2002.

**Table 4-4** summarizes the coverage criteria, actions implemented by EVMWD, and actions to be completed in order to meet the requirements of the MOU for each BMP.

presents a plan for completing implementation of the BMPs in the coming fiscal year 2005-2006 through 2011-2012. This period was selected to coincide with the remainder of the 10-year period commencing from EVMWD's signature of the MOU. The plan draws from coverage requirements and measures of schedule performance in the MOU, as well as actual coverage reported to-date by EVMWD.

also presents a projection of water savings resulting from implementation of the recommended plan. The per-unit savings used in this table are based upon the recently-completed Urban Water Management Plan for the City of Ontario (MWH, 2005c). The City of Ontario is also a signatory to the MOU and the service area is considered comparable in character and growth to EVMWD for BMP implementation planning purposes. It should be noted that water savings cannot be quantified for many of the BMPs.

**THIS PAGE INTENTIONALLY LEFT BLANK**

Table 4-4  
BMP Coverage

BMP	On Track?	Coverage Criteria	Action completed by EVMWD	Actions To Meet Requirements by 2012
1. Water Survey Programs for Single-Family Residential and Multi-Family Residential Customers	NO	<ol style="list-style-type: none"> <li>Adopt survey targeting and marketing strategy on time</li> <li>Offer surveys to 20 percent of SFR accounts and 20 percent of MFR units during report period</li> <li>Be on track to survey 15 percent of SFR accounts and 15 percent of MFR accounts existing in signatory year within 10 years of implementation start date.</li> </ol>	<ol style="list-style-type: none"> <li>Implemented SFR targeting and marketing strategy on 9/15/1991.</li> <li>Offered 150 SFR surveys in 2004.</li> <li>Completed 8 SFR surveys in 2004. Note: 28,038 SFR and 408 MFR accounts existed in 2002.</li> </ol>	<ol style="list-style-type: none"> <li>Implement MFR targeting and marketing strategy</li> <li>Offer surveys to 20% of SFR and 20% of MFR each reporting period</li> <li>Complete surveys for 4,151 more SFR accounts and 61 more MFR units.</li> </ol>
2. Residential Plumbing Retrofit	NO	<ol style="list-style-type: none"> <li>The agency has demonstrated that 75 percent of SFR accounts and 75 percent of MFR units constructed prior to 1992 are fitted with low-flow showerheads.</li> <li>An enforceable ordinance requiring the replacement of high-flow showerheads and other water use fixtures with their low-flow counterparts is in place for the agency's service area.</li> <li>The agency has distributed or directly installed low-flow showerheads and other low-flow plumbing devices to not less than 10 percent of single-family accounts and 10 percent of multi-family units constructed prior to 1992 during the reporting period.</li> </ol>	<ol style="list-style-type: none"> <li>Implemented targeting and marketing strategy for distributing low-flow devices on 1/1/1997.</li> <li>Distributed 127 showerheads to SFR and 19 to MRF accounts in 2004. Note: 19,729 SFR and 347 MFR accounts in 1992.</li> </ol>	<ol style="list-style-type: none"> <li>Distribute showerheads to 14,670 more SFR accounts and 241 more MFR units.</li> </ol>
3. System Water Audits, Leak Detection, and Repair	YES	<ol style="list-style-type: none"> <li>Perform an annual prescreening audit. If the result is equal to or greater than 0.9 nothing more needs be done.</li> <li>Perform an annual prescreening audit. If the result is less than 0.9, perform a full audit in accordance with AWWA's Manual of Water Supply Practices, Water Audits, and Leak Detection.</li> </ol>	<ol style="list-style-type: none"> <li>EVMWD does not have an unaccounted-for-water loss of more than 10 percent.</li> <li>EVMWD has equipment to search for a leak in a specific area where they suspect a leak on an as-needed basis.</li> </ol>	<ol style="list-style-type: none"> <li>EVMWD plans to implement an official leak detection and repair program in 2006.</li> </ol>
4. Metering with Commodity Rates for all New Connections and Retrofit of Existing Connections	YES	<ol style="list-style-type: none"> <li>An agency must be on track to retrofit 100 percent of its unmetered accounts within 10 years to be in compliance.</li> </ol>	<ol style="list-style-type: none"> <li>EVMWD requires meters for all new connections and bills by volume-of-use.</li> <li>Retrofitted 916 mixed-use CII accounts with irrigation meters in 2004.</li> </ol>	N/A
5. Large Landscape Conservation Programs and Incentives	NO	<ol style="list-style-type: none"> <li>Develop water budgets for 90 percent of its dedicated landscape meter accounts within four years of the date implementation is to start.</li> <li>(a) Offer landscape surveys to at least 20 percent of its CII accounts with mixed use meters each report cycle and be on track to survey at least 15 percent of its signatory year CII accounts with mixed use meters within 10 years of the date implementation is to start OR (b) Implement a dedicated landscape meter retrofit program for CII accounts with mixed use meters or assign landscape budgets to mixed use meters.</li> <li>Implement and maintain customer incentive program(s) for irrigation equipment retrofits.</li> </ol>	<ol style="list-style-type: none"> <li>Implemented marketing and targeting strategy for landscape surveys on 1/1/1994.</li> <li>Offered 6 surveys and completed none.</li> <li>EVMWD has 916 dedicated irrigation meters. Note: EVMWD does not provide ETo-based water budgets.</li> </ol>	<ol style="list-style-type: none"> <li>Develop water budgets for 770 of its dedicated landscape meter accounts.</li> <li>Offer landscape surveys to 20% of dedicated irrigation accounts each reporting period. Complete landscape surveys for 79 more dedication irrigation accounts.</li> </ol>
6. High-Efficiency Washing Machine Rebate Programs	YES	<ol style="list-style-type: none"> <li>Offer a cost-effective financial incentive for high-efficiency washers if one or more energy service providers in service area offer financial incentives for high-efficiency washers.</li> </ol>	<ol style="list-style-type: none"> <li>Awarded 375 rebates as of 6/1/2004. Note 1: Assumed lowest efficiency High-Efficiency Washing Machines so only 1 point will be earned for each rebate towards the Coverage Goal.</li> </ol>	Award 1,200 more rebates.
7. Public Information Programs	YES	<ol style="list-style-type: none"> <li>Implement and maintain a public information program to promote and educate customers about water conservation.</li> </ol>	<ol style="list-style-type: none"> <li>Implemented and maintained a public information program.</li> </ol>	N/A
8. School Education Programs	YES	<ol style="list-style-type: none"> <li>Implement and maintain a school education program to promote water conservation.</li> </ol>	<ol style="list-style-type: none"> <li>Implemented and maintained a school education program.</li> </ol>	N/A

**THIS PAGE INTENTIONALLY LEFT BLANK**

Table 4-4 (Continued)  
BMP Coverage

BMP	Coverage Met?	Coverage Criteria	Action completed by EVMWD	Actions To Meet Requirements by 2012
9. Conservation Programs for CII Accounts	YES	<p>1. Agency has identified and ranked by use commercial, industrial, and institutional accounts.</p> <p>2. (a): Agency is on track to survey 10 percent of commercial accounts, 10 percent of industrial accounts, and 10 percent of institutional accounts within 10 years of date implementation to commence. OR 2(b): Agency is on track to reduce CII water use by an amount equal to 10 percent of 1997 CII water use within 10 years of date implementation to commence. OR Condition 2(c): Agency is on track to meet the combined target as described in Exhibit 1 BMP 9 documentation.</p>	<p>1. Identified and ranked by use the CII accounts.</p> <p>2. Based on the 2004 BMP Report and 2003-04 Coverage Report data, EVMWD has chosen the option to reduce water use.</p> <p>3. Saved 0.35 acre-ft/yr from site-verified actions and 3.14 acre-ft/yr from non-site verified actions from 1991 to 6/1/2004.</p> <p>Note 1: 1997 data obtained from EVMWD's UWMP 2000. Assumed Comm<sup>1</sup> + Other = CII customers.</p> <p>Note 2: EVMWD is except from the 3-year CII UFLT program because it signed the MOU after July 1, 2001.</p>	<p>1. Reduce water use by a total of 127 acre-ft</p>
10. Wholesale Agency Assistance Programs	YES	<p>1. Timely and complete reporting of all information as provided for under "Reporting and Record Keeping Requirements" in BMP 10.</p> <p>2. Offer workshops covering all topics listed under "Technical Support" in BMP 10.</p>	<p>1. Offered financial support, technical support, staff resources, and regional programs to the retail end-users of its wholesale customers.</p>	N/A
11. Conservation Pricing	YES	<p>1. Agency shall maintain rate structure consistent with BMP 11's definition of conservation pricing. Implementation methods shall be at least as effective as eliminating non-conserving pricing and adopting conserving pricing. For signatories supplying both water and sewer service, this BMP applies to pricing of both water and sewer service. Signatories that supply water but not sewer service shall make good faith efforts to work with sewer agencies so that those sewer agencies adopt conservation pricing for sewer service.</p>	<p>1. Implemented an increasing block water rate structure for residential customers and a uniform water rate structure for CII and irrigation customers.</p>	N/A
12. Water Conservation Coordinator	YES	<p>1. Agency shall staff and maintain the position of conservation coordinator and provide support staff as necessary.</p>	<p>1. EVMWD has had a conservation coordinator since 3/18/1991.</p>	N/A
13. Water Waste Prohibition	NO	<p>1. Implementation methods shall be enacting and enforcing measures prohibiting gutter flooding, single pass cooling systems in new connections, non-recirculating systems in all new conveyer car wash and commercial laundry systems, and non-recycling decorative water fountains.</p>	<p>1. Requests customers to voluntarily install non-single pass cooling, recirculating conveyor car wash, and commercial laundry systems. Their existing ordinance does not enforce this.</p> <p>2. Cannot enforce water softener ordinance due as a result of court case in Escondido.</p>	<p>1. EVMWD plans to update its water waste ordinance in 2006 to enact and enforce measures prohibiting gutter flooding, single-pass cooling, non-circulating car wash and laundry, and non-recycling decorative water fountains.</p>
14. Residential ULFT Replacement Programs	NO	<p>1. Water savings from toilet replacement programs equal to 90 percent of Exhibit 6 coverage requirement. This report treats an agency with missing base year data required to compute the Exhibit 6 coverage requirement as out of compliance.</p>	<p>1. EVMWD has not provided any data for Exhibit 6 calculations.</p>	<p>1. Achieve water savings from toilet replacement programs equal to 90 percent of MOU Exhibit 6 coverage requirement.</p>

Sources: 1) California Urban Water Conservation Council (CUWCC), 2004. *Memorandum of Understanding Regarding Urban Water Conservation in California*, March 10, 2004.  
2) EVMWD, 2004a. 2003-2004 Best Management Practice Coverage Report, June 1, 2004.  
3) EVMWD, 2004b. 2004 Best Management Practice Report, June 1, 2004.

**THIS PAGE INTENTIONALLY LEFT BLANK**

Table 4-5  
BMP Implementation Plan

Best Management Practice	Historical FY 03-04 (Implemented To Date)	Implementation Plan to Meet MOU Requirements											Total	Unit	Savings (AFY/unit)	Estimated Total Savings from 2003- 2012		
		FY 04-05	FY 05-06	FY 06-07	FY 07-08	FY 08-09	FY 09-10	FY 10-11	FY 11-12									
<b>(1) Water Survey Programs</b>																		
SFR Customers	314	0	6326	6576	6826	7076	7326	0	0	34444	surveys offered	N/A	N/A	N/A				
MFR Customers	0	0	93	97	101	105	108	0	0	504	surveys offered	N/A	N/A	N/A				
SFR Customers	52	0	957	808	925	1093	420	0	0	4255	surveys completed	N/A	N/A	N/A				
MFR Customers	0	0	15	11	13	16	6	0	0	61	surveys completed	N/A	N/A	N/A				
<b>(2) Residential Plumbing Retrofit</b>																		
SFR Customers	127	0	3819	2100	1973	1973	1973	1973	986	14924	showerheads	0.01	144					
MFR Customers	19	0	50	54	35	35	35	35	17	279	showerheads	0.01	3					
<b>(3) System Water Audits, Leak Detection and Repair</b>	yes	0	0	0	0	0	0	0	0	0	audits	N/A	N/A					
<b>(4) Metering with Commodity Rates for all New Connections and Retrofit of Existing</b>	yes	0	0	0	0	0	0	0	0	0	unmetered accounts	N/A	N/A					
<b>(5) Large Landscape Conservation Programs and Incentives</b>	36	0	11	16	21	25	30	0	0	139	landscape meters surveyed	0.96	134					
<b>(6) High-Efficiency Washing Machine Rebate Programs</b>	375	0	969	607	0	0	0	0	0	1950	RES HEW rebates	0.046	89					
<b>(7) Public Information Programs</b>	24	0	0	0	0	0	0	0	0	24	events	N/A	N/A					
<b>(8) School Education Programs</b>	3818	0	0	0	0	0	0	0	0	3818	students	N/A	N/A					
<b>(9) Conservation Program Targets for CII accounts</b>	49	0	9	51	23	39	46	0	0	216	acre-ft	1	216					
<b>(11) Conservation Pricing</b>	yes	0	0	0	0	0	0	0	0	0	increasing price block	N/A	N/A					
<b>(12) Conservation Coordinator</b>	yes	0	0	0	0	0	0	0	0	0	coordinator	N/A	N/A					
<b>(13) Water Waste Prohibition</b>	no	0	yes	0	0	0	0	0	0	0	water waste ordinance	N/A	N/A					
<b>(14) Residential ULFT Replacement Program</b>	139	0	NA	139	residential ULFT rebates	0.03	4											
<b>Total</b>													<b>598</b>					

NA = data not available

**THIS PAGE INTENTIONALLY LEFT BLANK**

### 4.6 EVALUATION OF DMMS NOT IMPLEMENTED

***Water Code Section 10631(g):***

*(g): An evaluation of each water demand management measure listed in paragraph (1) of subdivision (f) that is not currently being implemented or scheduled for implementation. In the course of the evaluation, first consideration shall be given to water demand management measures, or combination of measures, that offer lower incremental costs than expanded or additional water supplies. This evaluation shall do all of the following:*

- (1) Take into account economic and noneconomic factors, including environmental, social, health, customer impact, and technological factors.*
- (2) Include a cost-benefit analysis, identifying total benefits and total costs.*
- (3) Include a description of funding available to implement any planned water supply project that would provide water at a higher unit cost.*

*Include a description of the water supplier's legal authority to implement the measure and efforts to work with other relevant agencies to ensure the implementation of the measure and to share the cost of implementation.*

EVMWD has implemented or plans the implementation of all DMMs.

**THIS PAGE INTENTIONALLY LEFT BLANK**

# Section 5

## Water Shortage Contingency Plan

---

EVMWD adopted a Water Shortage Contingency Plan on February 5, 1992, that is included herein by reference. This section provides a summary of that plan in order to meet the requirements of the UWMP Act. Because recycled water is provided by EVMWD to customers on an as-available basis as governed by adopted rules and regulations, the discussion in this section focuses on potable water.

### 5.1 INTENT OF THE PLAN

EVMWD's Water Shortage Contingency Plan (James M. Montgomery Consulting Engineers, 1992) was prepared to comply with Assembly Bill 11x (1991). The bill required every urban water supplier to file a plan, because of the worsening 1986–1992 drought. The bill modified Section 10632 of the California Water Code. Key requirements of the current Section 10632 are summarized and discussed in the following sections.

### 5.2 STAGES OF ACTION

*Water Code Section 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:*

- (a) *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 which are applicable to each stage.*

The key elements of the EVMWD's Water Shortage Contingency Plan are ordinances with phased water use restrictions and a drought rate structure. The District has two water shortage ordinances: Nos. 78 and 81, presented in **Appendix E**. The drought plan stages and reduction goals (applied to the base years specified in the ordinances) are presented in **Table 5-1**. Determination of a Stage I, II, III, or IV condition is at the discretion of EVMWD's General Manager in consultation with the Board of Directors.

## Section 5 – Water Shortage Contingency Plan

**Table 5-1  
Water Supply Shortage Stages and Conditions**

Stage	Voluntary or Mandatory Reduction	Reduction Goal (%)			
		Retail Customers (Firm Deliveries)	Wholesale Customers (Firm Deliveries)	Retail Customers (Interruptible Deliveries)	Retail Agricultural Customers (Interruptible Deliveries)
I	Voluntary	10	10	Non-specific	Non-specific
II	Mandatory	5	5	20	20
III	Mandatory	10	10	30	30
IV	Mandatory	15	15	40	40
V	Mandatory	N/A	20	N/A	50

The trigger levels (to move from one stage to the next) depend on the local water situation and actions taken by MWDSC. MWDSC's actions represent the principal trigger(s) for EVMWD's action, because cutbacks in its supply to EVMWD will require action to mitigate impacts.

EVMWD does not have customers with interruptible deliveries at this time.

### 5.3 ESTIMATE OF MINIMUM SUPPLY FOR THE NEXT THREE YEARS

*Water Code Section 10632(b): 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.*

Because EVMWD relies on a combination of groundwater, local surface water, and imported water supplies, supply production is driven by demands. When groundwater and local surface water supplies are low, imported water is used to meet demands. Therefore, the period of "driest" historical supply actually corresponds to the period of lowest demands and is not a good indicator of shortages in supply. Instead, projections of driest multiple years of supply for water years 2006, 2007, and 2008 were used in this analysis. The projections were taken from values presented in the service reliability analysis, described in **Section 8**. The projection includes all potable sources of supply, including imported water, and assumes these supplies will remain constant over the period of interest.

The average annual potable demand listed in **Table 5-2** is projected for water years 2006 through 2008 using linear interpolation of values in **Section 3**.

MWDSC has stated in its Urban Water Management Plan (MWDSC, 2005) Metropolitan Water District of Southern California, 2005. Urban Water Management Plan ((Draft) Sept. 2005) that the supply of imported water it provides is considered to be fully reliable through 2030. EVMWD's demands would be met through the purchase of supplemental supply from MWDSC, even in the event of a drought impacting local supply availability.

## Section 5 – Water Shortage Contingency Plan

**Table 5-2  
Three-Year Estimated Minimum Water Supply and Average Demands (acre-ft/yr)**

Water Year	(a) Projected Multiple Dry-Year Supply	(b) Average Demand	(c) Surplus = (a) - (b)	Surplus (%)
2006	55,590	30,939	24,651	80%
2007	55,590	32,163	23,427	73%
2008	55,590	33,386	22,204	67%

It should also be noted that EVMWD is empowered to declare a water shortage and enforce mandatory restrictions on water customers to further reduce demands.

### 5.4 CATASTROPHIC SUPPLY INTERRUPTION PROGRAM

*Water Code Section 10632(c): 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.*

Ordinances No. 78 and 81 apply to water supply emergencies due to disasters other than droughts. In the ordinance, an “emergency supply shortage” is defined as “any water shortage caused by an earthquake, loss of electrical power, pipeline breakage, or any other threatened or existing water shortage caused by a disaster or facility failure which results in District inability to meet the water demands of its customers.” Response to emergency supply shortages are identical to droughts and the water shortage stages previously discussed apply. These actions are summarized in **Table 5-3**.

**Table 5-3  
Preparation Actions for a Catastrophic Supply Interruption**

Possible Catastrophe	Summary of Actions
Regional Power Outage	<ul style="list-style-type: none"> <li>• Implement Ordinances No. 78 and 81</li> <li>• Declare emergency supply shortage</li> <li>• Notify public of emergency supply shortage condition</li> <li>• Prohibit non-essential water usage</li> <li>• Require reduction of water usage to specified goals</li> <li>• Enforce penalties for non-compliance</li> <li>• Enact incentive/disincentive water rates</li> <li>• Develop emergency water management plans if more stringent conservation measures are required</li> <li>• Establish task force to develop ongoing conservation measures/programs</li> </ul>
Earthquake	
Pipeline Break	
Facility Failure	
Any Other	

## Section 5 – Water Shortage Contingency Plan

### 5.5 PROHIBITIONS, PENALTIES, AND CONSUMPTION REDUCTION METHODS

**Water Code Section 10632(d-f):**

- (d) 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
- (e) 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.
- (f) Penalties or charges for excessive use, where applicable.

The mandatory water use restrictions and actions are detailed in Ordinances No. 78 and 81. Key prohibited actions by stage are presented in **Table 5-4**.

**Table 5-4  
Mandatory Prohibitions**

Restriction	Stage When Restriction Becomes Mandatory
No landscape irrigation between 11am and 4pm	Stage I
No runoff from irrigation	
Water efficient landscaping encouraged	
No landscape irrigation between 6am and 6pm unless hand-held hose or drip irrigation or reclaimed water is used	Stage II
Irrigation only three times per week	
No water served in restaurants unless requested	
Irrigation only twice a week	Stage III
Commercial car washing using recycled water only	
No filling swimming pools	
No golf course watering, except greens, unless reclaimed water is used	
Irrigation only once a week	Stage IV
Water rationing by customer class	
No turf planting at new homes until drought is over	

During a Stage I shortage, while a water usage reduction to meet a reduction goal is voluntary (as indicated in **Table 5-1**), the restrictions on water-use activities shown in **Table 5-4** are mandatory. Examples of water consumption reduction methods and the project percent of reduction are presented in **Table 5-5**.

## Section 5 – Water Shortage Contingency Plan

**Table 5-5  
Consumption Reduction Methods**

Consumption Reduction Method	Stage When Method Takes Effect	Projected Reduction (percent)
Demand Reduction Program	Varies	Varies with Stage
Voluntary Rationing	Varies	10 (Total)
Education Program	Varies	10 (Total)
Plumbing Fixture Replacement	Varies	10 (Total)
Mandatory Rationing	Varies	Up to 50 (Total)
Flow Restrictions	Varies	Up to 50 (Total)
Use Prohibitions	Varies	Up to 50 (Total)

EVMWD’s water shortage ordinances include penalties for customers for non-compliance. These include warnings, fines, flow restrictions, and finally, water service shut-offs. Penalties and charges for non-compliance are summarized in **Table 5-6**.

**Table 5-6  
Penalties and Charges**

Penalties or Charges	Stage When Penalty Takes Effect
First Violation – Notice of Non-Compliance	Varies
Second Violation – Fine, Flow Restriction, or Water Service Shutoff	Varies
Referral of Misdemeanor Charge	Varies

### 5.6 ANALYSIS OF REVENUE IMPACTS OF REDUCED SALES DURING SHORTAGES

**Water Code Section 10632(g):**

*(g) An analysis of the impacts of each of the actions and condition described in subdivisions (a) to (f), inclusive, on the revenues and expenditures of the urban water suppliers, and proposed measures to overcome those impacts, such as the development of reserves and rate adjustments.*

A reduction in the amount of water consumed will lead to a reduction in revenue and expenses for EVMWD. These reductions will impact EVMWD’s ability to finance its operations during periods of water shortages. Revenue reductions were calculated based upon the following assumptions:

- water reduction goals by stage shown in **Table 5-1** are met
- percentage of revenue from retail customers versus wholesale customers would remain stable at 2004 levels
- there are no customers with interruptible deliveries
- revenue from 2006 to 2008 is projected by scaling up 2004 revenues by the projected quantity of water delivered

## Section 5 – Water Shortage Contingency Plan

---

**Table 5-7** presents a summary of projected revenue reduction by stage and year for water years 2006 through 2008. The revenue reduction is the total reduction corresponding to that stage, not an incremental reduction from one stage to the next. Also note that the revenue reduction in Stage I is calculated assuming EVMWD's *voluntary* water usage reduction goal is met. This voluntary goal is the same as the *mandatory* reduction goal in Stage III (see **Table 5-1**), hence the values for Stages I and III are the same. All revenues shown are in 2004 dollars.

**Table 5-7**  
**Reduced Revenue Due to Water Shortage**

Stage	2006	2007	2008
I	\$2,025,000	\$2,105,000	\$2,185,000
II	\$1,013,000	\$1,053,000	\$1,093,000
III	\$2,025,000	\$2,105,000	\$2,185,000
IV	\$3,037,000	\$3,157,000	\$3,277,000
V	\$3,061,000	\$3,182,000	\$3,303,000

Expenditures by EVMWD are also expected to decrease in the event of a water shortage. Reductions are expected in water purchases, water pumping and booster expenses, and wastewater lift station expenses.

Expense reductions were calculated based upon the following assumptions:

- water reduction goals shown in **Table 5-1** by stage are met
- there are no customers with interruptible deliveries
- expenses from 2006 to 2008 is projected by scaling up 2004 expenses by the projected quantity of water delivered
- the unit price for savings from reduced water purchases is for imported water
- water pumping and booster pumping expenses would be reduced in proportion to the reduction in quantity delivered
- wastewater lift station expenses would be reduced in proportion to the reduction in quantity delivered

MWDSC has adopted a policy and fund to manage supplies in times of shortage to avoid changing rates (MWDSC, 1999). Rates may change if actual supply availability and/or customer demands are considerably different than their assumed conditions. For the purposes of this analysis, water supply costs from MWDSC are not expected to increase in times of water shortages. Reduced water purchases are calculated using MWDSC Tier 1 rates for treated water, plus the higher of the two possible surcharges from wholesale suppliers. One surcharge of \$5/acre-foot would be paid to Western MWD for delivery through the TVP and the other surcharge of \$11/acre-foot would be paid to Eastern MWD for delivery through the AVP (see Section 3 for details), so the AVP surcharge was used in the calculation. A projection of reduced expenses by stage and water year is presented in **Table 5-8**. All expenses shown are in 2004 dollars.

## Section 5 – Water Shortage Contingency Plan

**Table 5-8**  
**Reduced Expenses Due to Water Shortage**

Stage	2006	2007	2008
I	\$1,736,000	\$1,878,000	\$1,996,000
II	\$868,000	\$939,000	\$999,000
III	\$1,736,000	\$1,878,000	\$1,996,000
IV	\$2,603,000	\$2,817,000	\$2,994,000
V	\$2,624,000	\$2,840,000	\$3,018,000

The net revenue impact of revenue loss and expenditure reduction for each water shortage stage is calculated as revenue reduction minus expenditure reduction. The net revenue calculations are provided in **Table 5-9** in 2004 dollars.

**Table 5-9**  
**Net Revenue Reduction by Stage**

Stage	2006	2007	2008
I	\$289,000	\$227,000	\$189,000
II	\$145,000	\$114,000	\$94,000
III	\$289,000	\$227,000	\$189,000
IV	\$434,000	\$340,000	\$283,000
V	\$437,000	\$342,000	\$285,000

Methods of compensating for the reduced revenue include penalties for excess water use and rate increases for customers. Penalties for excess water use encourage conservation in turn, further reducing revenue from water sales, but penalties generally only provide a small amount of revenue. If the water shortage is deemed temporary, a rate increase may not be required.

For long-term shortages, immediate rate increases may be considered. A consequence of rate increases may be further conservation by customers. EVMWD would not change fixed domestic monthly service charges during a water shortage because these charges provide revenue for operational expenditures.

### 5.7 DRAFT ORDINANCE AND USE MONITORING PROCEDURE

***Water Code Section 10632(h & i):***

- (h) A draft water shortage contingency resolution or ordinance.*
- (i) A mechanism for determining actual reductions in water use pursuant to the urban water shortage contingency analysis.*

EVMWD's Water Shortage Contingency Plan (James M. Montgomery Consulting Engineers, 1992) was discussed at the beginning of this Section. Copies of the two drought ordinances associated with the plan are presented in **Appendix E**.

## **Section 5 – Water Shortage Contingency Plan**

---

EVMWD originally prepared its Water Shortage Contingency Plan and Ordinances No. 78 and 81 to correspond with MWDSC’s 1990 “Incremental Interruption and Conservation Plan.” That plan was put into place during the 1987-1992 statewide drought and has since been superseded by MWDSC’s Water Shortage and Drought Management (WSDM) Plan, described in Section 3 (MWDSC, 1999).

It is recommended that EVMWD revise its water shortage ordinances and Water Shortage Contingency Plan to coordinate with MWDSC’s WSDM Plan. That plan sets forth MWDSC’s intended actions in the event of a surplus or shortage in supply, the availability of resources and water demands, and how the plan fits into the framework of MWDSC’s regional resource management. EVMWD should also revise its Water Shortage Contingency Plan and drought ordinances to reflect changes to its rate structure, customer base and new developments, water usage patterns, and the addition of recycled water services. These revisions might include an update to the baseline year used for the water reduction goals, the number of water shortage stages, and the water usage reduction goals. EVMWD may also want to consider adding a description of monitoring and actions needed to determine compliance in order to support the enforcement activities set forth.

EVMWD has metered connections with which to monitor customer use on a monthly basis. It is recommended that EVMWD adopt a mechanism for determining actual reductions on a monthly basis by establishing a baseline for normal water use and comparing that to monthly usage.

**Table 5-10  
Water Use Monitoring Mechanisms**

<b>Mechanisms for Determining Actual Reductions</b>	<b>Type and Quality of Data Expected</b>
Monitor monthly billed water usage and compare usage to baseline.	Quality of billing data expected to be sufficient to evaluate effectiveness of actions taken.

# Section 6

## Recycled Water Plan

---

### 6.1 COORDINATION

#### *Water Code section 10633*

*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:*

As discussed in **Section 2**, in the effort to minimize the need for imported water, EVMWD plans to expand its recycled water system to provide recycled water for irrigation users and to maintain water levels in Lake Elsinore during normal and dry years. EVMWD has coordinated with the appropriate agencies in the preparation of plans presented in this UWMP.

### 6.2 WASTEWATER QUANTITY, QUALITY AND CURRENT USERS

#### *Water Code section 10633 (a-c)*

*(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.*

#### 6.2.1 Existing Recycled Water Supplies

EVMWD's non-potable demands are supplied by tertiary treated wastewater from the Regional WRF, Railroad Canyon WRF, and Horsethief Canyon WRF. Historically, EVMWD used the treated effluent from Railroad Canyon WRF and Horsethief Canyon WRF for irrigation, except during storm events. Effluent from the Regional WRF is typically discharged into the Temescal Wash, but in recent years, has also been used for lake replenishment.

**Table 6-1** summarizes the reclaimed water production as reported in EVMWD's 2004 Comprehensive Annual Financial Report (Eastern MWD, 2004). It should be noted that a portion of the wastewater flows collected by EVMWD is diverted to RCWD for treatment and disposal at its Santa Rosa WRF.

## Section 6 – Recycled Water Plan

---

### Railroad Canyon WRF and Horsethief Canyon WRF

The effluent from Railroad Canyon WRF and Horsethief Canyon WRF receives tertiary treatment and meets Title 22 requirements. The current rated capacity for Railroad Canyon WRF and Horsethief Canyon WRF are 1.2 mgd and 0.5 mgd, respectively. Based on normalized trends from the number of service connections, flows in 2004 were estimated to be 0.90 mgd to Railroad Canyon WRF and 0.42 mgd to Horsethief Canyon WRF. Most of the treated water from Railroad Canyon WRF is directed to the Canyon Lake Golf Course and the Canyon Hills development, with excess effluent bypassed to the Regional WRF. Treated recycled water from Horsethief Canyon WRF is distributed to local landscape irrigation users (Montgomery Watson/Maddaus Water Management/The Weber Group, 2000).

**Table 6-1**  
**Historical Recycled Water Production (FY 1995-2004)**  
(Units are in mgd)

Year	Horsethief Canyon WRF	Railroad Canyon WRF	Regional WRF	Total
1995	0.146	0.917	3.182	4.245
1996	0.151	0.885	3.239	4.275
1997	0.171	0.936	3.336	4.443
1998	0.192	0.969	3.726	4.887
1999	0.223	0.926	3.701	4.850
2000	0.260	0.950	3.709	4.919
2001	0.320	0.930	3.785	5.035
2002	0.377	0.910	3.729	5.016
2003	0.472	0.879	4.089	5.440
2004	0.427	0.883	4.464	5.774

Reference: EVMWD Comprehensive Annual Financial Report for the year ended in June 30, 2004 (EVMWD, 2004c).

### Regional WRF

The Regional WRF was expanded in 2004 and currently has a rated capacity of 8 mgd. The wastewater effluent is tertiary-treated discharged to the Temescal Wash. Flows to the Regional WRF in 2004 were about 4.5 mgd. As population and water demands increase, EVMWD anticipates future expansions to an ultimate capacity of 30 mgd (Kennedy-Jenks Consultants, 2003).

Beginning in June 2002, effluent from the Regional WRF and from Eastern MWD has been used for replenishing Lake Elsinore as part of a 2-year pilot test program. The purpose of this program was to evaluate the effects of using recycled water for lake replenishment as part of an overall lake management strategy. As of December 2004, 10,043 acre-ft of effluent has been discharged into the lake.

In March 2005, EVMWD received a revised NPDES permit from the RWQCB to discharge effluent into the lake. This permit requires EVMWD to reduce the nutrient loading to the lake

(Regional Water Quality Control Board (RWQCB), 2005). In 2005, EVMWD will install phosphorus removal treatment at the Regional WRF to comply with the permit.

**Eastern MWD and Rancho California WD**

Eastern MWD currently operates the Temecula Valley Regional WRF. This facility was recently expanded to 12 mgd. Eastern MWD completed construction of the Temecula Valley Effluent Disposal Pipeline that would convey effluent from the Temecula Valley Regional WRF and Rancho California Water District’s (RCWD) Santa Rosa WRF to Temescal Wash for discharge. This facility allows Eastern MWD and RCWD to avoid costly nutrient removal facilities required for discharge into the Santa Margarita River. This pipeline passes through EVMWD’s service area. In addition, effluent from the Temecula Valley Effluent Disposal Pipeline may be available to EVMWD for purchase to meet future recycled water demands under existing agreements with Eastern MWD. Water from the Temecula Valley Pipeline may be used in the Wildomar and Canyon Hills regions and was evaluated as part of the *Wildomar Service Area Recycled Water Master Plan Study* (Kennedy-Jenks Consultants, 2004).

Eastern MWD currently (FY 2003-04) generates approximately 38 mgd of effluent at its four active regional water reclamation facilities. The amount of effluent is expected to grow to 48 mgd by the year 2013. Approximately 60%-70% of the effluent currently generated is sold to agricultural and irrigation users (Eastern MWD, 2004). Consequently, about 10 to 15 mgd (11,200 to 16,800 acre-ft/yr) of effluent is available for purchase from Eastern MWD on an annual basis. Based on current operations, Eastern MWD retains as much recycled water as possible within its system, storing excess water for summer use. Once its storage ponds are full, Eastern MWD discharges water to Temescal Wash through the Effluent Disposal Pipeline, primarily in the winter months. **Table 6-2** presents Eastern MWD’s treated wastewater disposal amounts as projected in the draft version of their 2005 UWMP (EMWD, *Draft 2005 Urban Water Management Plan*, 2005). This treated wastewater is assumed to be available to EVMWD for supply of future irrigation demands.

**Table 6-2  
Eastern MWD Disposal of Wastewater**

<b>Disposal</b>	<b>Treatment</b>	<b>2000</b>	<b>2005</b>	<b>2010</b>	<b>2015</b>	<b>2020</b>	<b>2030</b>
Livestream Discharge (acre-ft/yr)	Tertiary	0	8,842	7,911	15,433	21,256	26,956
Livestream Discharge (mgd)	Tertiary	0	7.9	7.1	13.8	19.0	24.1

**6.2.2 Future Recycled Water Supplies**

The following section describes EVMWD’s plans for additional recycled water supplies to meet non-potable demands in the next 20 years, including the Alberhill WRF and the Regional WRF expansion. Analysis of historical per connection water usage and wastewater production data shows that 44 percent of potable water usage becomes wastewater. Using the projected water demands in **Section 3**, projected wastewater flows are shown in **Table 6-3**. Projected flows for

## Section 6 – Recycled Water Plan

the Alberhill WRF are based on projections from the draft Alberhill Water and Wastewater Facilities Phasing Study (Kennedy-Jenks Consultants, 2005a). Flows for the Horsethief Canyon WRF, Railroad Canyon WRF, and Southern areas are based on revised projections prepared in 2005 for the EVMWD Wastewater Master Plan (Kennedy-Jenks Consultants, 2005d). These flows are not expected to increase significantly in the future.

A portion of the EVMWD's service area is not sewered. It is assumed that septic flow will be the same as the 2000-2004 average because existing septic areas will convert to sewers at the same rate that new land without access to sewers develops.

### Regional WRF

The Regional WRF has existing flows of approximately 4.5 mgd. The majority of future customers that EVMWD has committed to serve (i.e., will-serve commitments presented in **Section 3**) are tributary to the Regional WRF. Considering the potable water demand projections in **Section 3**, the additional wastewater flow to the Regional WRF due to committed developments is projected to be approximately 5.7 mgd. An additional 0.3 mgd of committed new wastewater flows will be tributary to RCWD, which may be conveyed to the Regional WRF through the Lakeshore Interceptor Sewer. Therefore, the combined existing and committed wastewater flow to the Regional WRF is projected to be 10.5 mgd by 2018, which exceeds the existing plant capacity. Future development without will-serve letters is expected to increase the Regional WRF flows to about 14.8 mgd by 2030.

To treat the additional flows, EVMWD will begin planning for expansion of the Regional WRF when the average flow reaches 6 mgd (2007). The previous estimate of Regional WRF flows prepared for the Wastewater Master Plan was 8.3 mgd in 2025 (Kennedy-Jenks Consultants, 2005d).

**Table 6-3  
Projected Wastewater Flows by Treatment Facility**

Year	Alberhill WRF (mgd)	Horsethief Canyon WRF <sup>1</sup> (mgd)	Railroad Canyon WRF (mgd)	Southern Area <sup>2</sup> (mgd)	Regional WRF (mgd)	Total Treated Flow <sup>3</sup> (mgd)	Septic (mgd)	Total Wastewater (mgd)
2000		0.26	0.95	0.98	3.71	5.9	3.29	<b>9.19</b>
2001		0.32	0.93	0.98	3.79	6.02	2.59	<b>8.61</b>
2002		0.38	0.91	0.99	3.73	6.01	3.52	<b>9.53</b>
2003		0.47	0.88	0.99	4.09	6.43	3.33	<b>9.76</b>
2004		0.43	0.88	1.00	4.46	6.77	3.37	<b>10.14</b>
2005	0.05	0.42	1.15	1.00	5.48	8.11	3.31	<b>11.42</b>
2010	1.14	0.5	1.15	1.04	7.17	11.00	3.31	<b>14.31</b>
2015	1.23	0.5	1.15	1.06	9.74	13.68	3.31	<b>16.98</b>
2020	1.81	0.5	1.15	1.11	11.42	16.00	3.31	<b>19.30</b>
2025	2.40	0.5	1.17	1.14	13.20	18.41	3.31	<b>21.72</b>
2030	2.99	0.5	1.17	1.14	14.76	20.56	3.31	<b>23.87</b>

1- Flows may be treated at the Alberhill WRF in the future.

- 2- Historical flows are estimated.
- 3- All treated wastewater flows are anticipated to meet recycled standards.

The current NPDES permit for the Regional WRF requires that a minimum of 0.5 mgd of flow be discharged to Temescal Wash for environmental habitat needs (Regional Water Quality Control Board (RWQCB), 2005). Therefore, the total recycled water available from the Regional WRF is projected to be approximately 14.2 mgd in 2030. When necessary, the treated effluent will be used to replenish Lake Elsinore to maintain a minimum lake level of 1,240 ft msl. Otherwise, the water will be utilized for non-potable water uses or discharged to Temescal Wash. Discharges to the wash are expected to occur primarily during the winter months of wet years when water is not required for lake augmentation and non-potable demands are low.

EVMWD recently commissioned the preparation of a recycled water master plan for the Regional WRF service area. This plan will identify recycled water demands and facilities to deliver recycled water to customers that can be feasibly served.

### **Alberhill WRF**

The new Alberhill WRF will serve the Alberhill development and may ultimately replace the existing Horsethief Canyon WRF. The plant will be constructed in approximately 1 mgd increments, with a full capacity of 5.4 mgd. According to the Alberhill Water and Wastewater Facilities Phasing Plan, the plant is scheduled to be online in 2008 (Kennedy-Jenks Consultants, 2005a). Treated effluent from the plant will be used for irrigation in the Horsethief Canyon and Alberhill areas. Any surplus water will be discharged to Temescal Creek or reused in EVMWD's Temescal Division. The projected flow to the Alberhill WRF is expected to be 3.0 mgd by 2030 including 0.22 mgd of flow from Horsethief Canyon. Developments with current will-serve letters represent 0.46 mgd of the projected flow in 2030.

### **Temescal Pipeline System**

As part of its acquisition of TWC in 1989, EVMWD operates the Temescal Pipeline System. This system consists of 17 non-potable wells, booster pump stations, weirs, a sand trap, a reservoir, and an agricultural transmission line made of several different pipe sections. This system currently delivers non-potable water to users (mainly agricultural) in the Temescal Valley between Lake Elsinore and Corona. Flows from this system can potentially supply irrigation demands in the Horsethief and Alberhill regions.

### **Summary of Recycled Water Supplies**

A summary of future recycled water supplies is listed in **Table 6-4**. Recycled water supplies do not vary significantly during dry years.

## Section 6 – Recycled Water Plan

**Table 6-4  
Recycled Water Supplies – 2030**

Source	Projected Average Flows	
	(mgd)	(acre-ft/yr)
Alberhill WRF	3.0	3340
Horsethief Canyon WRF	0.5	560
Railroad Canyon WRF	1.2	1,310
Regional WRF	14.8	16,520
Santa Rosa WRF	1.5	1,680
Temecula Valley Regional WRF	12.0	13,430
<b>Total</b>	<b>33.0</b>	<b>36,840</b>

### 6.3 POTENTIAL AND PROJECTED USE, OPTIMIZATION PLAN WITH INCENTIVES

#### *Water Code section 10633 (d-g)*

*(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, 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.*

EVMWD currently serves recycled water to customers in Horsethief Canyon and Canyon Lake. These customers are presented as existing users in **Table 6-5**. EVMWD is considering expanding its non-potable water system (which receives recycled water from RCWD and Eastern MWD) to serve non-potable demands in the Wildomar area. Potential future non-potable demands due to increased growth include irrigation customers in the Wildomar, Lake Elsinore, Alberhill areas, the Southerly at Lake Elsinore (John Laing Homes) and Lumos Communities developments in East Lake. Recycled water demands will also increase to maintain Lake Elsinore water levels.

Non-potable water demands are discussed for five main regions within the EVMWD service area – Wildomar, Lake Elsinore, Alberhill, Ramsgate, and Canyon Hills. Recycled water demands for irrigation are assumed to have a MDD/ADD peaking factor of 2.77 based on evapotranspiration and rainfall patterns.

### 6.3.1 Wildomar Region

EVMWD recently completed the *Wildomar Service Area Recycled Water Master Plan* (Kennedy-Jenks Consultants, 2004) and is considering expanding its non-potable water system, with delivery of recycled water from Rancho California WD and Eastern MWD. The Wildomar recycled water system will serve non-potable demands in the Wildomar and Lake Elsinore regions, including existing customers utilizing potable water for irrigation and the Southerly and Lumos developments in East Lake. Potable water demands that could be converted to recycled water demands in the Wildomar region total 1,060 acre-ft/yr (Kennedy-Jenks Consultants, 2004). The Southerly at the Lake Elsinore development has a projected non-potable water demand of 1,220 acre-ft/yr. Evaluation of land use for the proposed Lumos development (East Lake Specific Plan Amendment No. 8) indicates this development could generate 890 acre-ft/yr of non-potable demand. Other future Wildomar non-potable irrigation demands total an additional 150 acre-ft/yr.

### 6.3.2 Lake Elsinore Region

Kennedy-Jenks Consultants is preparing a recycled water master plan update for EVMWD focusing on the Lake Elsinore region (Kennedy-Jenks Consultants, 2005. *Draft Facilities Planning Report for the Elsinore Valley Municipal Water District's Regional Service Area – Recycled Water Project Plan*, prepared for EVMWD, August 2005). Preliminary results of a market assessment (Kennedy-Jenks Consultants, 2005b) have identified major residential and commercial areas that could utilize significant volumes of recycled water. These include major residential and commercial areas in the Lake Elsinore area, the existing agricultural line called the Elsinore Pipeline, and Lake Elsinore itself. The recycled water demands for the Lake Elsinore area are summarized as:

- Residential and commercial uses for school fields, parks, cemeteries, and golf courses within three distinct areas (downtown, Northwest, and Northeast) near the Regional WRF have an expected demand of about 1,130 acre-ft/yr. This estimate excludes demands for John Laing Homes East Lake, Alberhill Ranch, and Rosetta Canyon ), for which separate demand estimates are made. Recycled water demands for Lakeside High School are also excluded since its supply comes from its own well.
- Another potential recycled water demand is providing up to 10,300 acre-ft/yr (7.5 mgd) to Lake Elsinore during dry years (5,900 acre-ft/yr during normal years) as part of an environmental restoration project. This use is discussed later in this section.

These demands, excluding those in the Temescal system, total nearly 11,430 acre-ft/yr (10.2 mgd), which is greater than the current effluent flow from the Regional WRF. Currently, the District expects to meet this recycled water demand by utilizing the effluent from the Regional WRF and augmenting it with recycled water from the Temecula Valley Regional WRF via Eastern MWD. In the future, EVMWD also plans an expansion of the Regional WRF that will increase the amount of available recycled water.

## Section 6 – Recycled Water Plan

---

### 6.3.3 Alberhill Region

Planned developments in the Alberhill region have significant irrigation demands (parks, open space, slopes, and wildlife corridors) which can be served using recycled water. Kennedy-Jenks Consultants is preparing a Recycled Water Master Plan Market Assessment for the Alberhill Service Area (Kennedy-Jenks Consultants, 2005e.). Based upon proposed land use, the projected recycled water demand for the Alberhill CFD is calculated as about 540 acre-ft/year. In 2003, Hunsaker & Associates prepared Water and Sewer Master Plans for the Alberhill Ranch Development (Hunsaker & Associates, 2003). Based upon proposed land use area for parks and slopes, the irrigation demand for Alberhill Ranch is projected at 410 acre-ft/yr. For estimating the recycled demands in the surrounding areas, the percentage of recycled demand out of potable demand for Alberhill CFD and Alberhill Ranch were applied to the projected potable demands of the surrounding areas, given that similar types of development are expected to occur in the region. Based upon this calculation, the recycled demand for Alberhill surroundings is projected at 980 acre-ft/yr. The total irrigation demands for the proposed developments in the Alberhill region, which include Alberhill CFD, Alberhill Ranch, and the surrounding areas is projected to be 1,935 acre-ft/yr, which are projected to match the timing of the developments (discussed in **Section 3**). The irrigation demands in the Alberhill region will be met by recycled water from the proposed Alberhill WRF that will replace the existing Horsethief Canyon WRF.

### 6.3.4 Ramsgate Region

Developments in the Ramsgate region also have significant irrigation demands (parks, open space, slopes, and wildlife corridors) which can be met using recycled water. The irrigation demand for the proposed developments in the Ramsgate region is projected to be about 900 acre-ft/yr, based on values presented in the *Ramsgate Water, Wastewater & Recycled Water Facilities Plan* (Hunsaker & Associates, 2004a). The irrigation demands are projected to match the timing of the developments (discussed in **Section 3**). The Ramsgate Facilities Plan service area studied in this report extends beyond the Ramsgate boundaries, and was generally determined to be that area tributary by gravity flow to the north side of I-15 between State route 74 (Central Avenue) and 2<sup>nd</sup> Street and extending north to Highway 74 and Ethanac Road. These demands will be met by recycled water from the Regional WRF; the developer is installing recycled water pipelines as part of the development's on-site utilities. If necessary, supply from the Regional WRF will also be augmented with recycled water from the Temecula Valley Regional WRF via Eastern MWD.

### 6.3.5 Canyon Hills

Based upon data from 2004, the existing annual demand of the Canyon Lake Golf Course is 278 acre-ft/yr, while Phases 1 and 2 of the Canyon Hills recycled water system account for another 210 acre-ft/yr (0.5 mgd) of existing demand (Personal Correspondence with EVMWD staff, October 25, 2005.). EVMWD plans to expand the Canyon Hills recycled water system to irrigate parkways, medians, slopes, parks, and two school sites in Phases 3 through 7 of the development. This will increase the recycled water demand an additional 960 acre-ft/yr (0.86 mgd). (Psomas, 2005). The recycled water system is expected to be fully online by 2015. The total projected recycled water demand for the Canyon Hills region is nearly 1,450 acre-ft/yr.

### 6.3.6 Temescal System

Approximately 3,000 acre-ft/yr may be supplied to users currently receiving non-potable water through the Elsinore Pipeline in the Temescal Canyon area. Currently, some of this demand is being served by the treated effluent from the Regional WRF through a diversion of water from the Temescal Wash into the Elsinore Pipeline. The rest of the demand is met with supply from non-potable wells in the Temescal Valley. It is not certain whether the Temescal system will be converted to recycled use, for which reason these users are not included in the projections.

### 6.3.7 Lake Stabilization

Since June 2003, EVMWD has been replenishing Lake Elsinore with tertiary-treated effluent from the Regional WRF and Eastern MWD's Temecula Valley effluent pipeline under a pilot project discharge permit issued by the RWQCB. In March 2004, EVMWD also began operating the refurbished Island Wells to replenish the lake.

In December 2004, the RWQCB adopted total maximum daily loads (TMDLs) which limit the discharge of nitrogen and phosphorus into Lake Elsinore. The RWQCB subsequently issued a NPDES permit for the Regional WRF that reflect the new TMDLs (Regional Water Quality Control Board (RWQCB), 2005). To comply with the TMDLs and the NPDES permit, EVMWD is installing phosphorus removal treatment at the Regional WRF and the Lake Elsinore and San Jacinto Watersheds Authority (LESJWA) is installing a lake aeration system and other facilities to maintain the quality of the lake (MWH, 2005. *Draft Program Environmental Impact Report for Lake Elsinore Stabilization and Enhancement Project*, prepared for Lake Elsinore and San Jacinto Watershed Authority, March 2005). Initially, EVMWD will discharge all available Regional WRF effluent (less 0.5 mgd for wetlands maintenance in Temescal Wash) along with Island Well water to Lake Elsinore. As the available recycled water increases, the amount of Island Well water can gradually be decreased.

### 6.3.8 Projected Recycled Water Demand

As shown in **Table 6-5**, the recycled water demand in the EVMWD service area is expected to increase to approximately 14,830 acre-ft/yr in a normal demand year. During dry years when the maximum amount of water is required for Lake Elsinore and irrigation demand is high, recycled water usage could increase to nearly 20,050 acre-ft/yr. If EVMWD's available recycled water supply is insufficient to meet this demand, it could purchase water from Eastern MWD or supply potable water to meet these demands. **Table 6-5** also shows the estimated MDD. For irrigation users, the MDD/ADD factor is 2.77 (the factor is applied to an ADD for an above normal year). Consequently, the MDD for irrigation usage is expected to be 22.1 mgd in 2030. For lake replenishment, the MDD is assumed to equal the annual demand because lake replenishment water would be delivered generally year-around at a constant rate. The combined MDD during dry years could be 33.3 mgd. **Table 6-10** shows the total supply versus demand from Eastern MWD and

## Section 6 – Recycled Water Plan

**Table 6-5  
Summary of Recycled Water Demands – 2030**

Demand Category	Normal Year	Below Normal Year	Above Normal Year
<b>Average Annual Demand - acre-ft/yr</b>			
Existing Canyon Lake Golf Course <sup>1</sup>	278	250	304
Existing Horsethief <sup>2</sup>	202	182	221
Future Alberhill Ranch <sup>3</sup>	414	373	452
Future Alberhill CFD <sup>4</sup>	541	487	591
Future Alberhill Surroundings <sup>5</sup>	980	882	1,070
Existing Canyon Hills (Phases 1 and 2) <sup>1</sup>	210	189	229
Future Canyon Hills (Phases 3-7) <sup>6</sup>	960	864	1,048
Downtown Area Conversion from Existing Potable Use <sup>2</sup>	206	185	225
Northwest Area Conversion from Existing Potable Use <sup>2</sup>	401	361	438
Northwest Area Future use <sup>2</sup>	119	107	130
Northeast Area Conversion from Existing Potable Use <sup>2</sup>	346	311	378
Northeast Area Future Use <sup>2</sup>	55	50	60
Future Ramsgate <sup>7</sup>	897	807	980
Wildomar Conversion from Existing Potable Use <sup>8</sup>	1,060	954	1,158
Future Wildomar <sup>8</sup>	150	135	164
Southerly at Lake Elsinore (John Laing Homes) <sup>8</sup>	1,221	1,099	1,333
LUMOS (East Lake Specific Plan Amendment No. 8) <sup>8</sup>	890	801	972
Subtotal - Irrigation Demand	8,930	8,037	9,752
Lake Replenishment <sup>9</sup>	5,900	0	10,300
<b>Total</b>	<b>14,830</b>	<b>8,037</b>	<b>20,052</b>
<b>Maximum Day Demand - mgd</b>			
Irrigation	22.1	19.9	24.1
Lake Replenishment	5.3	0.0	9.2
<b>TOTAL</b>	<b>27.4</b>	<b>19.9</b>	<b>33.3</b>

1. Personal Correspondence with EVMWD staff, October 25, 2005.
2. Kennedy/Jenks, *Draft Facilities Planning Report for EVMWD's Regional Service Area – Recycled Water Project Plan*, August 2005.
3. Hunsaker and Associates, *Water and Sewer Master Plans for the Alberhill Ranch Development*, 2003.
4. Based upon proposed land use files.
5. Assumed that the same percentage of recycled to potable use in Alberhill Ranch and Alberhill CFD applies to the surroundings.
6. Psomas, *Canyon Hills Recycled Water Project: Water Recycling Construction Funding Program Grant Application*, January 20, 2005.
7. Hunsaker & Associates, *Ramsgate Water, Wastewater & Recycled Water Facilities Plan*, July 27, 2004.
8. Kennedy/Jenks, *Wildomar Service Area Recycled Water Master Plan*, June 2004.
9. MWH, *Draft Program Environmental Impact Report for Lake Elsinore Stabilization and Enhancement Project*, March 2005.

## Section 6 – Recycled Water Plan

Table 6-6 through Table 6-9 presents the projected recycled water supply versus demand in 5 year increments categorized by supply source.

**Table 6-6**  
**Projected Recycled Supply Versus MDD for the Regional Area (mgd)**

	2010	2015	2020	2025	2030
<i>Regional MDD</i>					
Downtown Area Conversion from Existing Potable Use	0.3	0.6	0.6	0.6	0.6
Northwest Area Conversion from Existing Potable Use	0.5	1.1	1.1	1.1	1.1
Northwest Area Future Use	0.1	0.2	0.2	0.3	0.3
Northeast Area Conversion from Existing Potable Use	0.5	0.9	0.9	0.9	0.9
Northeast Area Future Use	0.1	0.1	0.1	0.1	0.1
Lake Replenishment	9.2	9.2	9.2	9.2	9.2
Future Ramsgate	0.5	1.0	1.5	1.9	2.4
<b>TOTAL MDD</b>	<b>11.2</b>	<b>13.1</b>	<b>13.6</b>	<b>14.1</b>	<b>14.6</b>
<i>Regional Supplies</i>					
Regional WRF (mgd) <sup>1</sup>	6.7	9.2	10.9	12.7	14.2
Eastern MWD (mgd) <sup>2</sup>	2.0	3.9	2.7	1.4	0.4
Island Wells (mgd) <sup>3</sup>	2.5	0	0	0	0
<b>TOTAL Supplies</b>	<b>11.2</b>	<b>13.1</b>	<b>13.6</b>	<b>14.1</b>	<b>14.6</b>

1. Includes a reduction of 0.5 mgd of required discharge to the Temescal Wash.
2. Flows from Eastern MWD are based on anticipated need for irrigation water (not available for lake replenishment). See Table 6-2 for Eastern MWD's supply availability.
3. Supply from the Island Wells would temporarily be available to meet part of the lake replenishment demand until adequate expansion of the Regional WRF.

**Table 6-7**  
**Projected Recycled Supply Versus MDD for Canyon Lake/Canyon Hills (mgd)**

	2010	2015	2020	2025	2030
<i>Canyon Lake/Canyon Hills MDD</i>					
Existing Canyon Lake	0.8	0.8	0.8	0.8	0.8
Existing Canyon Hills	0.6	0.6	0.6	0.6	0.6
Future Canyon Hills	0.5	2.6	2.6	2.6	2.6
<b>TOTAL MDD</b>	<b>1.9</b>	<b>4.0</b>	<b>4.0</b>	<b>4.0</b>	<b>4.0</b>
<i>Canyon Lake/Canyon Hills Supplies</i>					
Railroad Canyon WRF	1.2	1.2	1.2	1.2	1.2
Eastern MWD <sup>1</sup>	0.7	2.8	2.8	2.8	2.8
<b>TOTAL Supplies</b>	<b>1.9</b>	<b>4.0</b>	<b>4.0</b>	<b>4.0</b>	<b>4.0</b>

1. Flows from Eastern MWD are based on anticipated need for recycled water. See Table 6-2 for Eastern MWD's supply availability.

## Section 6 – Recycled Water Plan

**Table 6-8**  
**Projected Recycled Supply Versus MDD for Alberhill/Horsethief (mgd)**

	2010	2015	2020	2025	2030
<i>Alberhill/Horsethief MDD</i>					
Existing Horsethief	0.5	0.5	0.5	0.5	0.5
Future Alberhill	1.9	2.6	3.5	4.3	5.2
<b>TOTAL MDD</b>	<b>2.4</b>	<b>3.1</b>	<b>4.0</b>	<b>4.8</b>	<b>5.7</b>
<i>Alberhill/Horsethief Supplies</i>					
Horsethief Canyon WRF	0.5	0.5	0.5	0.5	0.5
Alberhill WRF	1.1	1.2	1.8	2.4	3.0
Temescal System <sup>1</sup>	0.8	1.4	1.7	1.9	2.2
<b>TOTAL Supplies</b>	<b>2.4</b>	<b>3.1</b>	<b>4.0</b>	<b>4.8</b>	<b>5.7</b>

1. Water from the Temescal non-potable system would be available to meet MDD in the Alberhill and Horsethief areas.

**Table 6-9**  
**Projected Recycled Supply Versus MDD for the Wildomar Region (mgd)**

	2010	2015	2020	2025	2030
<i>Wildomar Region MDD</i>					
Existing Wildomar Potable Conversion	1.4	2.9	2.9	2.9	2.9
Future Wildomar & East Lake	2.0	4.8	5.9	6.0	6.1
<b>TOTAL MDD</b>	<b>3.4</b>	<b>7.7</b>	<b>8.8</b>	<b>8.9</b>	<b>9.0</b>
<i>Wildomar Region Supplies</i>					
Rancho California WD <sup>1</sup>	1.5	1.5	1.5	1.5	1.5
Eastern MWD <sup>2</sup>	1.9	6.2	7.3	7.4	7.5
<b>TOTAL Supplies</b>	<b>3.4</b>	<b>7.7</b>	<b>8.8</b>	<b>8.9</b>	<b>9.0</b>

1. Flows from Rancho California WD are based on existing EVMWD wastewater treated at the Santa Rosa WRF.
2. Flows from Eastern MWD are based on anticipated need for recycled water. See Table 6-2 for Eastern MWD's supply availability.

**Table 6-10** shows the total supply versus demand via Eastern MWD. **Table 6-11** summarizes the total recycled supply versus demand for all regions within the EVMWD.

**Table 6-10**  
**Projected Recycled Supply versus MDD via Eastern MWD (mgd)**

	2010	2015	2020	2025	2030 <sup>1</sup>
Eastern MWD Demand	4.6	12.9	12.8	11.6	10.7
Eastern MWD Supply	7.1	13.8	19	24.1	24.1

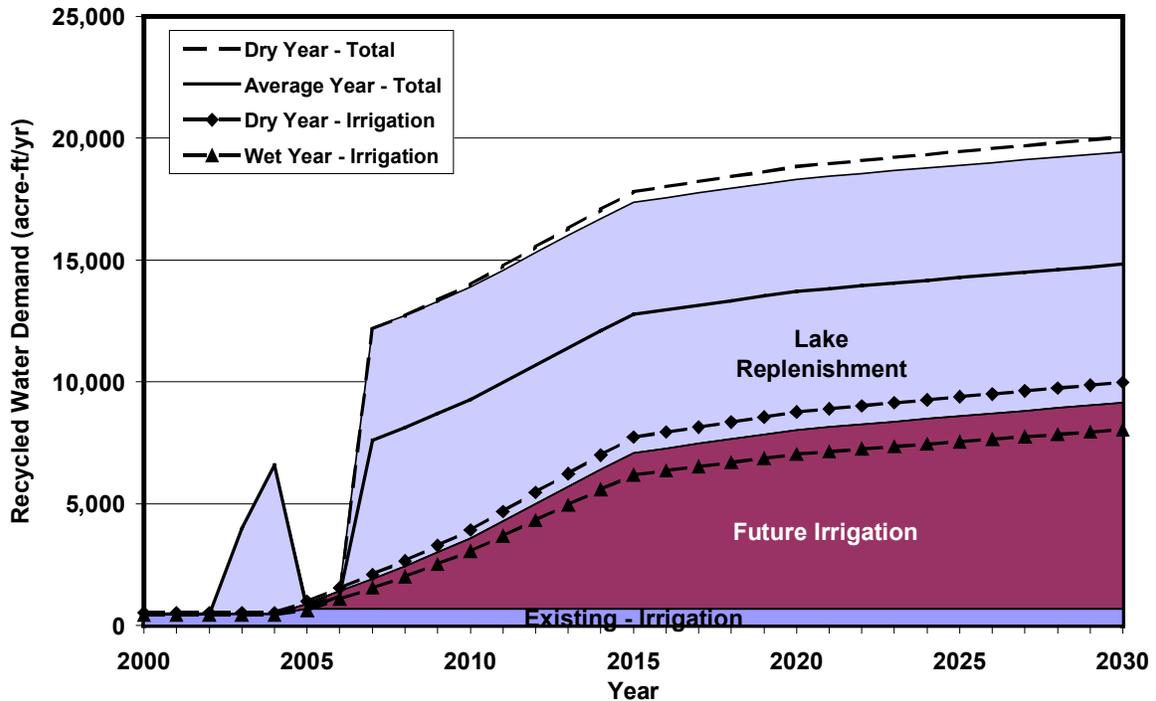
1. Supply projections (livestream discharge) in Eastern MWD's UWMP only extend until 2025. Based upon the consistent increase until 2025, the supply for 2030 is conservatively assumed to be the same as for 2025.

**Table 6-11**  
**Total Recycled Supply versus Demand (mgd)**

	2010	2015	2020	2025	2030
<i>MDD</i>					
Regional	11.2	13.1	13.6	14.1	14.6
Canyon Lake/Canyon Hills	1.9	4.0	4.0	4.0	4.0
Alberhill/Horsethief	2.4	3.1	4.0	4.8	5.7
Wildomar Region	3.4	7.7	8.8	8.9	9.0
<b>TOTAL MDD</b>	<b>18.9</b>	<b>27.9</b>	<b>30.4</b>	<b>31.8</b>	<b>33.3</b>
<i>Supply</i>					
Regional	11.2	13.1	13.6	14.1	14.6
Canyon Lake/Canyon Hills	1.9	4.0	4.0	4.0	4.0
Alberhill/Horsethief	2.4	3.1	4.0	4.8	5.7
Wildomar Region	3.4	7.7	8.8	8.9	9.0
<b>TOTAL Supply</b>	<b>18.9</b>	<b>27.9</b>	<b>30.4</b>	<b>31.8</b>	<b>33.3</b>

Figure 6-1 presents the estimated build-up of recycled water demand through 2030. The chart shows the wide range in recycled water demand due to lake replenishment demands.

**Figure 6-1**  
**Projected Recycled Water Demand**



**THIS PAGE INTENTIONALLY LEFT BLANK**

# Section 7

## Water Quality Impacts on Reliability

---

*Water Code Section 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.*

### 7.1 WATER QUALITY IMPACTS ON SUPPLY RELIABILITY

EVMWD obtains its potable water supplies from local surface water from Canyon Lake, local groundwater, and imported water.

#### 7.1.1 Surface Water

Significant levels of Disinfection By-Products (DBP) have been detected in treated Canyon Lake water. The average level of chlorite measured at the Canyon Lake WTP in 2004 was 0.7 mg/L, which has an Maximum Contaminant Level Goal (MCLG) of 0.8 mg/L and an Maximum Contaminant Level (MCL) of 1.0 mg/L. Currently, breakpoint chlorination is used at all MWDSC connections, which possibly accounts for the high DBP levels in Canyon Lake. EVMWD is converting to chloramination disinfection at all facilities to address this problem. The new disinfection system should be on-line in early 2006.

Canyon Lake had the highest Total Dissolved Solids (TDS) among all of EVMWD's water sources between 1999 and 2004, except in 2003. The TDS in treated water from Canyon Lake ranged between 588 to 660 mg/L, except in 2003 when the concentration dropped to 400 mg/L due to above normal runoff. The secondary (aesthetic) MCL for TDS is 1,000 mg/L.

Despite these water quality issues, no water quality problems from the EVMWD's surface water sources are expected to have an impact on water supply reliability.

#### 7.1.2 Groundwater

Groundwater produced from the EVMWD's wells is EVMWD's most economical water source. However, data from 2004 reveals that groundwater from EVMWD's wells show significant levels of nitrate. Groundwater from the Elsinore Division system had an average nitrate (as N) level of 2.8 mg/L and a maximum level of 8.1 mg/L. Groundwater from the Temescal Division system had an average nitrate (as N) level of 6.2 mg/L, and a maximum level of 6.7 mg/L. The MCL and MCLG for nitrate (as N) is 10 mg/L. The high nitrate levels could be due to contamination from septic systems. Between 1999 and 2004, the flow-weighted TDS of all wells ranged between 399 to 489 mg/L.

Starting from January 23, 2006, water systems are required to comply with the reduced MCL for arsenic. The US EPA lowered the arsenic MCL from 0.050 mg/L to 0.010 mg/L. For groundwater systems, there is a two-year compliance reporting period provided by the US EPA.

## Section 7 – Water Quality Impacts on Reliability

Four of EVMWD's wells have arsenic levels exceeding the new MCL. To comply with the deadline, EVMWD is designing and constructing pipelines to blend the elevated arsenic groundwater with imported water that has a low arsenic concentration. EVMWD is also designing a treatment facility to remove arsenic from the groundwater. The cost of the new facilities is estimated to be \$3.1 million. Construction of all facilities is anticipated to be completed by July 2007, within the allotted compliance period.

With the current plans to reduce levels of arsenic in the EVMWD's groundwater supply, EVMWD does not anticipate any groundwater quality to have adverse impacts on supply reliability.

### 7.1.3 Imported Water

EVMWD obtains all of its imported water supply from MWDSC. MWDSC has recognized the importance of the quality of its water supplies, and to the extent possible, is responding to the issue by concentrating on maintaining the quality of its source water and developing water management programs that protect and enhance water quality. These management programs recognize that any contaminants that cannot be sufficiently controlled through protection of source waters must be handled through changed water treatment protocols or blending.

Imported MWDSC water treated at Skinner Filtration Plant is conveyed to EVMWD through the SVP. From 1999 to 2004, the TDS content of this water supply, which is primarily Colorado River water, ranged between 436 to 509 mg/L. In 1999, MWD adopted a policy to maintain the TDS concentration at 500 mg/L (secondary standards for drinking water) or less. This is being accomplished by blending the Colorado River water, which has TDS as high as 700 mg/l, with State Water Project water that has an average TDS of about 300 mg/L.

Imported MWDSC water treated at Mills Filtration Plan is conveyed to EVMWD through the TVP. From 2002 to 2004, the TDS content of this water supply ranged between 263 and 299 mg/L.

Currently there are no restrictions on water supply due to imported water quality. As presented in **Table 7-1**, no projected water supply changes are anticipated due to water quality impacts from any of EVMWD's sources.

**Table 7-1**  
**Current & Projected Water Supply Changes Due to Water Quality (percent)**

Water Source	2005	2010	2015	2020	2025	2030
Surface Water – Canyon Lake Runoff	0	0	0	0	0	0
Groundwater	0	0	0	0	0	0
Imported Water – AVP	0	0	0	0	0	0
Imported Water – TVP	0	0	0	0	0	0

# Section 8

## Water Service Reliability

---

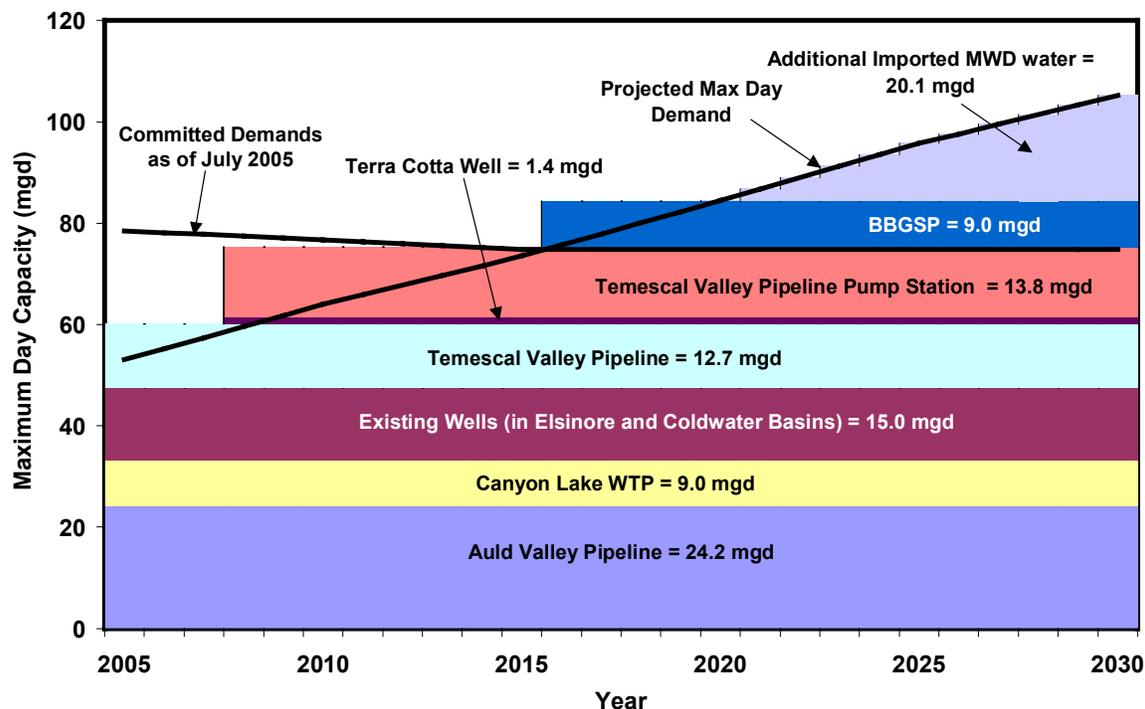
### **Water Code Section 10635:**

- (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.*

Supplies are calculated according to information presented earlier in **Tables 3-5, 3-10, and 3-11**. Beyond 2020, imported MWDSC water sources (in addition to those already projected for through the AVP and TVP) are used to supply needed capacity to meet MDD. In addition, supply from the Coldwater basin is limited by the demand of the TDSA. Demands are calculated from information presented in **Section 3.6-7**. **Figure 8-1** presents EVMWD's supply availability to meet MDD through 2030.

## Section 8 – Water Service Reliability

**Figure 8-1  
Supply Availability to Meet MDD through 2030**



### 8.1 PROJECTED NORMAL WATER YEAR SUPPLY AND DEMAND

The projected normal water year supply includes local groundwater and surface water as well as imported MWDSC water sources. **Table 8-1** summarizes the projected normal water year supply until 2030. Note that recycled water supply and demand is excluded from the calculations (discussed separately in **Section 6**). Current and anticipated future supplies are sufficient to meet the projected normal year water demand through 2030. After 2020, additional water from MWDSC (not including supply already planned for through the AVP and TVP) will be imported to supply increasing MDD.

**Table 8-1  
Projected Normal Water Year Supply**

	2010	2015	2020	2025	2030
Supply (acre-ft/year)	66,590	66,690	66,690	72,627	77,919
% of year 2005	120%	120%	120%	131%	140%

**Table 8-2** summarizes the projected normal water year demand until 2030, while **Table 8-3** provides the projected normal year supply and demand comparison. Note that in all tables, MDD is calculated as two times the ADD of a normal water year.

## Section 8 – Water Service Reliability

**Table 8-2  
Projected Normal Water Year Demand**

	2010	2015	2020	2025	2030
Demand (acre-ft/year)	35,833	41,186	47,305	53,630	58,923
% of year 2005	121%	139%	159%	180%	198%
MDD (mgd)	64.0	73.6	84.5	95.8	105.3

**Table 8-3  
Projected Normal Water Year Supply and Demand Comparison**

	2010	2015	2020	2025	2030
Supply Totals (acre-ft/year)	66,590	66,690	66,690	72,627	77,919
Demand Totals (acre-ft/year)	35,833	41,186	47,305	53,630	58,923
Difference (supply minus demand)	30,757	25,504	19,385	18,996	18,996
Difference as % of supply	46%	38%	29%	26%	24%
Difference as % of demand	86%	62%	41%	35%	32%
Supply Capacity (mgd)	85.1	85.2	85.2	95.8	105.3
MDD (mgd)	64	73.6	84.5	95.8	105.3
Difference (supply minus demand)	21.1	11.6	0.7	0.0	0.0
Difference as % of Supply Capacity	25%	14%	1%	0%	0%
Difference as % of MDD	33%	16%	1%	0%	0%

### 8.2 PROJECTED SINGLE DRY-YEAR SUPPLY AND DEMAND

EVMWD has predicted that sufficient supply exists to meet demands for single dry year requirements. As described in the Water Shortage Contingency Plan, dry years may prompt additional water conservation measures to ensure sufficient supply is maintained. **Table 8-4** shows the projected single dry year supply, **Table 8-5** shows the projected single dry year demand, and **Table 8-6** shows the projected single dry year supply and demand comparison. Current and anticipated future supplies are sufficient to meet the projected single dry-year water demand through 2030. After 2020, additional water from MWDSC (not including supply already planned for through the AVP and TVP) will be imported to supply increasing MDD.

**Table 8-4  
Projected Single Dry-Year Water Supply**

	2010	2015	2020	2025	2030
Supply (acre-ft/year)	76,490	76,590	76,590	82,527	87,819
% of projected normal	115%	115%	115%	114%	113%

## Section 8 – Water Service Reliability

**Table 8-5  
Projected Single Dry-Year Water Demand**

	2010	2015	2020	2025	2030
Demand (acre-ft/year)	39,129	44,975	51,657	58,565	64,344
% of year 2005	109%	109%	109%	109%	109%
MDD (mgd)	64.0	73.6	84.5	95.8	105.3

**Table 8-6  
Projected Single Dry-Year Supply and Demand Comparison**

	2010	2015	2020	2025	2030
Supply Totals (acre-ft/year)	76,490	76,590	76,590	82,527	87,819
Demand Totals (acre-ft/year)	39,129	44,975	51,657	58,565	64,344
Difference (supply minus demand)	37,361	31,615	24,933	23,962	23,475
Difference as % of supply	49%	41%	33%	29%	27%
Difference as % of demand	95%	70%	48%	41%	36%
Supply Capacity (mgd)	85.1	85.2	85.2	95.8	105.3
MDD (mgd)	64.0	73.6	84.5	95.8	105.3
Difference (supply minus demand)	21.1	11.6	0.7	0.0	0.0
Difference as % of Supply Capacity	25%	14%	1%	0%	0%
Difference as % of MDD	33%	16%	1%	0%	0%

### 8.3 PROJECTED MULTIPLE DRY-YEAR SUPPLY AND DEMAND

EVMWD has predicted that sufficient supply exists to meet demands for multiple dry year requirements and, similar to single dry-year supply, dry years may prompt additional water conservation measures to ensure sufficient supply is maintained. **Tables 8-7 through 8-19** show multiple-dry-year supply and demand figures through 2030. Current and anticipated future supplies are sufficient to meet the projected multiple dry-year demand through 2030. After 2020, additional water from MWDSC (not including supply already planned for through the AVP and TVP) will be imported to supply increasing MDD.

**Table 8-7  
Projected Supply During Multiple Dry-Year Period Ending in 2010**

	2006	2007	2008	2009	2010
Supply (acre-ft/year)	55,590	71,790	71,790	76,190	76,190
% of projected normal	100%	107%	107%	114%	114%

**Table 8-8  
Projected Demand during Multiple Dry Year Period Ending in 2010**

	2006	2007	2008	2009	2010
Demand (acre-ft/year)	33,786	35,122	36,459	37,795	39,129
% of year 2005	109%	109%	109%	109%	109%
MDD (mgd)	55.3	57.5	59.6	61.8	64.0

## Section 8 – Water Service Reliability

**Table 8-9  
Projected Supply and Demand Comparison During Multiple Dry Year  
Period Ending in 2010**

	2006	2007	2008	2009	2010
Supply Totals (acre-ft/year)	55,590	71,790	71,790	76,190	76,190
Demand Totals (acre-ft/year)	33,786	35,122	36,459	37,795	39,129
Difference (supply minus demand)	21,804	36,668	35,331	38,395	37,061
Difference as % of supply	39%	51%	49%	50%	49%
Difference as % of demand	65%	104%	97%	102%	95%
Supply Capacity (mgd)	60.9	80.6	80.6	85.1	85.1
MDD (mgd)	55.3	57.5	59.6	61.8	64.0
Difference (supply minus demand)	5.6	23.1	21.0	23.3	21.1
Difference as % of Supply Capacity	9%	29%	26%	27%	25%
Difference as % of MDD	10%	40%	35%	38%	33%

**Table 8-10  
Projected Supply During Multiple Dry Year Period Ending in 2015**

	2011	2012	2013	2014	2015
Supply (acre-ft/year)	76,190	76,190	76,190	76,190	76,290
% of projected normal	114%	114%	114%	114%	114%

**Table 8-11  
Projected Demand during Multiple Dry Year Period Ending in 2015**

	2011	2012	2013	2014	2015
Demand (acre-ft/year)	40,298	41,467	42,637	43,806	44,975
% of year projected normal	109%	109%	109%	109%	109%
MDD (mgd)	65.9	67.8	69.7	71.7	73.6

## Section 8 – Water Service Reliability

**Table 8-12  
Projected Supply and Demand Comparison During Multiple Dry Year Period  
Ending in 2015**

	2011	2012	2013	2014	2015
Supply Totals (acre-ft/year)	76,190	76,190	76,190	76,190	76,290
Demand Totals (acre-ft/year)	40,298	41,467	42,637	43,806	44,975
Difference (supply minus demand)	35,892	34,723	33,553	32,384	31,315
Difference as % of supply	47%	46%	44%	43%	41%
Difference as % of demand	89%	84%	79%	74%	70%
Supply Capacity (mgd)	85.1	85.1	85.1	85.1	85.2
MDD (mgd)	65.9	67.8	69.7	71.7	73.6
Difference (supply minus demand)	19.2	17.3	15.4	13.4	11.6
Difference as % of Supply Capacity	23%	20%	18%	16%	14%
Difference as % of MDD	29%	25%	22%	19%	16%

**Table 8-13  
Projected Supply During Multiple Dry Year Period Ending in 2020**

	2016	2017	2018	2019	2020
Supply (acre-ft/year)	76,290	76,290	76,290	76,290	76,290
% of projected normal	114%	114%	114%	114%	114%

**Table 8-14  
Projected Demand during Multiple Dry Year Period Ending in 2020**

	2016	2017	2018	2019	2020
Demand (acre-ft/year)	46,312	47,648	48,985	50,322	51,657
% of year projected normal	109%	109%	109%	109%	109%
MDD (mgd)	75.8	77.9	80.1	82.3	84.5

**Table 8-15  
Projected Supply and Demand Comparison During Multiple Dry Year Period  
Ending in 2020**

	2016	2017	2018	2019	2020
Supply Totals (acre-ft/year)	76,290	76,290	76,290	76,290	76,290
Demand Totals (acre-ft/year)	46,312	47,648	48,985	50,322	51,657
Difference (supply minus demand)	29,978	28,642	27,305	25,968	24,633
Difference as % of supply	39%	38%	36%	34%	32%
Difference as % of demand	65%	60%	56%	52%	48%
Supply Capacity (mgd)	85.2	85.2	85.2	85.2	85.2
MDD (mgd)	75.8	77.9	80.1	82.3	84.5
Difference (supply minus demand)	9.4	7.3	5.1	2.9	0.7
Difference as % of Supply Capacity	11%	9%	6%	3%	1%
Difference as % of MDD	12%	9%	6%	3%	1%

## Section 8 – Water Service Reliability

**Table 8-16**  
**Projected Supply During Multiple Dry Year Period Ending in 2025**

	2021	2022	2023	2024	2025
Supply (acre-ft/year)	77,166	78,431	79,696	80,961	82,227
% of projected normal	114%	114%	114%	113%	113%

**Table 8-17**  
**Projected Demand during Multiple Dry Year Period Ending in 2025**

	2021	2022	2023	2024	2025
Demand (acre-ft/year)	53,038	54,420	55,801	57,183	58,565
% of year projected normal	109%	109%	109%	109%	109%
MDD (mgd)	86.8	89.0	91.3	93.5	95.8

**Table 8-18**  
**Projected Supply and Demand Comparison During Multiple Dry Year Period Ending in 2025**

	2021	2022	2023	2024	2025
Supply Totals (acre-ft/year)	77,166	78,431	79,696	80,961	82,227
Demand Totals (acre-ft/year)	53,038	54,420	55,801	57,183	58,565
Difference (supply minus demand)	24,128	24,011	23,895	23,779	23,662
Difference as % of supply	31%	31%	30%	29%	29%
Difference as % of demand	45%	44%	43%	42%	40%
Supply Capacity (mgd)	86.8	89.0	91.3	93.5	95.8
MDD (mgd)	86.8	89.0	91.3	93.5	95.8
Difference (supply minus demand)	0.0	0.0	0.0	0.0	0.0
Difference as % of Supply Capacity	0%	0%	0%	0%	0%
Difference as % of MDD	0%	0%	0%	0%	0%

**Table 8-19**  
**Projected Supply During Multiple Dry Year Period Ending in 2030**

	2026	2027	2028	2029	2030
Supply (acre-ft/year)	83,285	84,344	85,403	86,462	87,519
% of projected normal	113%	113%	113%	112%	112%

**Table 8-20**  
**Projected Demand during Multiple Dry Year Period Ending in 2030**

	2026	2027	2028	2029	2030
Demand (acre-ft/year)	59,720	60,877	62,033	63,190	64,344
% of year projected normal	109%	109%	109%	109%	109%
MDD (mgd)	97.7	99.6	101.5	103.4	105.3

## Section 8 – Water Service Reliability

---

**Table 8-21**  
**Projected Supply and Demand Comparison During Multiple Dry Year Period**  
**Ending in 2030**

	<b>2026</b>	<b>2027</b>	<b>2028</b>	<b>2029</b>	<b>2030</b>
Supply Totals (acre-ft/year)	83,285	84,344	85,403	86,462	87,519
Demand Totals (acre-ft/year)	59,720	60,877	62,033	63,190	64,344
Difference (supply minus demand)	23,565	23,467	23,370	23,273	23,175
Difference as % of supply	28%	28%	27%	27%	26%
Difference as % of demand	39%	39%	38%	37%	36%
Supply Capacity (mgd)	97.7	99.6	101.5	103.4	105.3
MDD (mgd)	97.7	99.6	101.5	103.4	105.3
Difference (supply minus demand)	0.0	0.0	0.0	0.0	0.0
Difference as % of Supply Capacity	0%	0%	0%	0%	0%
Difference as % of MDD	0%	0%	0%	0%	0%

# Section 9

## Adoption and Implementation of the UWMP

---

**Water Code Section 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.*

**Water Code Section 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.*

**Water Code Section 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.*

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

**Water Code Section 10644 (a & b):**

- (a) *An urban water supplier shall file with the department 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 filed with the department and any city or county within which the supplier provides water supplies within 30 days after adoption.*
- (b) *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 outstanding elements of the individual plans. The department shall provide a copy of the report to each urban water supplier that has filed its plan with 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.*

## **Section 9 – Adoption and Implementation of the UWMP**

---

*Water Code Section 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.*

### **9.1 PLAN DEVELOPMENT AND PUBLIC PARTICIPATION**

EVMWD followed its normal procedures for reviewing and adopting the UWMP:

- Review by staff of a preliminary draft of the UWMP;
- Workshop on the UWMP with the Board of Directors;
- Draft plan made available to public two weeks before public hearing. Copies of the report were on file at the EVMWD office at 31315 Chaney Street, Lake Elsinore, CA.
- Legal notice published in the *Press-Enterprise*;
- Public hearing held at a regular EVMWD Board Meeting; and
- Adoption by resolution at EVMWD Board Meeting.

### **9.2 RESOLUTION FOR ADOPTING THE PLAN**

The Board of Directors of EVMWD adopted this urban water management plan on December 12, 2005 as Resolution No. 05-12-01. A copy of this resolution is presented at the end of this section.

### **9.3 DISTRIBUTION OF THE 2005 UWMP**

The final EVMWD 2005 UWMP will be distributed to the following entities:

- City of Lake Elsinore;
- City of Canyon Lake;
- City of Murietta; and
- County of Riverside Planning Department.

Copies of the 2005 UWMP are available to the public upon request.

## Section 9 – Adoption and Implementation of the UWMP

---

RESOLUTION NO. 05-12-01

RESOLUTION OF THE BOARD OF DIRECTORS  
OF ELSINORE VALLEY MUNICIPAL WATER  
DISTRICT ADOPTING THE URBAN WATER  
MANAGEMENT PLAN (UWMP) 2005

WHEREAS, the California Legislature enacted Assembly Bill 797 during the 1983-94 Regular Session of the California Legislature (Water Code Section 10610 et. seq.) known as the Urban Water Management Planning Act, which mandates that every urban supplier of water 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, Elsinore Valley Municipal Water District is an urban supplier of water providing to over 32,000 customers, and has therefore, prepared and circulated for public review a Draft Urban Water Management Plan, in compliance with requirements of AB 797; and

WHEREAS, a properly noticed public hearing regarding said Draft Plan was held by the Board of Directors of Elsinore Valley Municipal Water District on December 12, 2005;

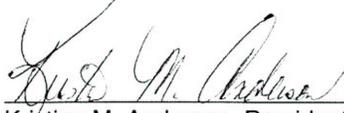
NOW, THEREFORE BE IT RESOLVED, by the Board of Directors of the Elsinore Valley Municipal Water District as follows:

1. The 2005 Urban Water Management Plan is hereby adopted;
2. The General Manager is hereby authorized and directed to file the Plan with the State Water Resources Control Board for approval, and then before December 31, 2005, submit the Plan to the California Department of Water Resources, in accordance with AB797;
3. The General Manager is hereby authorized and directed to implement the Water Conservation Programs as detailed in the adopted Urban Water Management Plan, including recommendations to the Board of Directors regarding necessary procedures, rules, and regulations to carry out effective and equitable water conservation programs.

## Section 9 – Adoption and Implementation of the UWMP

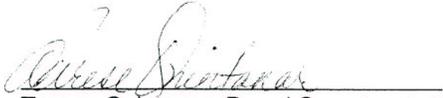
---

APPROVED, ADOPTED AND SIGNED this 12th day of December 2005.



Kristine M. Anderson, President of the  
Board of Directors of the  
Elsinore Valley Municipal Water District

ATTEST:



Terese Quintanar, Board Secretary to the  
Board of Directors of the  
Elsinore Valley Municipal Water District



**THIS PAGE INTENTIONALLY LEFT BLANK**

# Section 10

## Miscellaneous Provisions

---

### ***Water Code Section 10650 – 10657:***

**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.*

## **Section 10 – Miscellaneous Provisions**

---

*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.*

*10657.*

- (a) The department shall take into consideration whether the urban water supplier has submitted an updated urban water management plan that is consistent with Section 10631, as amended by the act that adds this section, in determining whether the urban water supplier is eligible for funds made available pursuant to any program administered by the department.*
- (b) This section shall remain in effect only until January 1, 2006, and as of that date is repealed. unless a later enacted statute, that is enacted before January 1, 2006, deletes or extends that date.*

Should any of the provisions listed above become applicable, necessary action shall be taken.

# Appendix A

## References

---

California Department of Water Resources (DWR), 2003. California's Groundwater, DWR Bulletin 118, October 2003.

California Department of Water Resources (DWR), 2005. Guidebook to Assist Water Suppliers in the Preparation of a 2005 Urban Water Management Plan, prepared by the California DWR.

California Urban Water Conservation Council (CUWCC), 2004. Memorandum of Understanding Regarding Urban Water Conservation in California, March 10, 2004.

City of Lake Elsinore, 2005. Notice of Preparation of a Draft Environmental Impact Report for Specific Plan Amendment No. 8 – East Lake Specific Plan, June 6, 2005.

Eastern MWD, 2004. Comprehensive Annual Financial Report for the year ended June 30, 2004, August 31, 2004.

EVMWD, 2001a. Board of Directors Agenda Item -- Consider Approval of Two Agreements Between the Western Municipal Water District and EVMWD for the Reciprocal Use of Certain Assets Related to the Production and/or Conveyance of Water for the Lease of a 5.0 cfs Temporary Capacity Use Right in the Mills Pipeline, August 23, 2001.

EVMWD, 2001b. Lease of 5.0 cfs of Temporary Capacity Agreement with Western MWD, August 23, 2001.

EVMWD, 2001c. Reciprocal Use Agreement with Western MWD, August 23, 2001.

EVMWD, 2002a. Board of Directors Meeting Minutes authorizing Amendment No, 1 to Lease of 5.0 cfs of Temporary Capacity Agreement with Western MWD, August 8, 2002.

EVMWD, 2002b. Comprehensive Annual Financial Report for the year ended June 30, 2002, December 2002.

EVMWD, 2004a. 2003-2004 Best Management Practice Coverage Report, June 1, 2004.

EVMWD, 2004b. 2004 Best Management Practice Report, June 1, 2004.

EVMWD, 2004c. Comprehensive Annual Financial Report for the year ended June 30, 2004, December 2004.

EVMWD, 2005a. EVMWD History. Available: [www.evmwd.com/about/history/default.asp](http://www.evmwd.com/about/history/default.asp). Accessed: August 12, 2005.

## **Appendix A – References**

---

EVMWD, 2005b. Project Development Status, July 2005.

EVMWD, 2005c. Total Savings Report.

HDR, 2004. “Final EIR for Canyon Lake Improvement Project,” Appendix C, prepared for Elsinore Valley Municipal Water District, February 2004.

Hunsaker & Associates, 2003. Water and Sewer Master Plans for Alberhill Ranch, May 9, 2003.

Hunsaker & Associates, 2004. Ramsgate Water, Wastewater & Recycled Water Facilities Plan, June 1, 2004.

Hunsaker & Associates, 2004a. Ramsgate Water, Wastewater & Recycled Water Facilities Plan, July 27, 2004

James M. Montgomery Consulting Engineers, 1992. Water Shortage Contingency Plan, prepared for EVMWD, February 1992.

Kennedy-Jenks Consultants, 2003. Wastewater Master Plan, prepared for EVMWD.

Kennedy-Jenks Consultants, 2004. Wildomar Service Area Recycled Water Master Plan, prepared for EVMWD, June 2004.

Kennedy-Jenks Consultants, 2005a. Draft Technical Memorandum – Alberhill Water & Wastewater Phasing Plan, prepared for EVMWD, June 10, 2005.

Kennedy-Jenks Consultants, 2005b. Draft Technical Memorandum No. 1 – Market Assessment – Regional Water Reclamation Facility Recycled Water Master Plan, prepared for EVMWD, June 10, 2005.

Kennedy-Jenks Consultants, 2005c. Draft Wastewater Master Plan, prepared for EVMWD.

Kennedy-Jenks Consultants, 2005d. Revised Wastewater Flow Projection, prepared for EVMWD, March 2005.

Kennedy-Jenks Consultants, 2005. Draft Technical Memorandum – Alberhill Recycled Water Master Plan market Assessment, prepared for EVMWD, September 21, 2005.

MWDSC, 1999. Water Shortage and Drought Management Plan, March 29, 1999.

MWDSC, 2003. Report of Metropolitan’s Water Supplies, March 25, 2003.

MWDSC, 2005a. Budget 2005/2006.

Available: <http://www.mwdh2o.com/mwdh2o/pages/finance/finance01.html>. Accessed: October 25, 2005.

- MWDSC, 2005b. Draft Regional Urban Water Management Plan, May 2005.
- MWDSC, 2005c. Personal communication with Jack Safely regarding Metropolitan's future water facilities planning, June 21, 2005.
- MWDSC, 2005d. Regional Urban Water Management Plan, September 2005.
- Montgomery Watson/Black & Veatch, 1997. Water Resources Development Plan, prepared for EVMWD, February 1997.
- Montgomery Watson/Maddaus Water Management/The Weber Group, 2000. Final Urban Water Management Plan prepared for EVMWD, January 2000.
- MWH, 2001a. Distribution System Master Plan, prepared for EVMWD
- MWH, 2001b. Distribution System Master Plan, September 2001.
- MWH, 2002. Distribution System Master Plan, prepared for EVMWD, May 2002.
- MWH, 2003a. Elsinore Basin Groundwater Management Plan, prepared for Elsinore Valley Municipal Water District.
- MWH, 2003b. John Laing Homes Community Development Water Supply Assessment, prepared for Elsinore Valley Municipal Water District.
- MWH, 2004a. Asset Inventory and Operations Assessment of the Temescal Water Division, prepared for Elsinore Valley Municipal Water District, May 2004.
- MWH, 2004b. Coldwater Basin Recharge Feasibility Study prepared for EVMWD, March 2004.
- MWH, 2005a. Final District-Wide Water Supply Assessment, prepared for Elsinore Valley Municipal Water District, August 2005.
- MWH, 2005b. Draft Program Environmental Impact Report for Lake Elsinore Stabilization and Enhancement Project, prepared for Lake Elsinore and San Jacinto Watershed Authority, March 2005.
- MWH, 2005c. Draft Urban Water Management Plan, prepared for the City of Ontario.
- Psomas, 2005. Canyon Hills Recycled Water Project – Water Recycled Construction Funding Program Grant Application, prepared for EVMWD, January 20, 2005.
- Regional Water Quality Control Board (RWQCB), 2005. Order No. R8-2005-0003, NPDES CA 8000027, Waste Discharge and Producer/User Water Reclamation Requirements for Elsinore Valley Municipal Water District Regional Water Reclamation Facility, Riverside County.

## Appendix A – References

---

State Department of Public Works Division of Water Resources (SDPW-DWR), 1935. Water Rights License No. 1533 issued to Temescal Water Company, effective date April 5, 1920, issued April 16, 1935.

State Water Rights Board (SWRB), 1961. Water Rights License No. 6327 issued to Temescal Water Company, effective date October 29, 1941, issued June 5, 1961.

Superior Court, 2003. Stipulated Judgment – City of Lake Elsinore v. Elsinore Valley Municipal Water District; Does 1 through 25. Case No. 359671. (Lake Elsinore Settlement Agreement, March 1, 2003).

United States Geological Survey (USGS), 2005. USGS Stream Gauge on the San Jacinto River below Railroad Canyon Dam (No. 11070500) data accessed, July 2005.

Viega Nascimento, R.A., and M.A. Anderson, 2004. Lake Elsinore Recycled Water Project, Final Report, prepared for LESJWA, December 9, 2004.

Western MWD, 2005. Western MWD 2005 Urban Water Management Plan, October 14, 2005.

Western-San Bernardino Watermaster, 2003. Annual Report of the Western-San Bernardino Watermaster.

# Appendix B

## 2005 UWMP Guidebook

---

**THIS PAGE INTENTIONALLY LEFT BLANK**

**Guidebook to Assist Water Suppliers  
in the Preparation of a  
2005 Urban Water Management Plan**

January 18, 2005

Prepared by the California Department of Water Resources



**DEPARTMENT OF WATER RESOURCES**

1416 NINTH STREET, P.O. BOX 942836  
SACRAMENTO, CA 94236-0001  
(916) 653-5791



January 18, 2005

TO: California Urban Water Suppliers

This *Guidebook to Assist Water Suppliers in the Preparation of a 2005 Urban Water Management Plan* has been prepared by the Department of Water Resources (DWR) for your use in preparing Urban Water Management Plans (UWMPs). The Guidebook has been posted at the DWR website at: <http://www.owue.water.ca.gov/urbanplan/Guidebook.pdf>.

An UWMP can be a step-by-step approach for water utilities to assess their water resource needs. It is a solid basis for local and regional water management planning. Every retailer and wholesaler that meets the definition of an "urban water supplier" must prepare an UWMP, and then, if they wish, join with other agencies to prepare an Integrated Regional Water Management Plan (IRWMP). The UWMP can be a key component of the IRWMP and is a condition for eligibility for assistance pursuant to Proposition 50, Chapter 8 grant funds, as well as drought assistance.

An UWMP is also considered to be a source of information for Water Supply Assessments, Water Code Section 10613 et seq. (Added by Stats. 2001, c. 643), and Written Verifications of Water Supply, Water Code Section 66473.7 (Added by Stats. 2001, c. 642). Both statutes require detailed information regarding water availability to be provided to the city and county decision makers prior to approval of specified large development projects. Both statutes repeatedly identify the UWMP as a planning document that, if properly prepared, can be used by a water supplier to meet the standards set forth in both statutes. Thorough and complete UWMPs will allow water suppliers to use UWMPs as a foundation to fulfill the specific requirements of these two statutes. Additionally, an UWMP may serve as a long-range planning document for water supply and a source document for cities and counties as they prepare their General Plans.

Sincerely,

A handwritten signature in black ink, appearing to read "Lester A. Snow", with a long horizontal flourish extending to the right.

Lester A. Snow  
Director

Enclosure



# FOREWORD

Note: The Department of Water Resources does not determine whether a specific UWMP complies with the requirements of the Act, but reviews the plans for completeness. Except as provided in Water Code §10631.5 “DWR consideration of Demand Management Measures (DMMs) for specific financial assistance programs,” Water Code §10644 “Plans must be filed with DWR,” Water Code §10656 “supplier that does not prepare, adopt and submit a Plan to DWR is ineligible to receive drought assistance,” and Water Code §10657 “submission of an updated Plan necessary for financial assistance from DWR”, the Department of Water Resources has no regulatory, permitting or other approval authority over Plans.

The Urban Water Management Planning Act (Act) requires urban water suppliers to describe and evaluate sources of water supply, efficient uses of water, demand management measures, implementation strategy and schedule, and other relevant information and programs. Specific information required by the Act is cited in the Guidebook, by showing each provision of the Act in *Italic font*.

The Guidebook has been prepared to assist urban water suppliers in complying with the requirements of the Act. However the information in the Guidebook does not necessarily include all matters which may be necessary to comply with the Act, and some advice or recommendations may not be necessary in a specific case. In the event that information or recommendation in the Guidebook are inconsistent with, or conflict with the requirements of the Act or applicable laws, the Act or other laws shall prevail.

Additionally, tables are included, where applicable, to help plan preparers organize and report the necessary information. For those sections or portions thereof, where tabulating the information is not applicable, it is suggested the required information be reported in narrative format. Completion of the Guidebook tables may not be sufficient to meet the requirement of the Act. Table entries are designed to guide the urban water suppliers to tabulate the information. Table entries may not be inclusive or applicable to your case. As such, you may add to, modify, or replace the tables in reporting required information applicable to your plan. In many instances, even when data is available, the law’s requirements need to be addressed in narrative format.

In addition to the Guidebook, DWR has prepared Review Sheets that contain the criteria used by DWR staff in reviewing the UWMP for completeness. As a general rule, DWR reviewers will consider a plan complete if it meets the criteria listed in the Review Sheets. The DWR staff Review Sheets are available to interested parties on the DWR Web Site at <http://www.owue.water.ca.gov/urbanplan/assist/assist.cfm>. Urban water suppliers may wish to view the Review Sheets. The Review Sheets also contain tables identical to the tables in the Guidebook. DWR staff will enter information contained in the UWMPs into the appropriate Review Sheet tables in the UWMP database. The Review Sheets tables will also assist DWR staff to determine if all required information is included in the UWMP.

While use of Guidebook tables to report the information by the water supplier is encouraged, a supplier is not required (nor are the tables necessarily sufficient) to complete the Guidebook tables to meet the requirements of the Act.

## Using the Urban Water Management Plan as a foundation for a new Integrated Regional Water Management Plan

Urban water suppliers are required by the Urban Water Management Planning Act to update their UWMP and submit a complete plan to Department of Water Resources every five years. An UWMP is required in order for a water supplier to be eligible for DWR administered State grants and loans and drought assistance.

An UWMP is considered to be a source of information for Water Supply Assessments (Senate Bill 610) Water Code §10613 *et seq.* (Added by Stats. 2001, c. 643), and Written Verifications of Water Supply (SB 221) Water Code §66473.7 (Added by Stats. 2001, c. 642). In addition, an UWMP may serve as a long-range planning document for water supply, a source of data for development of a regional water plan, and a source document for cities and counties as they prepare their General Plans.

One of the strategic objectives of DWR and the State is to assist and encourage integrated regional water management planning. The UWMP can provide a step-by step approach for water utilities to assess their water resource needs and supplies, which may serve as a building block for an Integrated Regional Water Management Plan (IRWMP) Water Code § 10530 *et seq.* (SB 1672) (added by Stats. 2002, c. 767).

In 2000, the Legislature passed the Integrated Regional Water Management Planning Act, which allows a regional water management group to prepare and adopt an IRWMP that includes qualified programs or projects or qualified reports or studies identified in Water Code § 10540 *et seq.* Many of the water management elements identified in the Act are also part of an UWMP. The intent of the Legislature is to encourage local agencies to work cooperatively to manage their available local and imported water supplies to improve the quality, quantity, and reliability of those supplies.

The Integrated Regional Water Management grant program (Chapter 8 of Proposition 50) Water Code § 79510-7951, administered by DWR and the State Water Resources Control Board, provides funding for preparation and implementation of IRWMPs. The financial assistance provided by this grant program is expected to facilitate a variety of benefits not only through integration of multiple water management activities, but also planning and management on a regional basis, encompassing the service areas of multiple local agencies. IRWMPs will serve as a framework for agencies to integrate programs and projects that protect and enhance the quality and quantity of regional water supplies, as well as providing economic, environmental, and flood control benefits.

An urban water supplier that coordinates preparation of its UWMP with other water suppliers within the region or watershed will improve planning efficiencies and will be able to use its UWMP as a foundation for the IRWMP.

# Table of Contents

Letter From the Director.....	iii
Foreword.....	v
Using Urban Water Management Plans as a Foundation for New Integrated and Regional Water Management Plans.....	vi
Introduction .....	viii
Guidebook structure .....	ix
Definitions .....	x
Section 1 Agency Coordination.....	3
Section 2 Contents of UWMP .....	5
Step One: Appropriate level of planning for size of agency .....	7
Step Two: Service Area Information with 20 year projections .....	9
Step Three: Water Sources .....	11
Step Three: Water Sources - Groundwater .....	13
Step Four: Reliability of Supply .....	15
Step Five: Transfer and Exchange Opportunities .....	17
Step Six: Water Use by Customer-type - Past, Current and Future .....	19
Step Seven: Demand Management Measures.....	23
Step Eight: Evaluation of DMMs not implemented .....	41
Step Nine: Planned Water Supply Projects and Programs.....	43
Step Ten: Development of Desalinated Water.....	45
Step Eleven: Current or Projected Supply Includes Wholesale Water .....	47
Section 3 Determination of DMM Implementation.....	49
Section 4 Water Shortage Contingency Plan.....	51
Step One: Stages of Action.....	51
Step Two: Estimate of Minimum Supply for Next Three Years .....	53
Step Three: Catastrophic Supply Interruption Plan .....	55
Step Four: Prohibitions, Penalties and Consumption Reduction Methods .....	57
Step Five: Analysis of Revenue Impacts of Reduced Sales During Shortages .....	59
Step Six: Draft Ordinance and Use Monitoring Procedure .....	61
Section 5 Recycled Water Plan.....	63
Step One: Coordination .....	63
Step Two: Wastewater Quantity, Quality and Current Uses .....	65
Step Three: Potential and Projected Use, Optimization Plan with Incentives .....	67
Section 6 Water Quality Impacts on Reliability .....	69
Section 7 Water Service Reliability.....	71
Step One: Projected Normal Water Year Supply and Demand .....	71
Step Two: Projected Single-Dry-Year Supply and Demand Comparison.....	73
Step Three: Projected Multiple-Dry-Year Supply and Demand Comparison .....	75
Section 8 Adoption and Implementation of UWMP .....	79
Section 9 Miscellaneous Provisions .....	81
Appendix A - Urban Water Management Plan Act.....	83
Appendix B - Other Resources .....	91

## Guidebook Structure

The Guidebook is designed to provide step-by-step suggestions for completing a **2005 Urban Water Management Plan**. The organization of the Guidebook follows the Urban Water Management Planning Act. The Water Code Section is quoted first in each section. Then text and tables are provided to assist agencies in preparing their Urban Water Management Plans.

DWR recommends that the Guidebook be printed (front and back with odd pages on the right) and placed in a binder so the reader can see two pages at once. The layout of the Guidebook allows the user to read through the directions on the right-hand page and view the related citations from the statute on the left-hand page (except for the Demand Management Section).

You may also request a hard copy of the Guidebook from:

San Joaquin District, Luis G Avila, (559) 230-3364, [lgavila@water.ca.gov](mailto:lgavila@water.ca.gov)

Southern District, Sergio Fierro, (818) 543-4652, [sergiof@water.ca.gov](mailto:sergiof@water.ca.gov)

Central District, Kim E Rosmaier, (916) 227-7584, [krosmaie@water.ca.gov](mailto:krosmaie@water.ca.gov)

Northern District, Gene Pixley, (530) 529-7392, [pixley@water.ca.gov](mailto:pixley@water.ca.gov)

Headquarters, David Todd, (916) 651-7027, [dtodd@water.ca.gov](mailto:dtodd@water.ca.gov)

Headquarters, Chriss Fakunding, (916) 651-9673, [cfakund@water.ca.gov](mailto:cfakund@water.ca.gov)

A map of DWR districts is available at: <http://www.dpla2.water.ca.gov/docs.cfm?nav=539>.

Throughout the Guidebook the term “Agency” is used to refer to city and county governments and public and private water suppliers that provide water for municipal purposes to 3,000 or more customers or provide more than 3,000 acre-feet of water per year.

*Italicized* text indicates the actual wording in the law.

The full text of the **Urban Water Management Planning Act** is included as an attachment to the Guidebook and is available at our web site (<http://www.owue.water.ca.gov/urbanplan/assist/assist.cfm>) as an Adobe PDF or a Microsoft Word document.

Please provide your suggestions for modifications to these planning tools so that this process continues to improve California’s water management and planning capabilities. To provide suggestions, please contact the Department of Water Resources, Office of Water Use Efficiency at [dtodd@water.ca.gov](mailto:dtodd@water.ca.gov).

# Definitions

## **Water Code 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.*

.

## Introduction

California Water Code §10644(a) requires urban water suppliers to file with the Department of Water Resources, the California State Library, and any city or county within which the supplier provides water supplies, a copy of its Urban Water Management Plan, no later than 30 days after adoption. Urban water suppliers are required to file an Urban Water Management Plan at least once every five years on or before December 31, in years ending in five and zero.

The 2005 Urban Water Management Plans are due December 31, 2005. All urban water suppliers as defined in Section 10617 (including wholesalers), 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 annually are required to prepare an Urban Water Management Plan.

A complete UWMP could be a foundation document and source of information for a Water Supply Assessment and a Written Verification of Water Supply. An UWMP also serves as:

- A long-range planning document for water supply,
- Source data for development of a regional water plan, and
- A source document for cities and counties as they prepare their General Plans.
- A key component to Integrated Regional Water Management Plans.

General Plans are source documents for water suppliers as they prepare their UWMPs. General Plans and UWMPs may be linked, as their accuracy and usefulness are interdependent. Therefore cities, counties, and public and private water suppliers will find it useful to work closely when developing and updating these planning documents. Cities, counties, water districts, property owners, and developers will all be able to utilize the UWMP when planning for and proposing new projects.

Urban Water Management Plans are reviewed by DWR staff to determine whether or not they are complete pursuant to the Urban Water Management Planning Act. Agencies subject to the Act must have adopted a complete UWMP that meets the requirements of the law and submitted it to DWR to be eligible for drought assistance or to receive funds through DWR. Results of the DWR review are provided to urban water suppliers through a review letter. The agency may wish to use the review letter to revise their UWMP for re-submittal. DWR provides a Legislative Report to the California Legislature one year after UWMPs are due to the Department, detailing the status of and outstanding elements of the UWMPs. The Department also prepares reports and provides data for any legislative hearings designed to consider the effectiveness of the submitted UWMPs.

DWR has updated these worksheets included in this Guidebook for the 2005 UWMP and posted them on the DWR Office of Water Use Efficiency web site at: <http://www.owue.ca.gov/>.

If you have questions regarding the Urban Water Management Planning Act, please contact  
San Joaquin District, Luis G Avila, (559) 230-3364, [lgavila@water.ca.gov](mailto:lgavila@water.ca.gov)  
Southern District, Sergio Fierro, (818) 543-4652, [sergiof@water.ca.gov](mailto:sergiof@water.ca.gov)  
Central District, Kim E Rosmaier, (916) 227-7584, [krosmaie@water.ca.gov](mailto:krosmaie@water.ca.gov)  
Northern District, Gene Pixley, (530) 529-7392, [pixley@water.ca.gov](mailto:pixley@water.ca.gov)  
Headquarters, David Todd, (916) 651-7027, [dtodd@water.ca.gov](mailto:dtodd@water.ca.gov)  
Headquarters, Chriss Fakunding, (916) 651-9673, [cfakund@water.ca.gov](mailto:cfakund@water.ca.gov)



## Section 1 - Agency Coordination

### Water Code section 10620

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 area wide, regional, watershed, or basin wide 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.

### Water Code section 10617

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.

---

## NOTE

The UWMP Act requires certain information be included in an Urban Water Management Plan (UWMP). When the law requires a description of an activity, or the identification of a water supply, or asks for quantity or quality, or request other data, your UWMP should contain a complete response. In reviewing an UWMP for completeness, DWR will review each UWMP section and will enter the information in the Review Sheet tables and answer the Review Sheet questions. However, providing the information necessary to complete the Review Sheets does not necessarily meet the requirements of the law.

Tables in the Review Sheet document and in the Guidebook reflect the wording of the law. When a table contains words such as "(other) define" it is understood that information will only be included when it applies to your agency. For instance, in Table 1 (on the next page) DWR reviewers will look for information about the role that "other water suppliers", water management agencies" and "relevant public agencies" played in the development of your UWMP.

---

## Section 1 - Agency Coordination

### Water Provider which will become Urban Water Supplier before 2010 (§ 10620 (b))

If a water supplier currently serves less than 3,000 customers or provides less than 3,000 AF/Y but becomes an urban water supplier, they have one year to adopt and submit an UWMP.

### Wholesaler UWMP options (§ 10620 (c))

A wholesale water agency may include information for one or more of their retail agencies if the retail agencies agree. If a retail agency participates in a regional UWMP, all of the information required by the Urban Water Management Planning Act for each retailer must be included and each included agency must adopt the UWMP. However, a regional UWMP may be functionally equivalent to an Integrated Regional Water Management Plan.

### Coordination with Appropriate Agencies (§ 10620 (d))

Discuss whether your agency participated in area, regional, watershed or basin wide plan and the anticipated benefits.

Describe the coordination of the plan preparation. You may use the table below that includes a list of the type of agencies with which the supplier is required to coordinate UWMP preparation and examples of types of coordination. You may use this table or other formats to report the required information applicable to your agency. The types of agencies may be replaced with specific agency names.

**Coordination with Appropriate Agencies (Table 1)**

Check at least one box per row	Participated in UWMP development	Commented on the draft	Attended public meetings	Contacted for assistance	Received copy of draft	Sent notice of intention to adopt	Not Involved / No Information
<i>Other water suppliers</i>							
<i>Water management agencies</i>							
<i>Relevant public agencies</i>							
<i>Other</i>							

### UWMP preparation (§ 10620 (e))

The water supplier has several options for the preparation of their UWMP.

- Own staff
- By contract
- In cooperation with other governmental agencies

### Describe resource maximization / import minimization plan (§10620 (f))

Discuss how water management tools and options are used to maximize resources and minimize your need to import water. This discussion may include documents you developed, such as: Integrated Regional Water Management Plan, Groundwater Management Plan, Regional Water Efficiency Programs, Water Transfers and Exchanges, Regional Water Plan, Cooperative Agreements, etc.

## Section 1 - Agency Coordination

### **Water Code section 10621**

*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.*

*(b) Every urban water supplier required to prepare a plan pursuant to this part shall 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).*

## **Section 1 – Contents of UWMP**

### **Due Date for UWMP (§ 10621(a))**

UWMPs are due by December 31 of years ending in '0' and '5'. Suppliers are encouraged to submit their UWMPs prior to the due date in order to allow sufficient time for DWR review and any necessary additions or revisions by suppliers.

### **City and County Notification and Participation (§ 10621(b))**

Suppliers are required to notify cities and counties in their service area of the opportunity to submit comments regarding the UWMP during the update process. The supplier may consult with and obtain comments from cities and counties that receive the notices required by this subdivision.

### **Supplier will periodically review and adopt any changes or amendments (§ 10621(c))**

When making changes or additions to an UWMP the supplier should follow the procedure set forth in Water Code sections 10640 through 10645.

## **Section 2 - Contents of Plan**

### **Step 1: Appropriate level of planning for size of agency**

#### **Article 2. Contents of Plans**

##### **Water Code Section 10630**

*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*

## **Section 2 - Contents of UWMP**

### **Step 1: Appropriate level of planning for size of agency**

The level of detail provided in an UWMP should reflect the size and complexity of the water supplier. However, all elements required by the Urban Water Management Planning Act must be discussed in an UWMP. Note that certain specific provisions of the Act require inclusion of historic information “if available.”

## Section 2 - Contents of UWMP

### Step Two: Service Area Information with 20 year projections

#### Water Code section 10631

*10631. A plan shall be adopted in accordance with this chapter and 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.*

---

#### NOTES

The UWMP Act requires a 20-year projection (through 2025 for the 2005 UWMP) for most information required in an UWMP. The tables provided throughout the Guidebook allow for data through 2030. The column is labeled 2030/opt so that it is clear that information for 2030 is NOT required. The inclusion of the 2030 data column was suggested by several water agencies that are preparing water supply assessments and verifications. If your agency anticipates preparing an assessment or verification between 2006 and 2010 the inclusion of 2030 data will allow you to utilize UWMP data for these purposes.

---

## Section 2 - Contents of UWMP

### Step Two: Service Area Information with 20 year projections

A variety of demographic factors may affect water use, including current and projected population, climate, population density, and the mix of customer types.

Current population and projected population for your water service area can be presented in a table similar to Table 2, below. Identify source of population projections, i.e. state, regional or local agency.

**Population - Current and Projected (Table 2)**

	2005	2010	2015	2020	2025	2030/opt
<b>Service Area Population</b>						

Include climate characteristics that affect water management in your service area. It is recommended that average climate data be based on at least the last 30 years, although much of the information on the NOAA website covers more than 50 years (<http://www.wrcc.dri.edu/CLIMATEDATA.html> ). Average ETO data for your service area can be obtained from the CIMIS website (<http://www.cimis.water.ca.gov/cimis/welcome.jsp>). Select the CIMIS station that provides data for your area and select the “Standard Monthly Average” to see that CIMIS data.

**Climate (Table 3)**

	Jan	Feb	Mar	Apr	May	June
<b>Standard Monthly Average ETo</b>						
<b>Average Rainfall (inches)</b>						
<b>Average Temperature (Fahrenheit)</b>						

**Climate (continued) (Table 3)**

	July	Aug	Sept	Oct	Nov	Dec	Annual
<b>Standard Monthly Average ETo</b>							
<b>Average Rainfall (inches)</b>							
<b>Average Temperature (Fahrenheit)</b>							

Describe other demographic factors affecting water management, such as housing density, future commercial and industrial development, or projected income levels. Much of this data might be available in the General Plan(s) covering your service area.

## Section 2 - Contents of UWMP

### Step Three: Water Sources

#### Water Code section 10631

*(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). . . .*

---

The tables provided throughout the Guidebook are offered only as a tool to help agencies collect and report information that must be in a complete UWMP. Although use of the provided tables is not required, quantification (to the extent practicable) is required. Not all tables, or parts of tables, apply to every agency. Your UWMP should include only information that is applicable to your agency, whether in tabular or narrative form.

---

## Section 2 - Contents of UWMP Step Three: Water Sources

Identify existing and planned water supply sources and the current and planned quantities available to the supplier.

**Current and Planned Water Supplies – AF/Y (Table 4)**

Water Supply Sources	2005	2010	2015	2020	2025	2030/opt
Wholesale water providers						
Name of your supplier						
Name of your supplier						
Name of your supplier						
Supplier produced groundwater						
Supplier surface diversions						
Transfers in or out						
Exchanges in or out						
Recycled Water (current and projected use)						
Desalination						
Other						

## Section 2 - Contents of UWMP

### Step Three: Water Sources - Groundwater

#### Water Code section 10631

*(b) . . . . 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 those basins for which 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.*

## Section 2 - Contents of UWMP

### Step Three: Water Sources - Groundwater

If your agency currently uses, or plans to use groundwater by 2025, your UWMP should include all the information required in the UWMP Act. The description and analysis is to be based on information that is reasonably available, including, but not limited to, historic use records from DWR, and from other sources.

If there is a groundwater management plan, prepared pursuant to Part 2.75 (commencing with Section 10750), discuss its provisions and the impacts upon your use of that basin. If the groundwater plan was adopted by your agency, include a copy in the UWMP.

Describe the groundwater basin(s) from which your agency extracts groundwater and provide information such as the static pumping levels, water quality, extraction rate, total storage, recharge and other factors.

If the groundwater basin(s) is adjudicated, attach the order or decree and identify the quantified amount of legal pumping right.

#### **Groundwater Pumping Rights – AF/Year (Table 5)**

Basin Name	Pumping Right – AF/Y
<b>Total</b>	

For basins that have not been adjudicated, state whether the basins are in overdraft. The Department of Water Resources has projected estimates of overdraft, or “water shortage,” based on projected amounts of water supply and demand at the hydrologic region level in Bulletin 160, California Water Plan Update (<http://www.waterplan.water.ca.gov/>). Estimates at the basin or subbasin level will be projected for some basins in Bulletin 118-Update 2003 (<http://www.groundwater.water.ca.gov/bulletin118>). Data that indicate groundwater level trends over a period of time should be collected and evaluated. If the basin is in overdraft or is projected to be in overdraft, describe in detail your plan to eliminate the overdraft condition.

Provide a detailed analysis of location, amount and sufficiency (see Government Code Section 66473.7) of the groundwater pumped by the supplier for last five years and the amount recharged.

#### **Amount of Groundwater pumped – AF/Y (Table 6)**

Basin Name (s)	2000	2001	2002	2003	2004
<b>% of Total Water Supply</b>					

Provide a detailed analysis of location and amount of the groundwater that is projected to be pumped by the supplier. This may include projected cones of depression, changes in direction and amount of groundwater flow, movement and levels of contaminants, projected average annual recharge, salinity/TDS levels and other factors.

#### **Amount of Groundwater projected to be pumped – AF/Y (Table 7)**

Basin Name(s)	2010	2015	2020	2025	2030/opt
<b>% of Total Water Supply</b>					

## Section 2 - Contents of UWMP

### Step Four: Reliability of Supply

#### Water Code section 10631

*(c) 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:*

- (1) An average water year.*
- (2) A single dry water year.*
- (3) Multiple dry water years.*

*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.*

---

#### NOTES

Single-dry and multiple-dry years are usually based on historic records of annual runoff from a particular watershed. A multiple-dry year period is generally three or more consecutive years with the lowest average annual runoff. Single-dry and multiple-dry periods should be determined for each watershed (including wholesale sources, the State Water Project, the Colorado River and the Central Valley Project) from which your agency receives a water supply. The information is often presented as a probability of exceedance or probability of occurrence. Many water suppliers have multiple sources of water supplies. To show how the total supply would be affected document how each individual supply will be affected by single-dry and multiple-dry year periods.

---

## Section 2 - Contents of UWMP

### Step Four: Reliability of Supply

Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage.

If your agency receives wholesale water, that supplier (e.g., SWP, <http://swpdelivery.water.ca.gov>) may have already prepared a reliability assessment.

Seasonal shortages are based upon the precipitation patterns of individual watersheds and may vary substantially from one year to the next. Climatic shortages are based upon known factors such as El Nino, the Pacific Decadal Oscillation, and Jet Stream variations. A DWR-funded study, "Reconstructed Sacramento River System Runoff From Tree Rings" (2001) which reconstructed California climate for the last 1,000 years provides a long-term perspective on climate variation. Climate variation studies provide information on projected impacts on California water supply, including long-term variability in the form, time and location that precipitation is received.

To understand whether runoff is above or below normal for seasons and longer timescales, Normal is defined as the median runoff over the previous 30 years or more. This median is recalculated every ten years. Weather information is available at the National Weather Service web site - <http://www.nws.noaa.gov/>. Runoff data is available from DWR (<http://cdec.water.ca.gov/>), USGS (<http://waterdata.usgs.gov/ca/nwis/sw>), and the operator of your local dam.

Normal Year is a year in the historical sequence that most closely represents median runoff levels and patterns.

Single-dry year is generally considered to be the lowest annual runoff for a watershed since the water-year beginning in 1903. Suppliers should determine this for each watershed from which they receive supplies.

Multiple-dry year period is generally considered to be the lowest average runoff for a consecutive multiple year period (three years or more) for a watershed since 1903. For example, 1928-1934 and 1987-1992 were the two multi-year periods of lowest average runoff during the 20th century in the Central Valley basin. Suppliers should determine this for each watershed from which they receive supplies.

#### **Supply Reliability - AF Year (Table 8) (Suggestion - you may wish to add a row for each source)**

Multiple Dry Water Years (add columns if necessary)					
Normal Water Year	Single Dry Water Year	Year 1	Year 2	Year 3	Year 4
% of Normal					

#### **Basis of Water Year Data (Table 9)**

Water Year Type	Base Year(s)	Hist. Sequence
Normal Water Year		
Single-Dry Water Year		
Multiple-Dry Water Years		

#### **Describe the factors resulting in inconsistency of supply (Table 10)**

Name of supply	Legal	Environmental	Water Quality	Climatic

Describe your plans to supplement or replace water sources that may not be available at a consistent level of use with alternative sources (i.e., transfers, recycling, desalination, etc.) or water-use efficiency measures (DMM/ BMP / etc.). Since inconsistent sources will result in a supply deficit, this section should describe how much water will be acquired and from what sources.

## **Section 2 - Contents of UWMP**

### **Step Five: Transfer and Exchange Opportunities**

#### **Water Code section 10631**

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

## Section 2 - Contents of UWMP

### Step Five: Transfer and Exchange Opportunities

Describe your opportunities for short-term and long-term water exchange and transfer. Include proposed quantities and term of agreement.

Transfers and exchanges can be used for many purposes. Some agencies negotiate transfer agreements to provide a supplemental water supply when their regular supplies are limited or not available. Some exchange agreements provide for reduced costs or improved water quality for one or both agencies. The UWMP Act encourages water agencies to explore how transfers and/or exchanges would improve the reliability, quality, financial health, or other factors of their water supply.

The Water Code definition of short and long-term is that short-term is for a period of one year or less and long-term is for a period of more than one year.

**Transfer and Exchange Opportunities – AF/Year (Table 11)**

Source Transfer Agency	Transfer or Exchange	Short term	Proposed Quantities	Long term	Proposed Quantities
Total	XXX				

## Section 2 - Contents of UWMP

### Step Six: Water Use by Customer-type - Past, Current and Future

#### Water Code section 10631

*(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.*

*(2) Agricultural.*

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

## Section 2 - Contents of UWMP

### Step Six: Water Use by Customer-type - Past, Current and Future

Showing the past, current and projected water use by sector is an effective way to show growth patterns and more accurately predict future demand. Projecting future demand by using General Plan land-use zoning designations and projected build out by water use sector usually provides the most accurate demand projections (tables 12-15).

For past and current water use, you may provide limited information if you did not collect water use by customer type. For future water use develop projections based on number of customers per type and water use per type. Data on unmetered accounts and the number of accounts by type is necessary for the DMM / BMP section.

**Past, Current and Projected Water Deliveries (Table 12)**

Year	Water Use Sectors	Single family	Multi-family	Commercial	Industrial	Instit / gov	Land-scape	Agric	Total
2000	metered	# of accounts							
		Deliveries AF/Y							
	unmetered	# of accounts							
		Deliveries AF/Y							
2005	metered	# of accounts							
		Deliveries AF/Y							
	unmetered	# of accounts							
		Deliveries AF/Y							
2010	metered	# of accounts							
		Deliveries AF/Y							
	unmetered	# of accounts							
		Deliveries AF/Y							
2015	metered	# of accounts							
		Deliveries AF/Y							
	unmetered	# of accounts							
		Deliveries AF/Y							
2020	metered	# of accounts							
		Deliveries AF/Y							
	unmetered	# of accounts							
		Deliveries AF/Y							
2025	metered	# of accounts							
		Deliveries AF/Y							
	unmetered	# of accounts							
		Deliveries AF/Y							
2030 /opt	metered	# of accounts							
		Deliveries AF/Y							
	unmetered	# of accounts							
		Deliveries AF/Y							

## Section 2 - Contents of UWMP

### Step Six: Water Use by Customer-type - Past, Current and Future (continued)

#### Water Code section 10631

*(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.*

*(2) Agricultural.*

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

## Section 2 - Contents of UWMP

### Step Six: Water Use by Customer-type - Past, Current and Future (continued)

Identify and quantify sales to other agencies. Sales to other agencies could include wholesale water, exchanges, non-recurring agreements, etc.

#### Sales to Other Agencies – AF/Year (Table 13)

Water Distributed	2000	2005	2010	2015	2020	2025	2030/opt
name of agency							
name of agency							
Total							

Identify and quantify additional water uses. All water suppliers have unaccounted-for-water and this should be detailed as a separate quantity in 'additional water uses' (Table 14), not included as a part of water use by customer type (Table 12). Any recycled water was included in Table 12 should not be included in Table 14.

#### Additional Water Uses and Losses – AF/Year (Table 14)

Water Use	2000	2005	2010	2015	2020	2025	2030/opt
Saline barriers							
Groundwater recharge							
Conjunctive use							
Raw water							
Recycled							
Other (define)							
Unaccounted-for system losses							
Total							

#### Total Water Use – AF/Year (Table 15)

Water Use	2000	2005	2010	2015	2020	2025	2030/opt
Sum of Tables 12, 13, 14							

Total water use is the sum of water use by customer categories, sales to other agencies and additional water uses.

## Section 2 - Contents of UWMP

### Step Seven: Demand Management Measures

#### Water Code section 10631

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

(1) A description of each water demand management measure that is currently being implemented, or scheduled for implementation, including the steps necessary to implement any proposed measures, including, but not limited to, all of the following:

(2) A schedule of implementation for all water demand management measures proposed or described in the plan.

(3) A description of the methods, if any, that the supplier will use to evaluate the effectiveness of water demand management measures implemented or described under the plan.

(4) An estimate, if available, of existing conservation savings on water use within the supplier's service area, and the effect of the savings on the supplier's ability to further reduce demand.

(g) An evaluation of each water demand management measure listed in paragraph (1) of subdivision (f) that is not currently being implemented or scheduled for implementation. In the course of the evaluation, first consideration shall be given to water demand management measures, or combination of measures, that offer lower incremental costs than expanded or additional water supplies. This evaluation shall do all of the following:

(j) Urban water suppliers that are members of the California Urban Water Conservation Council and submit annual reports to that council in accordance with the "Memorandum of Understanding Regarding Urban Water Conservation in California," dated September 1991, may submit the annual reports identifying water demand management measures currently being implemented, or scheduled for implementation, to satisfy the requirements of subdivisions (f) and (g).

#### **Note on the Council's BMP Reporting Database:**

Signatories to the Council's MOU who have used the BMP Reporting Database to report their water conservation activities may retrieve their BMP Activity Reports and their Coverage Reports\* for use in satisfying subsections (f) and (g) by linking to the Council's BMP Reporting website at <http://bmp.cuwcc.org/bmp/default.htm> and following these steps:

To retrieve BMP Activity Reports:

- 1) login using your Conservation Coordinator's login name and password;
- 2) select your reporting unit (retail or wholesale, if applicable);
- 3) select the "Print Reports" button on the upper right hand side of the screen;
- 4) select the year you are interested in printing by scrolling right or left using the arrow buttons;
- 5) scroll to the bottom of the screen and click on the "Print All" button all of your agency's reporting data for that year will be printed (note: you may also print to a "PDF" document if your system has the full feature set for Adobe Acrobat installed)

To retrieve Coverage Reports for your agency:

- 1) select the "Coverage Reports" button at the top of the screen;
- 2) click on "print coverage reports" (note: you may also print to a "PDF" document if your system has the full feature set for Adobe Acrobat installed)

\* The Coverage Report provides information on whether or not your agency is on track for meeting BMP coverage requirements in accordance with the Council's MOU.

## Section 2 - Contents of UWMP

### Step Seven: Demand Management Measures

The Urban Water Management Planning Act provides two distinct methods for providing information related to Demand Management Measures (DMMs) and meeting the requirements of Water Code Section 10631 (f) and (g).

1. A water supplier who is a member of the California Urban Water Conservation Council (Council) may submit their BMP Activity Reports (Annual Reports). Council members agree to make a good faith effort to implement the 14 urban water conservation Best Management Practices (BMPs) that are intended to reduce long-term urban demands. Members are required to submit annual reports every two years identifying their implementation activities on each of the 14 BMPs. These BMPs are functionally equivalent to the Demand Management Measures in Water Code Section 10631. Council members would utilize the following components from the BMP Reporting Database to satisfy the DMM requirements:

- The most recent BMP Activity Reports submitted to the Council for reporting years 2003-04.
- It is recommended that you also include the Annual Reports for 2001-2002 and the Coverage Reports identifying the water supplier's progress on meeting the coverage requirements for quantifiable BMPs
- It is also recommended that agencies submit the Council Coverage Calculator and any BMP cost-effectiveness forms submitted to the Council in support of exemption submittals.

To use this method of providing demand management measure implementation information, the supplier must have submitted their BMP Activity Reports on implementation of the Council's 14 BMPs using the Council's BMP Reporting Database.

**OR**

2. A water supplier who is not a member of the Council, or chooses not to submit the Council BMP Activity Reports, must include the following data on implementation of DMMs in the UWMP:
  - There are 14 DMMs (see Step Seven below) and each of these, and any other measures the supplier is implementing or has scheduled for implementation, must be discussed in your UWMP.
  - For those DMMs and other measures currently being implemented describe the program, the implementation schedule currently and through 2010, and the methods you will use to evaluate the measure's effectiveness.
  - For those DMMs and other measures scheduled for implementation describe the proposed program, the implementation schedule through 2010, and the methods you propose to use to evaluate the measure's effectiveness.
  - For those DMMs not currently being implemented or scheduled for implementation, an UWMP must evaluate the incremental cost, taking into account factors in Section 2, Step 8 below.

Include estimates of how much existing water conservation savings have reduced demand and whether those reductions limit the supplier's ability to further increase efficiency and respond to water shortages. This phenomenon is known as "demand hardening". Water-use fixtures and practices continue to yield increased efficiency and the limits of efficiency are unknown. It is important not to underestimate future potential water savings based solely on existing technologies and practices.

Most water use efficiency programs rely on plumbing and appliance retrofits and changes in the consumer's water use that takes place on a consistent, predictable basis. Once most of these retrofits have been completed, some water suppliers' worry that their ability to further reduce water use during dry years will be limited. Districts and customers that have participated actively in water conservation programs fear that across-the-board cuts will affect them disproportionately. However, consumers will still respond behaviorally in drought times, and this additional water savings from the drought response can be measured using daily production records. Public education has proven effective in rallying support for short-term additional water conservation measures. Additionally, programs in which customers are given an annual allotment based partially on historic usage, and billed if usage exceeds their allotment in any given month, provide fairness for efficient customers. Furthermore, the Council's 14 BMPs may change over time to reflect new technologies, devices or programs that may yield additional savings.

## Section 2 - Contents of UWMP

### Step Seven: Demand Management Measures (continued)

#### Water Code section 10631

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

*(1) A description of each water demand management measure that is currently being implemented, or scheduled for implementation, including the steps necessary to implement any proposed measures, including, but not limited to, all of the following:*

*(A) Water survey programs for single-family residential and multifamily residential customers.*

*(B) Residential plumbing retrofit.*

*(C) System water audits, leak detection, and repair.*

*(D) Metering with commodity rates for all new connections and retrofit of existing connections.*

*(E) Large landscape conservation programs and incentives.*

*(F) High-efficiency washing machine rebate programs.*

*(G) Public information programs.*

*(H) School education programs.*

*(I) Conservation programs for commercial, industrial, and institutional accounts.*

*(J) Wholesale agency programs.*

*(K) Conservation pricing.*

*(L) Water conservation coordinator.*

*(M) Water waste prohibition.*

*(N) Residential ultra-low-flush toilet replacement programs.*

---

#### NOTES

The questions asked about each DMM in this Guidebook (between the lines on the following pages) are similar to the questions asked on the CUWCC BMP Activity Report. The CUWCC questions were developed by water agencies to assist them to describe each DMM (BMP) program in an efficient and thorough manner. Agencies are not required to respond to these questions when describing this program but DWR encourages that they provide this information.

The UWMP Act requires a description of each DMM you are implementing or plan to implement. DWR will take information from your DMM description to complete the Review Sheet tables. The Review Sheet tables are part of a checklist used by DWR staff in reviewing DMMs and do not constitute a complete program description.

---

## Section 2 - Contents of UWMP Step Seven: Demand Management Measures (continued)

### (A) Water survey programs for single-family residential and multifamily residential customers.

Describe the steps necessary to implement this measure.

*Suggested questions and ideas (refer to Notes section on Page 24)*

Has your agency developed and implemented a targeting/ marketing strategy for SINGLE-FAMILY residential water use surveys?

a. If YES, when was it implemented?

Has your agency developed and implemented a targeting/ marketing strategy for MULTI-FAMILY residential water use surveys?

a. If YES, when was it implemented?

Do your surveys:

- check for leaks, including toilets, faucets and use of meter to check for leaks
- check showerhead flow rates, aerator flow rates, and offer to replace or recommend replacement, if necessary
- check toilet flow rates and direct customer to ULFT replacement, as necessary; replace leaking toilet flapper, as necessary
- Check irrigation system and timers
- Review or develop customer irrigation schedule
- Measure landscaped area
- Measure total irrigable area

Were customers provided with information packets that included evaluation results and water savings recommendations?

Have the number of surveys offered and completed, survey results, and survey costs been tracked?

a. If yes, in what form are surveys tracked?

Describe the methods you are using or will use to evaluate this measure's effectiveness.

Provide estimates of existing conservation savings on water use and the effect of such savings on the ability to further reduce demand

If DMM is currently being implemented provide the following information

Year program started \_\_\_\_\_

Table A1 - Actual	2001	2002	2003	2004	2005 (proj)
# of single family surveys					
# of multifamily surveys					
actual expenditures - \$					
actual water savings – AF/Y					

If DMM is scheduled for implementation provide the following information

Year program scheduled to start \_\_\_\_\_

Table A2 - Planned	2006	2007	2008	2009	2010
# of single family surveys					
# of multifamily surveys					
projected expenditures - \$					
projected water savings – AF/Y					

## Section 2 - Contents of UWMP Step Seven: Demand Management Measures (continued)

### (B) Residential plumbing retrofit.

Describe the steps necessary to implement this measure

***Suggested questions and ideas (refer to Notes section on Page 24)***

Is there an enforceable ordinance in effect in your service area requiring replacement of high-flow showerheads and other water use fixtures with their low flow counterparts?

- a. If YES, list local jurisdictions in your service area and code or ordinance in each

Has your agency satisfied the 75% saturation requirement for single-family housing units?

Estimated percent of single-family households with low-flow showerheads:

Has your agency satisfied the 75% saturation requirement for multi-family housing units?

Estimated percent of multi-family households with low-flow showerheads.

Describe how saturation was determined, including the dates and results of any survey research.

Describe your survey methodology

#### **Low-Flow Device Distribution Information**

Has your agency developed a targeting/ marketing strategy for distributing low flow devices?

- a. If YES, when did your agency begin implementing this strategy?

Describe your targeting/ marketing methods.

Describe your targeting/ marketing strategy. (e.g., distribute devices, install devices)

Number of low-flow showerheads distributed

Number of toilet flappers distributed

Number of faucet aerators distributed

Does your agency track the distribution and cost of low-flow devices?

- a. describe tracking format
- b. describe your tracking and distribution system :

# of pre-1992 Single Family accounts \_\_\_\_\_ # of pre-1992 Multiple Family accounts \_\_\_\_\_

Describe the methods you are using or will use to evaluate this measure's effectiveness.

Provide estimates of existing conservation savings on water use and the effect of such savings on the ability to further reduce demand

If DMM is currently being implemented provide the following information

Year program started \_\_\_\_\_

Table B1 - Actual	1992-2001	2002	2003	2004	2005 (proj)
# of single family devices					
# of multi-family devices					
actual expenditures - \$					
actual water savings – AF/Y					

If DMM is scheduled for implementation provide the following information

Year program scheduled to start \_\_\_\_\_

Table B2 - Planned	2006	2007	2008	2009	2010
# of single family devices					
# of multi-family devices					
projected expenditures - \$					
projected water savings – AF/Y					

## Section 2 - Contents of UWMP Step Seven: Demand Management Measures (continued)

### (C) System water audits, leak detection, and repair.

Describe the steps necessary to implement this measure

***Suggested questions and ideas (refer to Notes section on Page 24)***

Has your agency completed a pre-screening system audit for this reporting year?

Specify the values (AF/Year) used to calculate verifiable use as a percent of total production

- Determine metered sales (AF/Y)
- Determine other system verifiable uses (AF/Y)
- Determine total supply into the system (AF/Y)

Does your agency keep necessary data on file to verify the values used to calculate verifiable uses as a percent of total production?

Did your agency complete a full-scale audit during this report year?

Does your agency maintain in-house records of audit results or the completed AWWA audit worksheets for the completed audit?

Does your agency operate a system leak detection program?

- a. If yes, describe the leak detection program:

**Survey Data**

Total number of miles of distribution system lines (DS lines)

Number of miles of distribution system line surveyed:

Year of last complete audit \_\_\_\_\_

Year of next complete audit \_\_\_\_\_

Describe the methods you are using or will use to evaluate this measure's effectiveness.

Provide estimates of existing conservation savings on water use and the effect of such savings on the ability to further reduce demand

If DMM is currently being implemented provide the following information

Year program started \_\_\_\_\_

Table C1 - Actual	2001	2002	2003	2004	2005 (proj)
% of unaccounted water					
miles of distribution lines surveyed					
miles of lines repaired					
actual expenditures - \$					
actual water savings – AF/Y					

If DMM is scheduled for implementation provide the following information

Year program scheduled to start \_\_\_\_\_

Table C2 - Planned	2006	2007	2008	2009	2010
% of unaccounted water					
miles of distribution lines to be surveyed					
miles of lines to be repaired					
projected expenditures - \$					
projected water savings – AF/Y					

## Section 2 - Contents of UWMP Step Seven: Demand Management Measures (continued)

### (D) Metering with commodity rates for all new connections and retrofit of existing connections.

Describe the steps necessary to implement this measure

***Suggested questions and ideas (refer to Notes section on Page 24)***

Does your agency require meters for all new connections and bill by volume-of -use?

Does your agency have a program for retrofitting existing unmetered connections and billing by volume-of -use?

a. Describe the program:

Specify the number of previously unmetered accounts fitted with meters during report year

Has your agency conducted a feasibility study to assess the merits of a program to provide incentives to switch mixed-use accounts to dedicated landscape meters?

a. Describe the feasibility study:

# of CII accounts with mixed-use meters

# of CII accounts with mixed-use meters retrofitted with dedicated irrigation meters during reporting period

*Total number of accounts* \_\_\_\_\_ *# of accounts w/o commodity rates* \_\_\_\_\_

Describe the methods you are using or will use to evaluate this measure's effectiveness.

Provide estimates of existing conservation savings on water use and the effect of such savings on the ability to further reduce demand

If DMM is currently being implemented provide the following information

Year program started \_\_\_\_\_

Table D1 - Actual	2001	2002	2003	2004	2005 (proj)
# of unmetered accounts					
# of retrofit meters installed					
# of accounts without commodity rates					
actual expenditures - \$					
actual water savings – AF/Y					

If DMM is scheduled for implementation provide the following information

Year program scheduled to start \_\_\_\_\_

Table D2 - Planned	2006	2007	2008	2009	2010
# of unmetered accounts					
# of retrofit meters to be installed					
# of accounts without commodity rates					
projected expenditures - \$					
projected water savings – AF/Y					

## Section 2 - Contents of UWMP Step Seven: Demand Management Measures (continued)

**(E) Large landscape conservation programs and incentives.**

Describe the steps necessary to implement this measure

*Suggested questions and ideas (refer to Notes section on Page 24)*

Number of Dedicated Irrigation Meter Accounts \_\_\_\_\_  
 Number of Dedicated Irrigation Meter Accounts with Water Budgets \_\_\_\_\_  
 Budgeted Use for Irrigation Meter Accounts with Water Budgets (AF) \_\_\_\_\_  
 Actual Use for Irrigation Meter Accounts with Water Budgets (AF) \_\_\_\_\_  
 Does your agency provide water use notices to accounts with budgets each billing cycle?

Has your agency developed a marketing / targeting strategy for landscape surveys?  
 Description of marketing / targeting strategy and when you began implementing this strategy?

# of CII accounts \_\_\_\_\_ # of CII accounts w/ landscape surveys \_\_\_\_\_

Number of Surveys Completed \_\_\_\_\_  
 Indicate which of the following Landscape Elements are part of your survey: Irrigation System Check, Distribution Uniformity Analysis, Review / Develop Irrigation Schedules, Measure Landscape Area, Measure Total Irrigable Area, Provide Customer Report / Information

Do you track survey offers and results?  
 Does your agency provide follow-up surveys for previously completed surveys?

Do you offer financial incentives to improve landscape water use efficiency?  
 Do you provide landscape water use efficiency information to new customers and customers changing services?  
 Do you have irrigated landscaping at your facilities?  
 Do you provide customer notices at the start of the irrigation season? Do you provide customer notices at the end of the irrigation season?

Describe the methods you are using or will use to evaluate this measure's effectiveness.  
 Provide estimates of existing conservation savings on water use and the effect of such savings on the ability to further reduce demand

If DMM is currently being implemented provide the following information

Year program started \_\_\_\_\_

Table E1 - Actual	2001	2002	2003	2004	2005 (proj)
# of budgets developed					
# of surveys completed					
# of follow-up visits					
actual expenditures - \$					
actual water savings – AF/Y					

If DMM is scheduled for implementation provide the following information

Year program scheduled to start \_\_\_\_\_

Table E2 - Planned	2006	2007	2008	2009	2010
# of budgets to be developed					
# of surveys to be completed					
# of follow-up visits					
projected expenditures - \$					
projected water savings – AF/Y					

## Section 2 - Contents of UWMP Step Seven: Demand Management Measures (continued)

**(F) High-efficiency washing machine rebate programs.**

Describe the steps necessary to implement this measure

---

***Suggested questions and ideas (refer to Notes section on Page 24)***

Do any energy service providers or wastewater utilities in your service area offer rebates for high-efficiency washers?

Describe the offerings and incentives as well as whom the energy/wastewater utility provider is.

Does your agency offer rebates for high-efficiency washers?

What is the level of the rebate?

Number of rebates awarded.

Other agencies offer rebates \$ \_\_\_\_\_

Cost-effectiveness calculations attached \_\_\_\_\_

---

Describe the methods you are using or will use to evaluate this measure's effectiveness.

Provide estimates of existing conservation savings on water use and the effect of such savings on the ability to further reduce demand

If DMM is currently being implemented provide the following information

Year program started \_\_\_\_\_

Table F1 - Actual	2001	2002	2003	2004	2005 (proj)
\$ per rebate					
# of rebates paid					
actual expenditures - \$					
actual water savings – AF/Y					

If DMM is scheduled for implementation provide the following information

Year program scheduled to start \_\_\_\_\_

Table F2 - Planned	2006	2007	2008	2009	2010
\$ per rebate					
# of rebates to be paid					
projected expenditures - \$					
projected water savings – AF/Y					

## Section 2 - Contents of UWMP Step Seven: Demand Management Measures (continued)

**(G) Public information programs.**

Describe the steps necessary to implement this measure

*Suggested questions and ideas (refer to Notes section on Page 24)*

Does your agency maintain an active public information program to promote and educate customers about water conservation?

Describe the program and how it's organized.

Indicate which and how many of the following activities are included in your public information program: paid advertising, public service announcement, bill inserts / newsletters / brochures, bill showing water usage in comparison to previous year's usage, demonstration gardens, special events, media events, speaker's bureau, program to coordinate with other government agencies, industry and public interest groups and media

Describe the methods you are using or will use to evaluate this measure's effectiveness.

Provide estimates of existing conservation savings on water use and the effect of such savings on the ability to further reduce demand

If DMM is currently being implemented provide the following information

Year program started \_\_\_\_\_

Table G1 - Actual	2001	2002	2003	2004	2005 (proj)
a. paid advertising					
b. Public Service Announcement					
c. Bill Inserts / Newsletters / Brochures					
d. Bill showing water usage in comparison to previous year's usage					
e. Demonstration Gardens					
f. Special Events, Media Events					
g. Speaker's Bureau					
h. Program to coordinate with other government agencies, industry and public interest groups and media					
actual expenditures - \$					

a complete UWMP requires a description of any of these, or other, activities being implemented and related expenditures

If DMM is scheduled for implementation provide the following information

Year program scheduled to start \_\_\_\_\_

Table G2 - Planned	2006	2007	2008	2009	2010
a. paid advertising					
b. Public Service Announcement					
c. Bill Inserts / Newsletters / Brochures					
d. Bill showing water usage in comparison to previous year's usage					
e. Demonstration Gardens					
f. Special Events, Media Events					
g. Speaker's Bureau					
h. Program to coordinate with other government agencies, industry and public interest groups and media					
Projected expenditures - \$					

## Section 2 - Contents of UWMP Step Seven: Demand Management Measures (continued)

### (H) School education programs.

Describe the steps necessary to implement this measure

***Suggested questions and ideas (refer to Notes section on Page 24)***

Has your agency implemented a school information program to promote water conservation?

Please provide information on your school programs (by grade level):

Grades K-3rd

Grades 4th-6th

Grades 7th-8th

High School

Are materials grade appropriate

Materials distributed?

No. of class presentations

No. of students reached

No. of teachers' workshops

Did your Agency's materials meet state education framework requirements?

When did your Agency begin implementing this program?

Describe the methods you are using or will use to evaluate this measure's effectiveness.

Provide estimates of existing conservation savings on water use and the effect of such savings on the ability to further reduce demand

If DMM is currently being implemented provide the following information

Year program started \_\_\_\_\_

Number of classroom presentations

Table H1 - Actual	# of classes	2001	2002	2003	2004	2005 (proj)
Grades K-3rd						
Grades 4th-6th						
Grades 7th-8th						
High School						
actual expenditures - \$						

a complete UWMP description requires information on at least one of the grade-ranges and expenditures

If DMM is scheduled for implementation provide the following information

Year program scheduled to start \_\_\_\_\_

Number of classroom presentations

Table H2 - Planned	# of classes	2006	2007	2008	2009	2010
Grades K-3rd						
Grades 4th-6th						
Grades 7th-8th						
High School						
projected expenditures - \$						

## Section 2 - Contents of UWMP Step Seven: Demand Management Measures (continued)

### (I) Conservation programs for commercial, industrial, and institutional accounts.

Describe the steps necessary to implement this measure

# of Commercial accounts \_\_\_\_\_ # of Industrial accounts \_\_\_\_\_ # of Institutional accounts \_\_\_\_\_

Describe the methods you are using or will use to evaluate this measure's effectiveness.

Provide estimates of existing conservation savings on water use and the effect of such savings on the ability to further reduce demand.

If DMM is currently being implemented provide the following information

Year program started \_\_\_\_\_

Table I1 - Actual	2001	2002	2003	2004	2005 (proj)
# of on-site surveys completed					
Was an incentives provided					
# of follow-up visits					
actual expenditures - \$					
actual water savings – AF/Y					

If DMM is scheduled for implementation provide the following information

Year program scheduled to start \_\_\_\_\_

Table I2 – Planned	2006	2007	2008	2009	2010
# of on-site surveys to be completed					
Will incentives be provided					
# of follow-up visits					
projected expenditures - \$					
projected water savings – AF/Y					

Describe the steps necessary to implement the CII toilet replacement part of this measure (OPTIONAL)

If DMM is currently being implemented provide the following information

Year program started \_\_\_\_\_

Table I4 - Actual	2001	2002	2003	2004	2005 (proj)
# of commercial replacements					
# of industrial replacements					
# of institutional replacements					
actual expenditures - \$					
actual water savings – AF/Y					

If DMM is scheduled for implementation provide the following information

Year program scheduled to start \_\_\_\_\_

Table I5 - Planned	2006	2007	2008	2009	2010
# of commercial replacements					
# of industrial replacements					
# of institutional replacements					
projected expenditures - \$					
projected water savings – AF/Y					

## Section 2 - Contents of UWMP Step Seven: Demand Management Measures (continued)

**(J) Wholesale agency programs.**

Describe the steps necessary to implement this measure

Describe the methods you are using or will use to evaluate this measure's effectiveness.

Provide estimates of existing conservation savings on water use and the effect of such savings on the ability to further reduce demand

If DMM is currently being implemented provide the following information

Year program started	# of suppliers served				
Table J1	Number of agencies assisted/Estimated AF Year Savings				
program activities	2001	2002	2003	2004	2005
Water Surveys					
Residential Retrofit					
System Audits					
Metering-Commodity Rates					
Landscape Programs					
Washing Machines					
Public Information					
School Education					
CII WC / ULF					
Water Waste					
Pricing					
WC Coordinator					
Water Waste					
ULFT Replacement					
actual expenditures - \$					

a complete UWMP requires a description of any of these, or other, activities being implemented and related expenditures

If DMM is scheduled for implementation provide the following information

Year program started	# of suppliers served				
Table J2	Number of agencies to be assisted/ Estimated AF Year Savings				
program activities	2006	2007	2008	2009	2010
Water Surveys					
Residential Retrofit					
System Audits					
Metering-Commodity Rates					
Landscape Programs					
Washing Machines					
Public Information					
School Education					
CII WC / ULF					
Water Waste					
Pricing					
WC Coordinator					
Water Waste					
ULFT Replacement					
projected expenditures - \$					

## Section 2 - Contents of UWMP Step Seven: Demand Management Measures (continued)

**(K) Conservation pricing.**

Describe the steps necessary to implement this measure

Describe the methods you are using or will use to evaluate this measure's effectiveness.

Provide estimates of existing conservation savings on water use and the effect of such savings on the ability to further reduce demand

Do you provide sewer service? \_\_\_\_\_

Enter the year the rate became effective or is projected to become effective \_\_\_\_\_

<b>Table K1 - RETAILERS</b>			
<b>Residential</b>			
Water Rate Structure	Define	Sewer Rate Structure	Define
Year rate effective		Year rate effective	
<b>Commercial</b>			
Water Rate Structure	Define	Sewer Rate Structure	Define
Year rate effective		Year rate effective	
<b>Industrial</b>			
Water Rate Structure	Define	Sewer Rate Structure	Define
Year rate effective		Year rate effective	
<b>Institutional/Government</b>			
Water Rate Structure	Define	Sewer Rate Structure	Define
Year rate effective		Year rate effective	
<b>Irrigation (dedicated meter)</b>			
Water Rate Structure	Define		
Year rate effective			
<b>Other</b>			
Water Rate Structure	Define	Sewer Rate Structure	Define
Year rate effective		Year rate effective	
<b>Table K2 - WHOLESALERS</b>			
Water Rate Structure	Define		
Year rate effective			

Discuss all accounts types that apply to your agency. If your agency does not have one of these account types, put NA

## Section 2 - Contents of UWMP Step Seven: Demand Management Measures (continued)

**(L) Water conservation coordinator.**

Describe steps necessary to implement this measure

*Suggested questions and ideas (refer to Notes section on Page 24)*

Does your Agency have a conservation coordinator?

Is this a full-time position?

If no, is the coordinator supplied by another agency with which you cooperate in a regional conservation program? Partner agency's name

If your agency supplies the conservation coordinator:

- a. What percent is this conservation coordinator's position?
- b. Coordinator's Name
- c. Coordinator's Title
- d. Coordinator's Experience
- e. Date Coordinator's position was created

Number of conservation staff, including Conservation Coordinator.

Describe the methods you are using or will use to evaluate this measure's effectiveness.

Provide estimates of existing conservation savings on water use and the effect of such savings on the ability to further reduce demand

If DMM is currently being implemented provide the following information

Year program started \_\_\_\_\_

Table L1 - Actual	2001	2002	2003	2004	2005 (proj)
# of full-time positions					
# of part-time staff					
Position supplied by other agency					
actual expenditures - \$					

If DMM is scheduled for implementation provide the following information

Year program scheduled to start \_\_\_\_\_

Table L2 - Planned	2006	2007	2008	2009	2010
# of full-time positions					
# of part-time staff					
Position supplied by other agency					
projected expenditures - \$					

## Section 2 - Contents of UWMP Step Seven: Demand Management Measures (continued)

**(M) Water waste prohibition.**

Describe steps necessary to implement this measure

*Suggested questions and ideas (refer to Notes section on Page 24)*

Is a water waste prohibition ordinance in effect in your service area?

Describe the ordinance

Attach a copy of the most current ordinance(s)

Indicate which of the water uses listed below are prohibited by your agency or service area: Gutter flooding, Single-pass cooling systems for new connections, Non-recirculating systems in all new conveyor or car wash systems, Non-recirculating systems in all new commercial laundry systems, Non-recirculating systems in all new decorative fountains, other (please name)

Describe measures that prohibit water uses listed above

Does your agency include water softener checks in home water survey programs?

Does your agency include information about Demand Initiated Regenerating and exchange-type water softeners in educational efforts to encourage replacement of less efficient timer models?

Describe the methods you are using or will use to evaluate this measure's effectiveness.

Provide estimates of existing conservation savings on water use and the effect of such savings on the ability to further reduce demand

If DMM is currently being implemented the program description should include the following information

Year program started \_\_\_\_\_

Table M1 - Actual	2001	2002	2003	2004	2005 (proj)
waste ordinance in effect					
# of on-site visits					
water softener ordinance					
actual expenditures - \$					

If DMM is scheduled for implementation the program description should include the following information

Year program scheduled to start \_\_\_\_\_

Table M2 - Planned	2006	2007	2008	2009	2010
waste ordinance will be in effect					
# of on-site visits					
water softener ordinance					
projected expenditures - \$					

## Section 2 - Contents of UWMP Step Seven: Demand Management Measures (continued)

**(N) Residential ultra-low-flush toilet replacement programs.**

Describe the steps necessary to implement this measure

*Suggested questions and ideas (refer to Notes section on Page 24)*

Does your agency have program(s) for replacing high-water using toilets with ultra-low flush toilets?

Number of toilets replaced by agency program during report year

Replacement method: rebate, direct install, community based organization distribution, other

Describe your agency's ULFT program for single-family residences and for multi-family residences

Is a toilet retrofit on resale ordinance in effect for your service area?

# of pre-1992 Single Family accounts \_\_\_\_\_ # of pre-1992 Multiple Family accounts \_\_\_\_\_

Describe the methods you are using or will use to evaluate this measure's effectiveness.

Provide estimates of existing conservation savings on water use and the effect of such savings on the ability to further reduce demand

If DMM is currently being implemented provide the following information

Year Single-Family program started \_\_\_\_\_

Table N1 - Actual	2001	2002	2003	2004	2005 (proj)
# of ULF rebates					
# of ULF direct installs					
# of ULF CBO installs					
actual expenditures - \$					
actual water savings – AF/Y					

a complete UWMP requires a description of any of these, or other, activities being implemented and related expenditures

Year Multi-Family program started \_\_\_\_\_

Table N2 – Actual	2001	2002	2003	2004	2005 (proj)
# of ULF rebates					
# of ULF direct installs					
# of ULF CBO installs					
actual expenditures - \$					
actual water savings – AF/Y					

If DMM is scheduled for implementation provide the following information

Year Single-Family program scheduled to start \_\_\_\_\_

Table N3 - Planned	2006	2007	2008	2009	2010
# of ULF rebates					
# of ULF direct installs					
# of ULF CBO installs					
projected expenditures - \$					
projected water savings – AF/Y					

Year Multi-Family program scheduled to start \_\_\_\_\_

Table N4 - Planned	2006	2007	2008	2009	2010
# of ULF rebates					
# of ULF direct installs					
# of ULF CBO installs					
projected expenditures - \$					
projected water savings – AF/Y					



## Section 2 - Contents of UWMP

### Step Eight: Evaluation of DMMs not implemented

#### Water Code section 10631

*(g) An evaluation of each water demand management measure listed in paragraph (1) of subdivision (f) that is not currently being implemented or scheduled for implementation. In the course of the evaluation, first consideration shall be given to water demand management measures, or combination of measures, that offer lower incremental costs than expanded or additional water supplies. This evaluation shall do all of the following:*

- (1) Take into account economic and noneconomic factors, including environmental, social, health, customer impact, and technological factors.*
- (2) Include a cost-benefit analysis, identifying total benefits and total costs.*
- (3) Include a description of funding available to implement any planned water supply project that would provide water at a higher unit cost.*
- (4) Include a description of the water supplier's legal authority to implement the measure and efforts to work with other relevant agencies to ensure the implementation of the measure and to share the cost of implementation.*

## Section 2 - Contents of UWMP

### Step Eight: Evaluation of DMMs not implemented

List any DMMs that are not currently being implemented or are not scheduled for implementation.

For each the listed DMM calculate the cost-benefit and the per-AF cost of water.

The Council has a simple cost-benefit spreadsheet for each quantifiable BMP / DMM on their website. These spreadsheet can be downloaded and may be of assistance in preparing cost-benefit analyses and per-AF-cost.

---

#### Cost-Benefit Check List

Cost-Benefit document includes a detailed description of the DMM.

Cost-Benefit document identifies all relevant costs and benefits of the DMM.

Cost-Benefit document clearly identifies the perspective of analysis (society, supplier, customer) when identifying program costs and benefits.

Cost-Benefit document addresses program cost sharing with other project beneficiaries.

Cost-Benefit document lists and discusses all major assumptions and data used to measure, value, and discount program costs and benefits. It also includes sensitivity analyses for all major assumptions and analysis parameters.

Cost-Benefit document includes copies of spreadsheet files, models, and supporting documentation used for the analysis.

---

The cost-benefit calculation must include economic and non-economic factors (environmental, social, health, customer impact, and technological factors) and total benefits and total costs.

This description will include the suppliers' legal authority to implement the DMM and efforts to implement the measures and funding available to implement the DMM and efforts to identify cost share partners.

#### Evaluation of unit cost of water that would result from non-implemented DMMs and planned water supply project and programs (Table 16)

Non-implemented & Not scheduled DMM / Planned Water Supply Project Name	Per-AF Cost (\$)

#### Cost Effectiveness Summary (Applicable to each item in Table 16)

Total Costs	
Total Benefits	
Discount Rate	
Time Horizon	
Cost of Water (\$ per AF)	
Water Savings (AF/Y)	

#### Examples of costs and benefits include (from CUWCC materials)

Benefits to supplier: avoided supply costs (O&M, chemicals, energy, water purchases, labor, regulatory compliance, capital); environmental benefits, supply reliability/avoided shortage cost)

Costs to supplier: materials, staff time, outside services, marketing, evaluation, regulatory compliance, incentives, environmental costs.

## **Section 2 - Contents of UWMP**

### **Step Nine: Planned Water Supply Projects and Programs**

#### **Water Code section 10631**

*(h) 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, other than the demand management programs identified pursuant to paragraph (1) of subdivision (f), 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.*

**Section 2 - Contents of UWMP**  
**Step Nine: Planned Water Supply Projects and Programs**

Provide a detailed description of expected future supply projects & programs that may be undertaken to meet your projected water use identified in your water supply and demand assessment required by Water Code §10635(a) (see Section 7) with a timeline (showing projected start date and completion date) for each proposed project. Quantify each proposed project’s normal-year supply to agency; single dry-year supply to agency and multiple dry-year supplies to agency.

Do not include descriptions of DMMs described elsewhere in the UWMP.

**Future Water Supply Projects (Table 17)**

Project Name	Normal-year AF to agency	Single-Dry AF/Year to agency	Multiple-Dry AF Years to agency		
			Year 1	Year 2	Year 3

Normal is defined as the average median over 30 years or more. This median is recalculated every ten years.

Single Dry Year is defined as the lowest annual runoff for a watershed since the water-year beginning in 1903. Suppliers should determine this for each watershed from which they receive supplies.

A Multiple Dry Year period is defined as the lowest average runoff for a continuous multiple year period (three years or more) for a watershed since 1903. For example, 1928-1934 and 1987-1992 were the two multi-year periods of lowest average precipitation and runoff during the 20th century in the Central Valley basin. Suppliers should determine this for each watershed from which they receive supplies.

**Weather information is available at the National Weather Service web site - <http://www.nws.noaa.gov/>**

## **Section 2 - Code Citations - Contents of UWMP**

### **Step Ten: Development of Desalinated Water**

#### **Water Code section 10631(i)**

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

## Section 2 - Contents of UWMP

### Step Ten: Development of Desalinated Water

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

If a desalinated water supply project is already planned as an expected future supply it should be discussed under Section 2, Step 9. This step (Water Code section 10631 (i)) requires a discussion of whether there is an opportunity to use desalinated water as a future supply.

#### **Opportunities for desalinated water (Table 18)**

Sources of Water	Yield AF/Y	Start Date	Type of use	Other
Ocean Water				
Brackish Ocean Water				
Brackish Groundwater				
Other (such as impaired groundwater)				
Other				

## Section 2 - Contents of UWMP

### Step Eleven: Current or Projected Supply Includes Wholesale Water

#### Water Code section 10631

*(k) Urban water suppliers that rely 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).*

## Section 2 - Contents of UWMP

### Step Eleven: Current or Projected Supply Includes Wholesale Water

If you receive, or project receiving, wholesale water you must provide the wholesale agency(s) with the amount of water you wish to purchase from that wholesaler for the next 20 years, in five year increments.

#### Agency demand projections provided to wholesale suppliers – AF/Y (Table 19)

Wholesaler	2010	2015	2020	2025	2030/opt

Include in your UWMP the written information provided by your wholesaler(s) that quantifies water availability to your agency projections for the next 20 years, in five-year increments.

#### Wholesaler identified & quantified the existing and planned sources of water available to your agency in – AF/Y (Table 20)

Wholesaler Sources	2010		2015		2020		2025		2030/opt	
	Existing	Planned								
(source 1)										
(source 2)										
(source 3)										

(If more than one wholesaler serves your agency, duplicate this table and provide the source availability for each wholesaler)

The written information provided by the wholesaler(s) must include the reliability of the wholesale supplies, including groundwater, and amount expected to be delivered, during normal, single-dry and multiple-dry years. If the wholesale agency has sources of water that are not available at consistent levels, the wholesaler’s information must show the reliability by source and include plans to supplement or replace the inconsistent sources with alternative sources or water demand measures.

#### Wholesale Supply Reliability - % of normal supply (Table 21)

Wholesaler	Single Dry	Multiple Dry Water Years			
		Year 1	Year 2	Year 3	Year 4

(If more than one wholesaler serves your agency, duplicate this table and provide the source availability during dry years for each wholesaler)

#### Factors resulting in inconsistency of wholesaler’s supply (Table 22)

Name of supply	Legal	Environmental	Water Quality	Climatic

Describe the wholesaler’s plans to supplement or replace water sources that may not be available at a consistent level of use with alternative sources or water-use efficiency measures. Since inconsistent sources will result in a supply deficit, this section should describe how much water will be acquired by the wholesaler and from what sources.

In situations where one wholesaler sells water to another wholesaler, (sometimes referred to as a “sub-wholesaler”), the retail water supplier should coordinate gathering the necessary information on its wholesale supply with the sub-wholesaler. This may include gathering documentation from both wholesalers’ Urban Water Management Plans and/or supplemental reports.

## Section 3 - Determination of DMM Implementation

### Water Code section 10631.5

*10631.5. The department shall take into consideration whether the urban water supplier is implementing or scheduled for implementation, the water demand management activities that the urban water supplier identified in its urban water management plan, pursuant to Section 10631, in evaluating applications for grants and loans made available pursuant to Section 79163. 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.*

### **Section 3 - Determination of DMM Implementation**

The Urban Water Management Planning Act requires the Department of Water Resources to consider whether an urban supplier is implementing, or has scheduled for implementation, the water demand management measures identified in the supplier's UWMP in evaluating applications for grants and loans.

CUWCC members should include at least their 2003-2004 Annual Report and it is recommended that the CUWCC Coverage Report also be included. Suppliers may also wish to submit their completed 2005 Annual Report with their UWMP.

Suppliers that are not CUWCC signatories will show DMM implementation or scheduled implementation in the DMM section of their UWMP.

## **Section 4 - Water Shortage Contingency Plan**

### **Step One: Stages of Action**

#### **Water Code section 10632 (a)**

*10632. 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:*

*(a) 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 which are applicable to each stage.*

## Section 4 - Water Shortage Contingency Plan

### Step One: Stages of Action

Your UWMP should provide an urban water shortage contingency analysis with all of the six steps included in this section.

An urban water shortage contingency analysis can have both voluntary and mandatory rationing during water supply shortages to help control consumption. Rationing requirements should be reasonably achievable for customers to encourage reductions in consumption. A typical rationing sequence would begin with voluntary rationing. In the second or third year of an extended drought, mandatory rationing might be expected. Factors that can change water use patterns during dry years include educational efforts and rationing policies established in water shortage contingency plans.

Identify stages of action that the supplier will take in response to a water supply shortage. One of these stages must be designed to address a 50 percent reduction in water supply. Identify the specific water supply conditions that trigger activation of each stage of action.

**Water Supply Shortage Stages and Conditions (Table 23)**

Stage No.	Water Supply Conditions	% Shortage

## **Section 4 - Water Shortage Contingency Plan**

### **Step Two: Estimate of Minimum Supply for Next Three Years**

#### **Water Code section 10632 (b)**

*(b) 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.*

## Section 4 - Water Shortage Contingency Plan

### Step Two: Estimate of Minimum Supply for Next Three Years

Your UWMP should quantify the minimum water supply available during the next three years (e.g., 2006-2008) based on the driest three-year historic sequence for your water supply (a single historic sequence may not apply to all of your agency's water supply sources).

The driest three year historic sequence usually refers to the recorded three-year period with the lowest runoff in the watershed of the supply source.

Different sources of water supplies will have different historical dry year sequences, and different yields during multiple year drought conditions based on hydrology, available storage, contract entitlements, water right characteristics, etc. In some cases there is not a direct correlation between hydrology and available water supply (e.g., groundwater, recycled water, water transfers, conservation, desalination). Alternative methodologies can be developed for these supplies that would provide an estimate of reasonably available water supplies.

**Three-Year Estimated Minimum Water Supply – AF/Year (Table 24)**

Source	Year 1	Year 2	Year 3	Normal
Total				

## **Section 4 - Water Shortage Contingency Plan**

### **Step Three: Catastrophic Supply Interruption Plan**

#### **Water Code section 10632 (c)**

*(c) 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.*

## Section 4 - Water Shortage Contingency Plan

### Step Three: Catastrophic Supply Interruption Plan

Provide catastrophic supply interruption plan. Catastrophic events includes non-drought related events. This plan should look at the vulnerability of each source and the delivery and distribution systems to events such as earthquakes, regional power outages, system failures and other events specific to your sources.

The plan should include specific supplier actions designed to minimize the impacts of supply interruption on your service area.

#### Preparation Actions for a Catastrophe (Table 25)

Possible Catastrophe	Summary of Actions
Regional power outage	
Earthquake	
Other (name event)	
Other (name event)	

## **Section 4 Water Shortage Contingency Plan**

### **Step Four: Prohibitions, Penalties and Consumption Reduction Methods**

#### **Water Code section 10632 (d-f)**

*(d) 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.*

*(e) 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.*

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

## Section 4 - Water Shortage Contingency Plan

### Step Four: Prohibitions, Penalties and Consumption Reduction Methods

List the mandatory prohibitions against specific water use practices during water shortages. Prohibitions often include excessive run-off, cleaning paved surfaces with potable water, failure to repair leaks, surface irrigation during restricted hours, etc.

**Mandatory Prohibitions (Table 26)**

Examples of Prohibitions	Stage When Prohibition Becomes Mandatory
Using potable water for street washing	
Other (name prohibition)	

List the consumption reduction methods the water supplier will use to reduce water use in the most restrictive stages with up to a 50% reduction. Reduction methods often include customer allocations, irrigation limited to certain days, restrictions on decorative fountains and refilling swimming pools, etc.

**Consumption Reduction Methods (Table 27)**

Consumption Reduction Method	Stage When Method Takes Effect	Projected Reduction (%)
name method		

List excessive use penalties or charges for excessive use. Examples include tiered water rates, flow restrictors installed after repeated violations, water waste charges or water waste school, water rate surcharge for inefficient fixtures, surcharge for uncovered swimming pools, etc.

**Penalties and Charges (Table 28)**

Penalty or Charge	Stage When Penalty Takes Effect
Penalty for excess use	
Charge for excess use	
Other (name penalties or charges)	

## **Section 4 - Water Shortage Contingency Plan**

### **Step Five: Analysis of Revenue Impacts of Reduce Sales During Shortages**

#### **Water Code section 10632 (g)**

*(g) An analysis of the impacts of each of the actions and conditions described in subdivisions (a) to (f), 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.*

## Section 4 - Water Shortage Contingency Plan

### Step Five: Analysis of Revenue Impacts of Reduced Sales During Shortages

Describe how your planned consumption reduction methods, penalties and prohibitions are likely to impact revenues. Describe how implementing a water shortage program is likely to impact expenditures (cost of additional supply, new staff, computer program modifications, billing changes, advertising costs, etc.)

Describe your proposed measures to overcome likely reduced revenues and increased expenditure (contingency funds, increased rates, rates adjustments, disaster loans, etc.)

#### **Actions and Conditions that Impact Revenues**

Type	Anticipated revenue reduction
Reduced sales	
(define)	
(define)	
(define)	

#### **Actions and Conditions that Impact Expenditures**

Category	Anticipated cost
Increase staff cost	
Increased O&M cost	
Increased cost of supply & treatment	
(define)	

#### **Proposed measures to overcome revenue impacts (Table 29)**

Names of measures	Summary of Effects
Rate adjustment	
Development of reserves	
name of measure	
name of measure	

#### **Proposed measures to overcome expenditure impacts (Table 30)**

Names of measures	Summary of Effects
name of measure	

## **Section 4 - Water Shortage Contingency Plan**

### **Step Six: Draft Ordinance and Use Monitoring Procedure**

#### **Water Code section 10632 (h & i)**

*(h) A draft water shortage contingency resolution or ordinance.*

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

## Section 4 - Water Shortage Contingency Plan

### Step Six: Draft Ordinance and Use Monitoring Procedure

Attach a copy of the draft water shortage contingency resolution or ordinance to your UWMP.

Describe the proposed mechanisms you will use to determining actual reductions on a weekly or daily basis, as appropriate to the severity of the water shortage. Examples include monitoring daily production and distribution records, more frequent reading of customer meters, waste water treatment records, etc.

#### Water Use Monitoring Mechanisms (Table 31)

Mechanisms for determining actual reductions	Type and quality of data expected
Name mechanism	
Name mechanism	
Name mechanism	

## **Section 5 - Recycled Water Plan**

### **Step One: Coordination**

#### **Water Code section 10633**

*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:*

## Section 5 - Recycled Water Plan

### Step One: Coordination

Identify the local water, wastewater, groundwater and planning agencies and how each participated in developing a plan for the use of recycled water in your service area. The UWMP should identify the names and roles of each agency that participated in developing a recycled water plan for your service area.

**Participating Agencies (Table 32)**

Participating agencies	Role in Plan Development
Water agencies	
Wastewater agencies	
Groundwater agencies	
Planning Agencies	
Other	

## **Section 5 - Recycled Water Plan**

### **Step Two: Wastewater Quantity, Quality and Current Uses**

#### **Water Code section 10633 (a-c)**

*(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.*

## Section 5 - Recycled Water Plan

### Step Two: Wastewater Quantity, Quality and Current Uses

Describe the wastewater collection and treatment systems in the service area and quantify the acre-feet of wastewater collected and treated.

#### Wastewater Collected and Treated – AF/Year (Table 33)

	2000	2005	2010	2015	2020	2025	2030/opt
Wastewater collected & treated in service area							
Quantity that meets recycled water standard							

Your plan should describe the methods of wastewater disposal (to ocean, rivers, land application, etc.) and quantify the amount of treated water that meets the recycled water standards and is being discharged.

#### Disposal of wastewater (non-recycled) AF/Y (Table 34)

Method of disposal	Treatment Level	2005	2010	2015	2020	2025	2030/opt
Name of method							
Name of method							
Name of method							
Name of method							
Total	XXX						

Identify the current uses of recycled water, including type, place and quantities.

#### Recycled Water Uses - Actual AF/Y (Table 35 a)

Type of Use	Treatment Level	2005 AF/Y
Agriculture		
Landscape		
Wildlife Habitat		
Wetlands		
Industrial		
Groundwater Recharge		
Other (type of use)		
Other (type of use)		
Total	XXX	

## Section 5 - Recycled Water Plan

### Step Three: Potential and Projected Use, Optimization Plan with Incentives

#### Water Code section 10633 (d-g)

*(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, 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.*

## Section 5 - Recycled Water Plan

### Step Three: Potential and Projected Use, Optimization Plan with Incentives

**Recycled Water Uses - Potential AF/Y (Table 35 b)**

Type of Use	Treatment Level	2010	2015	2020	2025	2030/opt
Agriculture						
Landscape						
Wildlife Habitat						
Wetlands						
Industrial						
Groundwater Recharge						
Other (type of use)						
Total	XXX					

Explain the technical and economic feasibility of serving the potential uses listed above.

**Projected Future Use of Recycled Water in Service Area – AF/Y (Table 36)**

Type of Use	2010	2015	2020	2025	2030/opt
Agriculture					
Landscape					
Wildlife Habitat					
Wetlands					
Industrial					
Groundwater Recharge					
Other (type of use)					
Total projected use of Recycled Water					

Compare your UWMP 2000 projections with UWMP 2005 actual use and explain any discrepancies.

**Recycled Water Uses - 2000 Projection compared with 2005 actual – AF/Y (Table 37)**

Type of Use	2000 Projection for 2005	2005 actual use
Agriculture		
Landscape		
Wildlife Habitat		
Wetlands		
Industrial		
Groundwater Recharge		
Other (type of use)		
Total		

Describe actions that might be taken to encourage recycled water use and the projected results of these actions in terms of acre-feet of recycled water used per year

**Methods to Encourage Recycled Water Use (Table 38)**

Actions	AF of use projected to result from this action				
	2010	2015	2020	2025	2030/opt
Financial incentives					
name of action					
name of action					
name of action					
Total					

Provide a recycled water use optimization plan that includes actions to facilitate the use of recycled water (dual distribution systems, promote recirculating uses, etc.)

## Section 6 - Water Quality Impacts on Reliability

### **Water Code section 10634**

*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.*

## Section 6 - Water Quality Impacts on Reliability

Analyze and describe how water quality affects water management strategies and supply reliability, for each of the existing sources of water for 20 years, in five-year increments. If groundwater is a source be sure to include it in this discussion.

**Current & projected water supply changes due to water quality - percentage (Table 39)**

water source	2005	2010	2015	2020	2025	2030/opt

## Section 7 - Water Service Reliability

### **Water Code 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.*

## Section 7 - Water Service Reliability

### Step One: Projected Normal Water Year Supply and Demand

You must provide this information to any city or county within your service area within 60 days of submission of the UWMP to DWR.

Compare the projected normal water supply to projected normal water use over the next 20 years, in 5-year increments.

#### Projected Normal Water Year Supply – AF/Y (Table 40)

	2010	2015	2020	2025	2030/opt
Supply					
% of Normal Year*					

\* from Table 9. Base year for Normal water year

#### Projected Normal Water Year Demand – AF/Y (Table 41)

	2010	2015	2020	2025	2030/opt
Demand					
% of year 2005					

#### Projected Normal Year Supply and Demand Comparison – AF/Y (Table 42)

	2010	2015	2020	2025	2030/opt
Supply totals					
Demand totals					
Difference (supply minus demand)					
Difference as % of Supply					
Difference as % of Demand					

## Section 7 - Water Service Reliability (continued)

### **Water Code 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.*

## Section 7 - Water Service Reliability

### Step Two: Projected Single-Dry-Year Supply and Demand Comparison

Water use patterns change during dry years. During dry water years some water agencies cannot provide their customers with 100 % of what they deliver during normal water years. One way to analyze the change in demand is to document expected changes to water demand by sector – assuming increasing demand due to increased irrigation needs and demand reductions resulting from rationing programs and policies.

Compare the projected single-dry year water supply to projected single-dry year water use over the next 20 years, in 5-year increments.

#### **Projected single dry year Water Supply – AF/Y (Table 43)**

	2010	2015	2020	2025	2030/opt
Supply					
% of projected normal*					

\*For projected normal use Table 40

#### **Projected single dry year Water Demand – AF/Y (Table 44)**

	2010	2015	2020	2025	2030/opt
Demand					
% of projected normal*					

\*For projected normal use Table 41

#### **Projected single dry year Supply and Demand Comparison – AF/Y (Table 45)**

	2010	2015	2020	2025	2030/opt
Supply totals					
Demand totals					
Difference (supply minus demand)					
Difference as % of Supply					
Difference as % of Demand					

## Section 7 - Water Service Reliability (continued)

### **Water Code 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.*

## Section 7 - Water Service Reliability 2006-2015

### Step Three: Projected Multiple-Dry-Year Supply and Demand Comparison

Project a multiple dry year period (based on Table 8) occurring between 2006-2010 and compare projected supply and demand during those years. Because supply and demand will vary during the 20-year projection, the law requires UWMPs to project the impact of multiple-dry year periods for each 5-year period during the 20-year projection.

Water use patterns change during dry years. Many water agencies cannot provide their customers with 100 % of what they deliver during a ‘normal’ water supply year. One way to analyze the change in demand is to document expected changes to water demand by sector – assuming increasing demand due to increased irrigation needs and demand reductions resulting from rationing programs and policies.

#### Projected supply during multiple dry year period ending in 2010 – AF/Y (Table 46)

	2006	2007	2008	2009	2010
Supply					
% of projected normal					

#### Projected demand multiple dry year period ending in 2010 – AF/Y (Table 47)

	2006	2007	2008	2009	2010
Demand					
% of projected normal					

#### Projected Supply & Demand Comparison during multiple dry year period ending in 2010 –AF/Y (Table 48)

	2006	2007	2008	2009	2010
Supply totals					
Demand totals					
Difference (supply minus demand)					
Difference as % of Supply					
Difference as % of Demand					

Project a multiple dry year period (based on Table 8) occurring between 2011-2015 and compare projected supply and demand during those years

#### Projected supply during multiple dry year period ending in 2015 – AF/Y (Table 49)

	2011	2012	2013	2014	2015
Supply					
% of projected normal					

#### Projected demand multiple dry year period ending in 2015 – AF/Y (Table 50)

	2011	2012	2013	2014	2015
Demand					
% of projected normal					

#### Projected Supply & Demand Comparison during multiple dry year period ending in 2015- AF/Y (Table 51)

	2011	2012	2013	2014	2015
Supply totals					
Demand totals					
Difference (supply minus demand)					
Difference as % of Supply					
Difference as % of Demand					

## Section 7 - Water Service Reliability 2016-2025

### Step Three: Projected Multiple-Dry-Year Supply and Demand Comparison

Project a multiple dry year period occurring between 2016-2020 and compare projected supply and demand during those years. Because supply and demand will vary during the 20-year projection, the law requires UWMPs to project the impact of multiple-dry year periods for each 5-year period during the 20-year projection.

Water use patterns change during dry years. Many water agencies cannot provide their customers with 100 % of what they deliver during a ‘normal’ water supply year. One way to analyze the change in demand is to document expected changes to water demand by sector – assuming increasing demand due to increased irrigation needs and demand reductions resulting from rationing programs and policies.

#### **Projected supply during multiple dry year period ending in 2020 – AF/Y (Table 52)**

	2016	2017	2018	2019	2020
Supply					
% of projected normal					

#### **Projected demand multiple dry year period ending in 2020 – AF/Y (Table 53)**

	2016	2017	2018	2019	2020
Demand					
% of projected normal					

#### **Projected Supply & Demand Comparison during multiple dry year period ending in 2020- AF/Y (Table 54)**

	2016	2017	2018	2019	2020
Supply totals					
Demand totals					
Difference (supply minus demand)					
Difference as % of Supply					
Difference as % of Demand					

Project a multiple-dry year period (based on Table 8) occurring between 2021-2025 and compare projected supply and demand during those years

#### **Projected supply during multiple dry year period ending in 2025 – AF/Y (Table 55)**

	2021	2022	2023	2024	2025
Supply					
% of projected normal					

#### **Projected demand multiple dry year period ending in 2025 – AF/Y (Table 56)**

	2021	2022	2023	2024	2025
Demand					
% of projected normal					

#### **Projected Supply & Demand Comparison during multiple dry year period ending in 2025- AF/Y (Table 57)**

	2021	2022	2023	2024	2025
Supply totals					
Demand totals					
Difference (supply minus demand)					
Difference as % of Supply					
Difference as % of Demand					

Provide reliability data to impacted cities and counties within 60 days of UWMP submission to DWR

## Section 7 - Water Service Reliability 2026-2030 (Optional) Step Three: Projected Multiple-Dry-Year Supply and Demand Comparison

Project a multiple dry year period occurring between 2026-2030 and compare projected supply and demand during those years. (optional) Because supply and demand will vary during the 20-year projection, the law requires UWMPs to project the impact of multiple-dry year periods for each 5-year period during the 20-year projection.

Water use patterns change during dry years. Many water agencies cannot provide their customers with 100% of what they deliver during a ‘normal’ water supply year. One way to analyze the change in demand is to document expected changes to water demand by sector – assuming increasing demand due to increased irrigation needs and demand reductions resulting from rationing programs and policies.

### Projected supply during multiple dry year period ending in 2030 – AF/Y (OPTIONAL)

	2026	2027	2028	2029	2030
Supply					
% of projected normal					

### Projected demand multiple dry year period ending in 2025 – AF/Y (OPTIONAL)

	2026	2027	2028	2029	2030
Demand					
% of projected normal					

### Projected Supply & Demand Comparison during multiple dry year period ending in 2025- AF/Y

	2026	2027	2028	2029	2030
Supply totals					
Demand totals					
Difference (supply minus demand)					
Difference as % of Supply					
Difference as % of Demand					

## Section 8 - Adoption and Implementation of UWMP

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) An urban water supplier shall file with the department 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 filed with the department and any city or county within which the supplier provides water supplies within 30 days after adoption.

(b) 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 outstanding elements of the individual plans. The department shall provide a copy of the report to each urban water supplier that has filed its plan with 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.

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.

---

### NOTES

Government Code section 6066. Publication of notice pursuant to this section shall be once a week for two successive weeks. Two publications in a newspaper published once a week or oftener, with at least five days intervening between the respective publication dates not counting such publication dates, are sufficient. The period of notice commences upon the first day of publication and terminates at the end of the fourteenth day, including therein the first day.

---

## **Section 8 - Adoption and Implementation of UWMP**

Attach a copy of adoption resolution to your UWMP

Review the DMM implementation plan and the recycled water plan contained in your 2000 UWMP and discuss whether they are being implemented as planned.

If you submitted CUWCC BMP Annual Reports as part of your 2000 UWMP, discuss whether the BMPs were implemented as planned.

You are required to provide your 2005 UWMP to DWR and cities and counties within your service area within 30 days of adoption

You are required to file copies of amendments or changes to the UWMP with DWR and city or counties within your service area within 30 days of adoption.

You are required to make the 2005 UWMP available for public review within 30 days of filing with DWR.

You are required to encourage the involvement of social, cultural & economic community groups prior to and during the preparation of your UWMP. Before adopting your 2005 UWMP you must make the UWMP available for public review and hold a public hearing about your 2005 UWMP. Public and private water suppliers have to notify cities, counties and the community served with notice of the time and place of the public hearing.

## Section 9 - Miscellaneous Provisions

### Water Code section 10650 - 10657

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.

10657. (a) The department shall take into consideration whether the urban water supplier has submitted an updated urban water management plan that is consistent with Section 10631, as amended by the act that adds this section, in determining whether the urban water supplier is eligible for funds made available pursuant to any program administered by the department.

(b) This section shall remain in effect only until January 1, 2006, and as of that date is repealed, unless a later enacted statute, that is enacted before January 1, 2006, deletes or extends that date.

## **Section 9 - Miscellaneous Provisions**

### **Water Code section 10650 - 10657**

Agencies subject to the Urban Water Management Planning Act must have adopted a complete UWMP that meets the requirements of the law and submitted it to DWR to be eligible for drought assistance from the State and funds administered by DWR.



# **Appendix A**

## **Urban Water Management Plan Act**

**Established:** AB 797, Klehs, 1983

**Amended:** AB 2661, Klehs, 1990

AB 11X, Filante, 1991

AB 1869, Speier, 1991

AB 892, Frazee, 1993

SB 1017, McCorquodale, 1994

AB 2853, Cortese, 1994

AB 1845, Cortese, 1995

SB 1011, Polanco, 1995

AB 2552, Bates, 2000

SB 553, Kelley, 2000

SB 610, Costa, 2001

AB 901, Daucher, 2001

SB 672, Machado, 2001

SB 1348, Brulte, 2002

SB 1384 Costa, 2002

SB 1518 Torlakson, 2002

AB 105, Wiggins, 2003

SB 318, Alpert, 2004

**CALIFORNIA WATER CODE DIVISION 6  
PART 2.6. URBAN WATER MANAGEMENT PLANNING  
CHAPTER 1. GENERAL DECLARATION AND POLICY**

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**

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**

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 area wide, regional, watershed, or basin wide 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.

(b) Every urban water supplier required to prepare a plan pursuant to this part shall 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).

## **Article 2. Contents of Plans**

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 and 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 those basins for which 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) 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:

- (1) An average water year.
- (2) A single dry water year.
- (3) Multiple dry water years.

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.
- (2) The water use projections shall be in the same five-year increments described in subdivision (a).
- (f) Provide a description of the supplier's water demand management measures. This description shall include all of the following:
- (1) A description of each water demand management measure that is currently being implemented, or scheduled for implementation, including the steps necessary to implement any proposed measures, including, but not limited to, all of the following:
    - (A) Water survey programs for single-family residential and multifamily residential customers.
    - (B) Residential plumbing retrofit.
    - (C) System water audits, leak detection, and repair.
    - (D) Metering with commodity rates for all new connections and retrofit of existing connections.
    - (E) Large landscape conservation programs and incentives.
    - (F) High-efficiency washing machine rebate programs.
    - (G) Public information programs.
    - (H) School education programs.
    - (I) Conservation programs for commercial, industrial, and institutional accounts.
    - (J) Wholesale agency programs.
    - (K) Conservation pricing.
    - (L) Water conservation coordinator.
    - (M) Water waste prohibition.
    - (N) Residential ultra-low-flush toilet replacement programs.
  - (2) A schedule of implementation for all water demand management measures proposed or described in the plan.
  - (3) A description of the methods, if any, that the supplier will use to evaluate the effectiveness of water demand management measures implemented or described under the plan.
  - (4) An estimate, if available, of existing conservation savings on water use within the supplier's service area, and the effect of the savings on the supplier's ability to further reduce demand.
    - (g) An evaluation of each water demand management measure listed in paragraph (1) of subdivision (f) that is not currently being implemented or scheduled for implementation. In the course of the evaluation, first consideration shall be given to water demand management measures, or combination of measures, that offer lower incremental costs than expanded or additional water supplies. This evaluation shall do all of the following:
      - (1) Take into account economic and noneconomic factors, including environmental, social, health, customer impact, and technological factors.
      - (2) Include a cost-benefit analysis, identifying total benefits and total costs.
      - (3) Include a description of funding available to implement any planned water supply project that would provide water at a higher unit cost.
      - (4) Include a description of the water supplier's legal authority to implement the measure and efforts to work with other relevant agencies to ensure the implementation of the measure and to share the cost of implementation.
    - (h) 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, other than the demand management programs identified pursuant to paragraph (1) of subdivision (f), 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.
      - (i) Describe the opportunities for development of desalinated water, including, but not limited to, ocean water, brackish water, and groundwater, as a long-term supply.
      - (j) Urban water suppliers that are members of the California Urban Water Conservation Council and submit annual reports to that council in accordance with the "Memorandum of Understanding Regarding Urban Water Conservation in California," dated September 1991, may submit the annual reports identifying water demand

management measures currently being implemented, or scheduled for implementation, to satisfy the requirements of subdivisions (f) and (g).

(k) Urban water suppliers that rely 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).

10631.5. The department shall take into consideration whether the urban water supplier is implementing or scheduled for implementation, the water demand management activities that the urban water supplier identified in its urban water management plan, pursuant to Section 10631, in evaluating applications for grants and loans made available pursuant to Section 79163. 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.

10632. 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:

(a) 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 which are applicable to each stage.

(b) 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.

(c) 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.

(d) 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.

(e) 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.

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

(g) An analysis of the impacts of each of the actions and conditions described in subdivisions (a) to (f), 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.

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

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

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 recycled water currently being used in the supplier's service area, including, but not limited to, the type, place, and quantity of use.

(c) 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, and other appropriate uses, and a determination with regard to the technical and economic feasibility of serving those uses.

(d) 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.

(e) 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.

(f) 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**

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**

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) 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.

(b) 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 outstanding elements of the individual plans. The department shall provide a copy of the report to each urban water supplier that has filed its plan with 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.

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**

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.

10657. (a) The department shall take into consideration whether the urban water supplier has submitted an updated urban water management plan that is consistent with Section 10631, as amended by the act that adds this section, in determining whether the urban water supplier is eligible for funds made available pursuant to any program administered by the department.

(b) This section shall remain in effect only until January 1, 2006, and as of that date is repealed, unless a later enacted statute, that is enacted before January 1, 2006, deletes or extends that date.

# **Appendix B**

## **Other Resources**

- California Environmental Quality Act - <http://ceres.ca.gov/ceqa/>
- California Land Use Planning Information Network - <http://ceres.ca.gov/planning/>
- The Governor's Office of Planning and Research - <http://www.opr.ca.gov/>
- US Bureau of Reclamation Lower Colorado Regional Office - <http://www.usbr.gov/lc/region/>
- US Bureau of Reclamation Mid-Pacific Region - <http://www.usbr.gov/mp/>
- California Department of Water Resources Bay Delta Office State Water Project Delivery Reliability Report - <http://swpdelivery.water.ca.gov/>
- California Department of Water Resources Division of Planning and Local Assistance Groundwater Management in California - <http://wwwdpla.water.ca.gov/cgi-bin/supply/gw/management/hq/main.pl>

# Appendix C

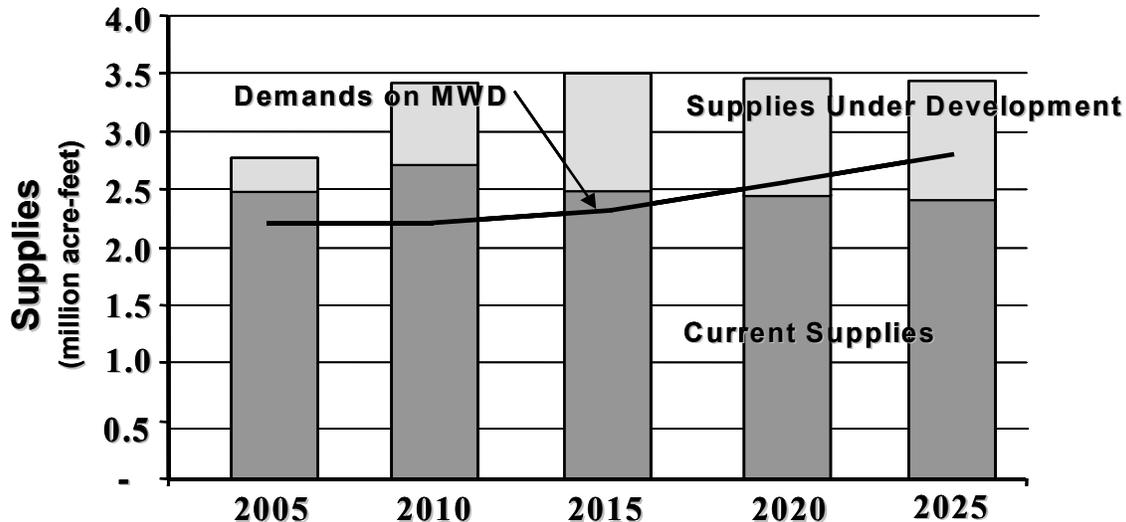
## MWD Supply Reliability Tables

---

**THIS PAGE INTENTIONALLY LEFT BLANK**

### Multiple Dry-year Supply Capability<sup>1</sup> & Projected Demands<sup>2</sup>

(Repeat of 1990-92 Hydrology)



### Supply Capability<sup>1</sup> & Potential Reserve or Replenishment

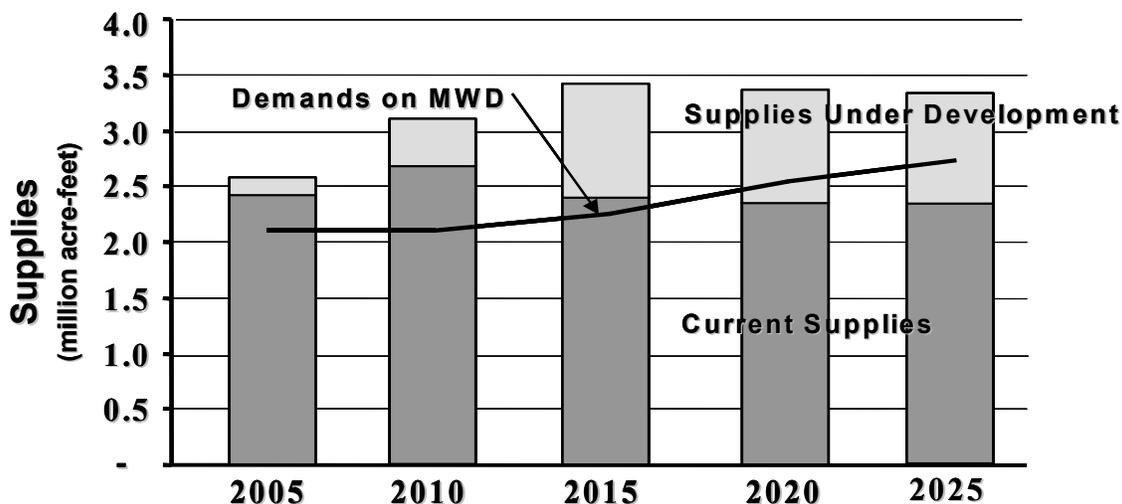
	2005	2010	2015	2020	2025
	(acre-feet per year)				
<b><u>Current Supplies</u></b>					
Colorado River <sup>2</sup>	721,330	833,292	833,292	833,292	833,292
California Aqueduct	1,290,300	1,376,100	1,146,100	1,120,300	1,120,300
In-Basin Storage	455,300	531,700	530,400	513,000	499,200
<b><u>Supplies Under Development</u></b>					
Colorado River <sup>2</sup>	167,300	416,708	416,708	416,708	416,708
California Aqueduct	20,000	195,000	390,000	390,000	390,000
In-Basin Storage	-	89,000	200,000	200,000	200,000
<b>Maximum Supply Capability<sup>1</sup></b>	<b>2,654,200</b>	<b>3,441,800</b>	<b>3,516,500</b>	<b>3,473,300</b>	<b>3,459,500</b>
<b>Total Demands on Metropolitan<sup>3</sup> (Firm &amp; Replenishment)</b>	<b>2,245,200</b>	<b>2,175,600</b>	<b>2,320,900</b>	<b>2,534,100</b>	<b>2,688,500</b>
<b>Potential Reserve &amp; System Replenishment Supply</b>	<b>409,000</b>	<b>1,266,200</b>	<b>1,195,600</b>	<b>939,200</b>	<b>771,000</b>

1 -- Represents expected supply capability for resource programs.

2 -- Total Colorado River Aqueduct Deliveries limited to 1,250,000 acre-feet per year.

3 -- Based on SCAG 98 RTP, SANDAG 1998 forecasts and member agency projections of local supplies.

**Single Dry-year Supply Capability<sup>1</sup>  
& Projected Demands<sup>2</sup>**  
(Repeat of 1977 Hydrology)



**Supply Capability<sup>1</sup> & Potential Reserve or Replenishment**

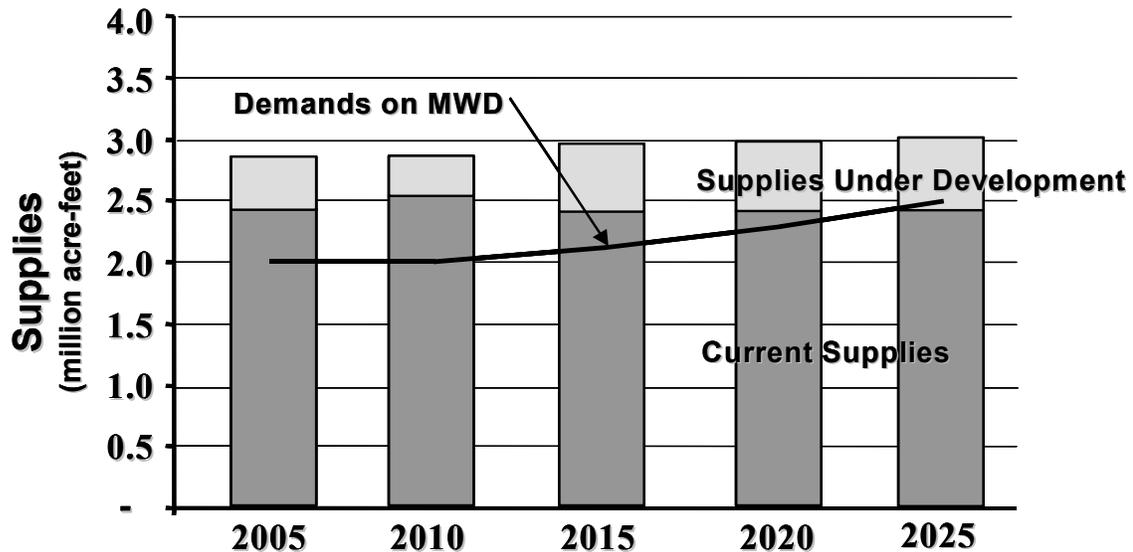
	2005	2010	2015	2020	2025
	(acre-feet per year)				
<b>Current Supplies</b>					
Colorado River <sup>2</sup>	721,330	833,292	833,292	833,292	833,292
California Aqueduct	997,300	997,300	822,300	822,300	822,300
In-Basin Storage	730,400	790,000	787,800	757,900	734,300
<b>Supplies Under Development</b>					
Colorado River <sup>2</sup>	208,600	230,538	416,708	416,708	416,708
California Aqueduct	20,000	195,000	390,000	390,000	390,000
In-Basin Storage	-	89,000	200,000	200,000	200,000
<b>Maximum Supply Capability<sup>1</sup></b>	<b>2,677,630</b>	<b>3,135,130</b>	<b>3,450,100</b>	<b>3,420,200</b>	<b>3,396,600</b>
<b>Total Demands on Metropolitan<sup>3</sup></b> (Firm & Replenishment)	<b>2,169,300</b>	<b>2,096,100</b>	<b>2,266,500</b>	<b>2,487,900</b>	<b>2,618,700</b>
<b>Potential Reserve &amp; System Replenishment Supply</b>	<b>508,330</b>	<b>1,039,030</b>	<b>1,183,600</b>	<b>932,300</b>	<b>777,900</b>

1 -- Represents expected supply capability for resource programs.

2 -- Total Colorado River Aqueduct Deliveries limited to 1,250,000 acre-feet per year.

3 -- Based on SCAG 98 RTP, SANDAG 1998 forecasts and member agency projections of local supplies.

**Average-year Supply Capability<sup>1</sup>  
& Projected Demands**



**Supply Capability<sup>1</sup> & Potential Reserve or Replenishment**

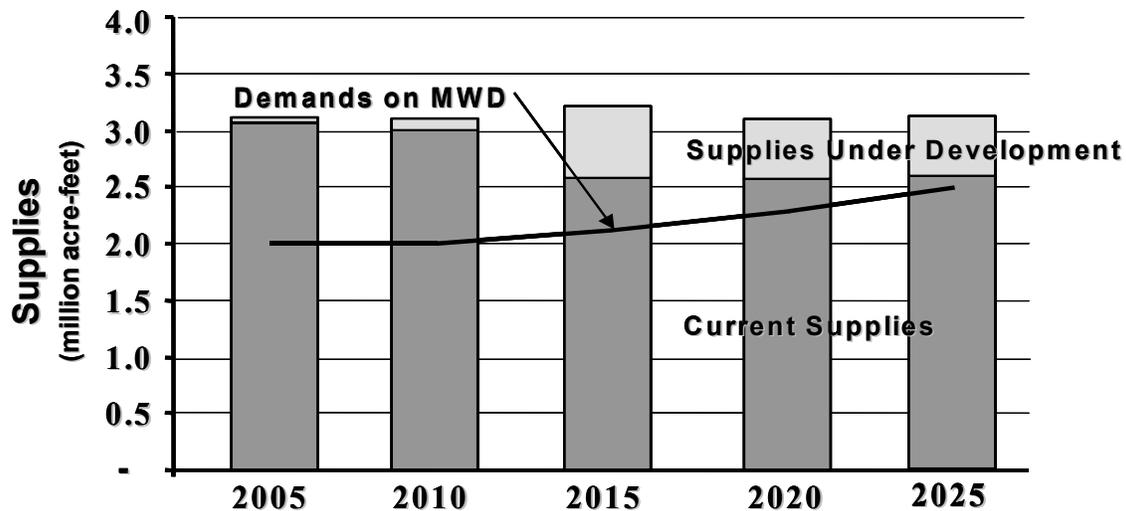
	2005	2010	2015	2020	2025
	(acre-feet per year)				
<b><u>Current Supplies</u></b>					
Colorado River <sup>2</sup>	695,330	735,222	719,292	707,292	719,292
California Aqueduct	1,780,800	1,783,200	1,723,900	1,714,900	1,705,900
In-Basin Storage	-	-	-	-	-
<b><u>Supplies Under Development</u></b>					
Colorado River <sup>2</sup>	321,500	228,608	260,538	350,038	360,538
California Aqueduct	20,000	65,000	220,000	220,000	220,000
In-Basin Storage	-	-	-	-	-
<b>Maximum Supply Capability<sup>1</sup></b>	<b>2,817,630</b>	<b>2,812,030</b>	<b>2,923,730</b>	<b>2,995,230</b>	<b>3,005,730</b>
<b>Total Demands on Metropolitan<sup>3</sup> (Firm &amp; Replenishment)</b>	<b>1,969,700</b>	<b>1,886,500</b>	<b>2,054,800</b>	<b>2,274,000</b>	<b>2,402,300</b>
<b>Potential Reserve &amp; System Replenishment Supply</b>	<b>847,930</b>	<b>925,530</b>	<b>868,930</b>	<b>721,230</b>	<b>603,430</b>

1 -- Represents expected supply capability for resource programs.

2 -- Total Colorado River Aqueduct Deliveries limited to 1,250,000 acre-feet per year.

3 -- Based on SCAG 98 RTP, SANDAG 1998 forecasts and member agency projections of local supplies

**Wet-year Supply Capability<sup>1</sup>  
& Projected Demands**  
(Repeat of 1985 Hydrology)



**Supply Capability<sup>1</sup> & Potential Reserve or Replenishment**

	2005	2010	2015	2020	2025
	(acre-feet per year)				
<b>Current Supplies</b>					
Colorado River <sup>2</sup>	1,156,330	1,156,830	683,292	683,292	683,292
California Aqueduct	1,882,200	1,882,200	1,882,200	1,882,200	1,882,200
In-Basin Storage	-	-	-	-	-
<b>Supplies Under Development</b>					
Colorado River <sup>2</sup>	93,670	93,170	503,138	353,038	360,538
California Aqueduct	20,000	65,000	220,000	220,000	220,000
In-Basin Storage	-	-	-	-	-
<b>Maximum Supply Capability<sup>1</sup></b>	<b>3,152,200</b>	<b>3,197,200</b>	<b>3,288,630</b>	<b>3,138,530</b>	<b>3,146,030</b>
<b>Total Demands on Metropolitan<sup>3</sup> (Firm &amp; Replenishment)</b>	<b>1,932,700</b>	<b>1,871,500</b>	<b>2,046,200</b>	<b>2,272,500</b>	<b>2,406,000</b>
<b>Potential Reserve &amp; System Replenishment Supply</b>	<b>1,219,500</b>	<b>1,325,700</b>	<b>1,242,430</b>	<b>866,030</b>	<b>740,030</b>

1 -- Represents expected supply capability for resource programs.

2 -- Total Colorado River Aqueduct Deliveries limited to 1,250,000 acre-feet per year.

3 -- Based on SCAG 98 RTP, SANDAG 1998 forecasts and member agency projections of local supplies.

# Appendix D

## Data for DMM Calculations

---

**THIS PAGE INTENTIONALLY LEFT BLANK**

**Water Supply & Reuse**

Reporting Unit:

Year:

**2004**

**Water Supply Source Information**

Supply Source Name

Quantity (AF) Supplied

Supply Type

**Total AF:**

## Accounts & Water Use

Reporting Unit Name:  
**Elsinore Valley MWD - Retail**

Submitted to  
 CUWCC  
**02/28/2005**

Year:  
**2004**

### A. Service Area Population Information:

1. Total service area population 112807

### B. Number of Accounts and Water Deliveries (AF)

Type	Metered		Unmetered	
	No. of Accounts	Water Deliveries (AF)	No. of Accounts	Water Deliveries (AF)
1. Single-Family	31262	18642	0	0
2. Multi-Family	412	703	0	0
3. Commercial	1021	2225	0	0
4. Industrial	31	1548	0	0
5. Institutional	70	213	0	0
6. Dedicated Irrigation	916	6796	0	0
7. Recycled Water	30	254	0	0
8. Other	0	0	0	0
9. Unaccounted	NA	0	NA	0
<b>Total</b>	<b>33742</b>	<b>30381</b>	<b>0</b>	<b>0</b>
	Metered		Unmetered	

## BMP 01: Water Survey Programs for Single-Family and Multi-Family Residential Customers

Reporting Unit: **Elsinore Valley MWD - Retail**      BMP Form Status: **100% Complete**      Year: **2004**

### A. Implementation

- |   |            |
|---|------------|
| 1. Based on your signed MOU date, 12/11/2002, your Agency STRATEGY DUE DATE is:   | 12/10/2004 |
| 2. Has your agency developed and implemented a targeting/ marketing strategy for SINGLE-FAMILY residential water use surveys? | yes        |
| a. If YES, when was it implemented?   | 9/15/1991  |
| 3. Has your agency developed and implemented a targeting/ marketing strategy for MULTI-FAMILY residential water use surveys?  | no         |
| a. If YES, when was it implemented?   |            |

### B. Water Survey Data

<b>Survey Counts:</b>	<b>Single Family Accounts</b>	<b>Multi-Family Units</b>
1. Number of surveys offered:	150	0
2. Number of surveys completed:	8	0

### Indoor Survey:

- |   |     |    |
|---|-----|----|
| 3. Check for leaks, including toilets, faucets and meter checks   | yes | no |
| 4. Check showerhead flow rates, aerator flow rates, and offer to replace or recommend replacement, if necessary   | yes | no |
| 5. Check toilet flow rates and offer to install or recommend installation of displacement device or direct customer to ULFT replacement program, as necessary; replace leaking toilet flapper, as necessary | yes | no |

### Outdoor Survey:

- |  |     |      |
|--|-----|------|
| 6. Check irrigation system and timers  | yes | no   |
| 7. Review or develop customer irrigation schedule  | yes | no   |
| 8. Measure landscaped area (Recommended but not required for surveys)  | no  | no   |
| 9. Measure total irrigable area (Recommended but not required for surveys)   | no  | no   |
| 10. Which measurement method is typically used (Recommended but not required for surveys)                                |     | None |
| 11. Were customers provided with information packets that included evaluation results and water savings recommendations? | no  | no   |
| 12. Have the number of surveys offered and completed, survey results, and survey costs been tracked?                     | no  | no   |
| a. If yes, in what form are surveys tracked?   |     | None |

b. Describe how your agency tracks this information.

Home water surveys have always been offered to attendees of the annual landscape workshops. The landscape surveys are normally generated through our customer service department through a work order. The meter and customer service departments handle resident requests for audits. High water use or a high bill normally triggers a request (work order) to the meter superintendent who then performs the landscape audit. Customers receiving landscape surveys are typically left with copies of their water use history and specific peak water usage normally can be identified through the families activities whether it was a water leak, filling of a pool, or visiting relatives.

### C. Water Survey Program Expenditures

	<b>This Year</b>	<b>Next Year</b>
1. Budgeted Expenditures	0	0
2. Actual Expenditures	0	

### D. "At Least As Effective As"

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP? No

a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

### E. Comments

Funds are not budgeted nor are expenses tracked because water audits are performed as part of regular duties in the customer service and metering areas. Public affairs staff handles requests as needed and the labor is considered a portion of the "conservation" hours. Inside home water audits are also routinely performed during the course of in-home verifications of HECW and ULF installation. In July 2004 a conservation brochure was designed to assist customers in performing their own home water audit. This is budgeted through normaly conservation activities.

## BMP 02: Residential Plumbing Retrofit

Reporting Unit: **Elsinore Valley MWD - Retail**      BMP Form Status: **100% Complete**      Year: **2004**

### A. Implementation

1. Is there an enforceable ordinance in effect in your service area requiring replacement of high-flow showerheads and other water use fixtures with their low-flow counterparts? yes
  - a. If YES, list local jurisdictions in your service area and code or ordinance in each:

California law now requires the installation of 1.6 gallon toilets and other water-efficient fixtures for all new construction under the federal Energy Policy Act of 1992. This law requires that all residential toilets sold after 1/1/94 use 1.6 gallons of water or less per flush.
2. Has your agency satisfied the 75% saturation requirement for single-family housing units? no
3. Estimated percent of single-family households with low-flow showerheads: .005%
4. Has your agency satisfied the 75% saturation requirement for multi-family housing units? no
5. Estimated percent of multi-family households with low-flow showerheads: 2%
6. If YES to 2 OR 4 above, please describe how saturation was determined, including the dates and results of any survey research.

### B. Low-Flow Device Distribution Information

1. Has your agency developed a targeting/ marketing strategy for distributing low-flow devices? yes
  - a. If YES, when did your agency begin implementing this strategy? 1/1/1997
  - b. Describe your targeting/ marketing strategy.

Promotion of program through landscape classes, billing inserts, lobby displays, through press releases and local cable TV ads.

<b>Low-Flow Devices Distributed/ Installed</b>	<b>SF Accounts</b>	<b>MF Units</b>
2. Number of low-flow showerheads distributed:	127	19
3. Number of toilet-displacement devices distributed:	0	0
4. Number of toilet flappers distributed:	0	0
5. Number of faucet aerators distributed:	0	0
6. Does your agency track the distribution and cost of low-flow devices?		yes
a. If YES, in what format are low-flow devices tracked?		Database
b. If yes, describe your tracking and distribution system :		

We accept showerhead applications in our lobby. The forms are delivered to public affairs staff who determine the applicant is a customer

and that the home was built before 1994, then send the showerheads to the customer. Customer account information is verified and the information is entered into a database and the form is filed.

**C. Low-Flow Device Distribution Expenditures**

	<b>This Year</b>	<b>Next Year</b>
1. Budgeted Expenditures	6000	2000
2. Actual Expenditures	3838.59	

**D. "At Least As Effective As"**

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP? No

a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

**E. Comments**

In January of 2004 EVMWD launched a showerhead give-away program for all customers whose homes were built before 1994. Customer notification included press releases, bill stuffers, cable TV PSA's and community outreach events. In 2003 we budgeted \$6,000 for showerhead purchase prior to receiving a price bid from the vendor. The showerheads were not as costly as originally thought so we reduced the budgeted amount for 2005. This program is totally funded by EVMWD.

**BMP 03: System Water Audits, Leak Detection and Repair**

Reporting Unit: **Elsinore Valley MWD - Retail**      BMP Form Status: **100% Complete**      Year: **2004**

**A. Implementation**

- 1. Has your agency completed a pre-screening system audit for this reporting year? no
- 2. If YES, enter the values (AF/Year) used to calculate verifiable use as a percent of total production:
  - a. Determine metered sales (AF)
  - b. Determine other system verifiable uses (AF)
  - c. Determine total supply into the system (AF)
  - d. Using the numbers above, if (Metered Sales + Other Verifiable Uses) / Total Supply is < 0.9 then a full-scale system audit is required. 0.00
- 3. Does your agency keep necessary data on file to verify the values used to calculate verifiable uses as a percent of total production? yes
- 4. Did your agency complete a full-scale audit during this report year? no
- 5. Does your agency maintain in-house records of audit results or the completed AWWA audit worksheets for the completed audit? no
- 6. Does your agency operate a system leak detection program? no
  - a. If yes, describe the leak detection program:

Leak detection is performed on an as needed basis.

**B. Survey Data**

- 1. Total number of miles of distribution system line. 541
- 2. Number of miles of distribution system line surveyed. 0

**C. System Audit / Leak Detection Program Expenditures**

	This Year	Next Year
1. Budgeted Expenditures	0	0
2. Actual Expenditures	0	

**D. "At Least As Effective As"**

- 1. Is your AGENCY implementing an "at least as effective as" variant of this BMP? No
  - a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

**E. Comments**

EVMWD does not have an "official" leak detection program, however, we do have equipment to search for a leak in a specific area where we suspect a leak.

**BMP 04: Metering with Commodity Rates for all New Connections and Retrofit of Existing**

Reporting Unit: **Elsinore Valley MWD - Retail**      BMP Form Status: **100% Complete**      Year: **2004**

**A. Implementation**

- 1. Does your agency require meters for all new connections and bill by volume-of-use? yes
- 2. Does your agency have a program for retrofitting existing unmetered connections and bill by volume-of-use? no
  - a. If YES, when was the plan to retrofit and bill by volume-of-use existing unmetered connections completed?
  - b. Describe the program:
 

We have no unmetered accounts.
- 3. Number of previously unmetered accounts fitted with meters during report year. 0

**B. Feasibility Study**

- 1. Has your agency conducted a feasibility study to assess the merits of a program to provide incentives to switch mixed-use accounts to dedicated landscape meters? no
  - a. If YES, when was the feasibility study conducted? (mm/dd/yy)
  - b. Describe the feasibility study:
- 2. Number of CII accounts with mixed-use meters. 0
- 3. Number of CII accounts with mixed-use meters retrofitted with dedicated irrigation meters during reporting period. 916

**C. Meter Retrofit Program Expenditures**

	This Year	Next Year
1. Budgeted Expenditures	0	0
2. Actual Expenditures	0	

**D. "At Least As Effective As"**

- 1. Is your AGENCY implementing an "at least as effective as" variant of this BMP? No
  - a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

**E. Comments**

We have no method in place to identify the amount of CII accounts with mixed use meters.

## BMP 05: Large Landscape Conservation Programs and Incentives

Reporting Unit:

**Elsinore Valley MWD -  
Retail**

BMP Form Status:  
**100% Complete**

Year:  
**2004**

### A. Water Use Budgets

- |  |     |
|--|-----|
| 1. Number of Dedicated Irrigation Meter Accounts:  | 916 |
| 2. Number of Dedicated Irrigation Meter Accounts with Water Budgets:                       | 0   |
| 3. Budgeted Use for Irrigation Meter Accounts with Water Budgets (AF):                     | 0   |
| 4. Actual Use for Irrigation Meter Accounts with Water Budgets (AF):                       | 0   |
| 5. Does your agency provide water use notices to accounts with budgets each billing cycle? | no  |

### B. Landscape Surveys

- |  |          |
|--|----------|
| 1. Has your agency developed a marketing / targeting strategy for landscape surveys? | yes      |
| a. If YES, when did your agency begin implementing this strategy?                    | 1/1/1994 |
| b. Description of marketing / targeting strategy:                                    |          |

The availability of large landscape water audits were promoted through the local school district and through the City of Lake Elsinore. Large landscape water audits were performed by the Riverside-Corona Resource Conservation District upon request from EVMWD. Staff from the Operations and Metering departments also promoted the program.

- |   |     |
|---|-----|
| 2. Number of Surveys Offered.   | 6   |
| 3. Number of Surveys Completed.   | 0   |
| 4. Indicate which of the following Landscape Elements are part of your survey:  |     |
| a. Irrigation System Check  | yes |
| b. Distribution Uniformity Analysis   | yes |
| c. Review / Develop Irrigation Schedules  | yes |
| d. Measure Landscape Area   | yes |
| e. Measure Total Irrigable Area   | yes |
| f. Provide Customer Report / Information  | yes |
| 5. Do you track survey offers and results?                                      | yes |
| 6. Does your agency provide follow-up surveys for previously completed surveys? | yes |
| a. If YES, describe below:  |     |

Depends upon recommendations included in the survey. If a change in irrigation controller systems is recommended we provide ET controller information. If rebates are available to assist in funding modifications, rebate information is provided. We also offer any staff expertise that is needed.

### C. Other BMP 5 Actions

1. An agency can provide mixed-use accounts with ETo-based landscape budgets in lieu of a large landscape survey program. no
- Does your agency provide mixed-use accounts with landscape budgets?
2. Number of CII mixed-use accounts with landscape budgets. 0
3. Do you offer landscape irrigation training? yes
4. Does your agency offer financial incentives to improve landscape water use efficiency? yes

<b>Type of Financial Incentive:</b>	<b>Budget (Dollars/Year)</b>	<b>Number Awarded to Customers</b>	<b>Total Amount Awarded</b>
a. Rebates	0	0	0
b. Loans	0	0	0
c. Grants	0	0	0

5. Do you provide landscape water use efficiency information to new customers and customers changing services? yes

a. If YES, describe below:

Yes, if requested. Large landscape water users can take advantage of our water audit program as well as the professional Protector del Agua programs offered in Riverside County and funded by MWD. All billing inserts and information about services are provided to all customers within our service area, large landscape accounts, residential, commercial and institutional. MWD, through WMWD, offers rebates and incentives to large water users throughout our service area. Those programs are promoted by our public affairs staff.

6. Do you have irrigated landscaping at your facilities? yes
  - a. If yes, is it water-efficient? yes
  - b. If yes, does it have dedicated irrigation metering? yes
7. Do you provide customer notices at the start of the irrigation season? no
8. Do you provide customer notices at the end of the irrigation season? no

#### **D. Landscape Conservation Program Expenditures**

	<b>This Year</b>	<b>Next Year</b>
1. Budgeted Expenditures	0	0
2. Actual Expenditures	0	

#### **E. "At Least As Effective As"**

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP? No

a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

#### **F. Comments**

The large landscape water audits are offered free of charge to customers and are performed by the Riverside-Corona Resource Conservation District and are funded by our imported water supplier, WMWD. We are continuing to seek funding for our headquarters landscape retrofit program.

## BMP 06: High-Efficiency Washing Machine Rebate Programs

Reporting Unit: **Elsinore Valley MWD - Retail**      BMP Form Status: **100% Complete**      Year: **2004**

### A. Implementation

1. Do any energy service providers or waste water utilities in your service area offer rebates for high-efficiency washers? yes

a. If YES, describe the offerings and incentives as well as who the energy/waste water utility provider is.

The Metropolitan Water District and the Department of Water Resources through Western Municipal Water District offers a \$110.00 rebate per machine.

2. Does your agency offer rebates for high-efficiency washers? yes

3. What is the level of the rebate? 15

4. Number of rebates awarded. 248

### B. Rebate Program Expenditures

	<b>This Year</b>	<b>Next Year</b>
1. Budgeted Expenditures	3000	3500
2. Actual Expenditures	3720	

### C. "At Least As Effective As"

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP? no

a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

### D. Comments

Extremely successful program. Most of the funding comes from MWD through WMWD.

## BMP 07: Public Information Programs

Reporting Unit: **Elsinore Valley MWD - Retail**      BMP Form Status: **100% Complete**      Year: **2004**

### A. Implementation

1. Does your agency maintain an active public information program to promote and educate customers about water conservation? yes

a. If YES, describe the program and how it's organized.

We currently have 2 full time staff and a part time clerical assistant in public affairs and a consultant assisting with our programs. Our program consists of legislative and community outreach programs including an extensive water education program directed to public schools, conservation programs directed to residential, commercial and institutional customers. We supply annual landscape design classes to residential customers, water audit programs to commercial/industrial and monthly billing inserts, website access, tours and outreach to community events. All of our residential rebate programs are promoted on a regular basis. The commercial/industrial programs through MWD's Save A Buck are also advertised on a regular basis. We also extend our community outreach with a sponsorship program that includes donations of bottled water which carry the conservation message to thousands of customers each year. In the 2005-06 budget year we have budgeted for a third full time person in Public Affairs to assist us in implementing additional CII programs, further develop our outdoor landscape conservation program and to better provide residential conservation programs.

2. Indicate which and how many of the following activities are included in your public information program.

Public Information Program Activity	Yes/No	Number of Events
a. Paid Advertising	yes	3
b. Public Service Announcement	yes	1
c. Bill Inserts / Newsletters / Brochures	yes	12
d. Bill showing water usage in comparison to previous year's usage	yes	
e. Demonstration Gardens	no	0
f. Special Events, Media Events	yes	2
g. Speaker's Bureau	yes	6
h. Program to coordinate with other government agencies, industry and public interest groups and media	yes	

### B. Conservation Information Program Expenditures

	This Year	Next Year
1. Budgeted Expenditures	129309	163767
2. Actual Expenditures	111501	

### C. "At Least As Effective As"

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP? No

a. If YES, please explain in detail how your implementation of this BMP

differs from Exhibit 1 and why you consider it to be "at least as effective as."

#### **D. Comments**

We have budgeted a third full-time staff person for Public Affairs. The new person will assist us in expanding our CII programs, will assist with conservation program tracking and reporting and will be responsible for the BMP program expansion and reporting. We are in the process of developing a water-wise landscape at our district headquarters to set a good example in the community and serve to educate both residential and commercial/industrial customers about water-wise landscape design, maintenance and irrigation.

**BMP 08: School Education Programs**

Reporting Unit: **Elsinore Valley MWD - Retail**      BMP Form Status: **100% Complete**      Year: **2004**

**A. Implementation**

1. Has your agency implemented a school information program to promote water conservation? yes

2. Please provide information on your school programs (by grade level):

Grade	Are grade-appropriate materials distributed?	No. of class presentations	No. of students reached	No. of teachers' workshops
Grades K-3rd	yes	70	2771	32
Grades 4th-6th	yes	3	692	18
Grades 7th-8th	yes	0	355	2
High School	no	0	0	0

3. Did your Agency's materials meet state education framework requirements? yes

4. When did your Agency begin implementing this program? 03/18/1991

**B. School Education Program Expenditures**

	This Year	Next Year
1. Budgeted Expenditures	32351	27975
2. Actual Expenditures	24950	

**C. "At Least As Effective As"**

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP? No

a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

**D. Comments**

I don't see any reductions as the school and student counts are increasing every year within our service area.

**BMP 09: Conservation Programs for CII Accounts**

Reporting Unit:

**Elsinore Valley MWD -  
Retail**

BMP Form Status:

**100% Complete**

Year:

**2004****A. Implementation**

- |  |     |
|--|-----|
| 1. Has your agency identified and ranked COMMERCIAL customers according to use?    | yes |
| 2. Has your agency identified and ranked INDUSTRIAL customers according to use?    | yes |
| 3. Has your agency identified and ranked INSTITUTIONAL customers according to use? | yes |

**Option A: CII Water Use Survey and Customer Incentives Program**

- |   |    |
|---|----|
| 4. Is your agency operating a CII water use survey and customer incentives program for the purpose of complying with BMP 9 under this option? | no |
|---|----|

<b>CII Surveys</b>	<b>Commercial Accounts</b>	<b>Industrial Accounts</b>	<b>Institutional Accounts</b>
a. Number of New Surveys Offered	0	0	0
b. Number of New Surveys Completed	0	0	0
c. Number of Site Follow-ups of Previous Surveys (within 1 yr)	0	0	0
d. Number of Phone Follow-ups of Previous Surveys (within 1 yr)	0	0	0
<b>CII Survey Components</b>	<b>Commercial Accounts</b>	<b>Industrial Accounts</b>	<b>Institutional Accounts</b>
e. Site Visit	no	no	no
f. Evaluation of all water-using apparatus and processes	no	no	no
g. Customer report identifying recommended efficiency measures, paybacks and agency incentives	no	no	no
<b>Agency CII Customer Incentives</b>	<b>Budget (\$/Year)</b>	<b>No. Awarded to Customers</b>	<b>Total \$ Amount Awarded</b>
h. Rebates	0	17	1200
i. Loans	0	0	0
j. Grants	0	0	0
k. Others	0	0	0

---

## Option B: CII Conservation Program Targets

---

5. Does your agency track CII program interventions and water savings for the purpose of complying with BMP 9 under this option?	yes
6. Does your agency document and maintain records on how savings were realized and the method of calculation for estimated savings?	yes
7. Estimated annual savings (AF/yr) from site-verified actions taken by agency since 1991.	.35
8. Estimated annual savings (AF/yr) from non-site-verified actions taken by agency since 1991.	3.14

### B. Conservation Program Expenditures for CII Accounts

	This Year	Next Year
1. Budgeted Expenditures	0	0
2. Actual Expenditures	1516.5	

### C. "At Least As Effective As"

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP? No
  - a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

### D. Comments

MWD provides CII programs to our service area. We advertise the availability of those programs via billing insert brochures, displays located at key facilities and on our district website. Additionally, staff is involved in local Rotary, Chamber and Economic Development Committees where CII programs are promoted to local business people. To date we have not allocated staff to this component of our conservation programs because our service area has had little commercial/industrial development. Since the area is currently experiencing significant growth, we have budgeted an additional staff member in the 2005-2006 fiscal year whose major role will be to help us develop the commercial/industrial/institutional conservation and rebate programs. Staff currently focuses on large POA/HOA and school district (institutional) assistance with rebate/incentive programs. MWD offers CII programs to businesses in our area, but I do not have access to that data and we do not track at this time. When our program is expanded we will track.

**BMP 09a: CII ULFT Water Savings**

Reporting Unit: **Elsinore Valley MWD - Retail**      BMP Form Status: **100% Complete**      Year: **2004**

1. Did your agency implement a CII ULFT replacement program in the reporting year? No  
 If No, please explain why on Line B. 10.

**A. Targeting and Marketing**

1. What basis does your agency use to target customers for participation in this program?

Check all that apply.

a. Describe which method you found to be the most effective overall, and which was the most effective per dollar expended.

EVMWD Director of Legislative and Community Affairs attends local chamber of commerce Rotary events and regularly discusses CII programs available to us through WMWD and MWD. WMWD Governmental Affairs Officer also attends chamber mixers and distributes Save Water, Save A Buck information.

2. How does your agency advertise this program? Check all that apply.

- Bill insert
- Newsletter
- Web page
- Other print media

a. Describe which method you found to be the most effective overall, and which was the most effective per dollar expended.

Attendance at local Chamber and Rotary events seems to have the most impact.

**B. Implementation**

1. Does your agency keep and maintain customer participant information? (Read the Help information for a complete list of all the information for this BMP.) Yes

2. Would your agency be willing to share this information if the CUWCC did a study to evaluate the program on behalf of your agency? No

3. What is the total number of customer accounts participating in the program during the last year ?

CII Subsector	Number of Toilets Replaced			
	Standard Gravity Tank	Air Assisted	Valve Floor Mount	Valve Wall Mount
4.				
a. Offices				
b. Retail / Wholesale				
c. Hotels				
d. Health				
e. Industrial				
f. Schools:				

- K to 12
- g. Eating
- h. Govern-  
ment
- i. Churches
- j. Other

5. Program design.

Rebate or voucher

6. Does your agency use outside services to implement this program?

Yes

a. If yes, check all that apply.

Consultant

7. Participant tracking and follow-up.

No follow-up

8. Based on your program experience, please rank on a scale of 1 to 5, with 1 being the least frequent cause and 5 being the most frequent cause, the following reasons why customers refused to participate in the program.

- a. Disruption to business 1
- b. Inadequate payback 1
- c. Inadequate ULFT performance 1
- d. Lack of funding 1
- e. American's with Disabilities Act 1
- f. Permitting 1

g. Other. Please describe in B. 9.

9. Please describe general program acceptance/resistance by customers, obstacles to implementation, and other issues affecting program implementation or effectiveness.

EVMWD customers benefit from regular program sponsored by MWD and provided to us through WMWD.

10. Please provide a general assessment of the program for this reporting year. Did your program achieve its objectives? Were your targeting and marketing approaches effective? Were program costs in line with expectations and budgeting?

The focus of our conservation program thus far has been residential. CII programs have been promoted within our service area by MWD's Save A Buck program. We support their efforts within our service area by highlighting commercial programs in monthly billing inserts and through public outreach. At this time this is not a targeted program goal for 2004-05.0

### C. Conservation Program Expenditures for CII ULFT

1. CII ULFT Program: Annual Budget & Expenditure Data

	Budgeted	Actual Expenditure
a. Labor	0	0
b. Materials	0	0
c. Marketing & Advertising	0	0
d. Administration &	0	0

Overhead		
e. Outside Services	0	0
f. Total	0	0

2. CII ULFT Program: Annual Cost Sharing

a. Wholesale agency contribution		0
b. State agency contribution		0
c. Federal agency contribution		0
d. Other contribution		0
e. Total		0

**D. Comments**

## BMP 11: Conservation Pricing

Reporting Unit:  
**Elsinore Valley MWD - Retail**

BMP Form  
 Status:  
**100% Complete**

Year:  
**2004**

### A. Implementation

#### Rate Structure Data Volumetric Rates for Water Service by Customer Class

##### 1. Residential

a. Water Rate Structure	Increasing Block
b. Sewer Rate Structure	Uniform
c. Total Revenue from Volumetric Rates	\$123456
d. Total Revenue from Non-Volumetric Charges, Fees and other Revenue Sources	\$123456

##### 2. Commercial

a. Water Rate Structure	Uniform
b. Sewer Rate Structure	Uniform
c. Total Revenue from Volumetric Rates	\$123456
d. Total Revenue from Non-Volumetric Charges, Fees and other Revenue Sources	\$123456

##### 3. Industrial

a. Water Rate Structure	Uniform
b. Sewer Rate Structure	Uniform
c. Total Revenue from Volumetric Rates	\$123456
d. Total Revenue from Non-Volumetric Charges, Fees and other Revenue Sources	\$123456

##### 4. Institutional / Government

a. Water Rate Structure	Uniform
b. Sewer Rate Structure	Uniform
c. Total Revenue from Volumetric Rates	\$123456
d. Total Revenue from Non-Volumetric Charges, Fees and other Revenue Sources	\$123456

##### 5. Irrigation

a. Water Rate Structure	Uniform
b. Sewer Rate Structure	Service Not Provided
c. Total Revenue from Volumetric Rates	\$123456
d. Total Revenue from Non-Volumetric Charges, Fees and other Revenue Sources	\$123456

##### 6. Other

a. Water Rate Structure	Service Not Provided
-------------------------	----------------------

- b. Sewer Rate Structure Service Not Provided
- c. Total Revenue from Volumetric Rates \$0
- d. Total Revenue from Non-Volumetric Charges, Fees and other Revenue Sources \$0

**B. Conservation Pricing Program Expenditures**

	<b>This Year</b>	<b>Next Year</b>
1. Budgeted Expenditures	0	0
2. Actual Expenditures	0	

**C. "At Least As Effective As"**

- 1. Is your AGENCY implementing an "at least as effective as" variant of this BMP? No

a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

**D. Comments**

**BMP 12: Conservation Coordinator**

Reporting Unit:  
**Elsinore Valley MWD - Retail**

BMP Form Status:  
**100% Complete**

Year:  
**2004**

**A. Implementation**

- 1. Does your Agency have a conservation coordinator? yes
- 2. Is this a full-time position? no
- 3. If no, is the coordinator supplied by another agency with which you cooperate in a regional conservation program ? no
- 4. Partner agency's name:
- 5. If your agency supplies the conservation coordinator:
  - a. What percent is this conservation coordinator's position? 50%
  - b. Coordinator's Name Mary Brown
  - c. Coordinator's Title Public Affairs Representative
  - d. Coordinator's Experience and Number of Years 20
  - e. Date Coordinator's position was created (mm/dd/yyyy) 3/18/1991
- 6. Number of conservation staff, including Conservation Coordinator. 3

**B. Conservation Staff Program Expenditures**

	<b>This Year</b>	<b>Next Year</b>
1. Budgeted Expenditures	52881	54132
2. Actual Expenditures	39400	

**C. "At Least As Effective As"**

- 1. Is your AGENCY implementing an "at least as effective as" variant of this BMP? no
  - a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

**D. Comments**

In the 2004 budget year, our public affairs staff added \$16,500 to our rebate budget to pay for additional expenses related to the HECW rebate program. We also offer a rebate to customers who purchase waterbrooms and we give away showerheads. We also used the funds to pay for inspections for installation of ET controllers.

**BMP 13: Water Waste Prohibition**

Reporting Unit: **Elsinore Valley MWD - Retail**      BMP Form Status: **100% Complete**      Year: **2004**

**A. Requirements for Documenting BMP Implementation**

1. Is a water waste prohibition ordinance in effect in your service area? no

a. If YES, describe the ordinance:

Ordinance No. 97, implemented in March, 1991 provides for implementation and enforcement of mandatory water conservation measures to mitigate effects of the 1991 drought. It also amends ordinance #78 and provides in part for the modification of a moratorium on new service connections and adoption of a formal appeals procedure. Ordinance #79 will be implemented if and when the board of directors declares a water emergency and drought conditions arise.

2. Is a copy of the most current ordinance(s) on file with CUWCC? no

a. List local jurisdictions in your service area in the first text box and water waste ordinance citations in each jurisdiction in the second text box:

City of Lake Elsinore, City of Canyon Lake, A portion of the City of Murrieta, Wildomar, Horsethief Canyon, Meadowbrook None

**B. Implementation**

1. Indicate which of the water uses listed below are prohibited by your agency or service area.

- a. Gutter flooding no
- b. Single-pass cooling systems for new connections no
- c. Non-recirculating systems in all new conveyor or car wash systems no
- d. Non-recirculating systems in all new commercial laundry systems no
- e. Non-recirculating systems in all new decorative fountains no
- f. Other, please name no

2. Describe measures that prohibit water uses listed above:

For items b., c., and d. we request customers to voluntarily comply and install reticulating systems.

**Water Softeners:**

3. Indicate which of the following measures your agency has supported in developing state law:

- a. Allow the sale of more efficient, demand-initiated regenerating DIR models. yes
- b. Develop minimum appliance efficiency standards that:
  - i.) Increase the regeneration efficiency standard to at least 3,350 grains of hardness removed per pound of common salt used. yes
  - ii.) Implement an identified maximum number of yes

gallons discharged per gallon of soft water produced.

c. Allow local agencies, including municipalities and special districts, to set more stringent standards and/or to ban on-site regeneration of water softeners if it is demonstrated and found by the agency governing board that there is an adverse effect on the reclaimed water or groundwater supply. yes

4. Does your agency include water softener checks in home water audit programs? no

5. Does your agency include information about DIR and exchange-type water softeners in educational efforts to encourage replacement of less efficient timer models? yes

**C. Water Waste Prohibition Program Expenditures**

	<b>This Year</b>	<b>Next Year</b>
1. Budgeted Expenditures	0	0
2. Actual Expenditures	0	

**D. "At Least As Effective As"**

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP? no

a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

**E. Comments**

Approximately 5-6 years ago there was a court case in the City of Escondido whereby the resident challenged the city water softener ordinance. The case was won and as a result, most water agencies in California cannot enforce water softener ordinances. This is the case at EVMWD, we have an ordinance however, and it is not enforceable.

## BMP 14: Residential ULFT Replacement Programs

Reporting Unit: **Elsinore Valley MWD - Retail**      BMP Form Status: **100% Complete**      Year: **2004**

### A. Implementation

	Single-Family Accounts	Multi- Family Units
1. Does your Agency have program(s) for replacing high-water-using toilets with ultra-low flush toilets?	yes	yes

#### Number of Toilets Replaced by Agency Program During Report Year

Replacement Method	SF Accounts	MF Units
2. Rebate	135	4
3. Direct Install	0	0
4. CBO Distribution	0	0
5. Other	0	0
<b>Total</b>	<b>135</b>	<b>4</b>

6. Describe your agency's ULFT program for single-family residences.

In January of 2001, we started the ULF toilet rebate program at EVMWD. Brochures were printed and distributed via bill inserts to approximately 20,000 customers. Single and multifamily customers were encouraged to apply. In 2002 the brochure was updated and distributed again to EVMWD customers. The ULF program is promoted on local cable TV, via regularly issued press releases, at community outreach events and in the EVMWD lobby. The Metropolitan Water District, through Western Municipal Water District, offers a \$60.00 rebate per machine. We provide program administration, publicity and track rebate distribution for single and multi-family residences.

7. Describe your agency's ULFT program for multi-family residences.

See #6

8. Is a toilet retrofit on resale ordinance in effect for your service area?      no

9. List local jurisdictions in your service area in the left box and ordinance citations in each jurisdiction in the right box:

### B. Residential ULFT Program Expenditures

	This Year	Next Year
1. Budgeted Expenditures	0	0
2. Actual Expenditures	0	

### C. "At Least As Effective As"

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP?      no

a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective"

as."

**D. Comments**

Budget dollars for this BMP are reflected in BMP 7 and BMP 12.

**Water Supply & Reuse**

Reporting Unit:  
**Elsinore Valley MWD - Wholesale**

Year:  
**2004**

**Report Not Filed**

## BMP 03: System Water Audits, Leak Detection and Repair

Reporting Unit: **Elsinore Valley MWD - Wholesale**      BMP Form Status: **100% Complete**      Year: **2004**

### A. Implementation

1. Has your agency completed a pre-screening system audit for this reporting year? no
2. If YES, enter the values (AF/Year) used to calculate verifiable use as a percent of total production:
  - a. Determine metered sales (AF)
  - b. Determine other system verifiable uses (AF)
  - c. Determine total supply into the system (AF)
  - d. Using the numbers above, if (Metered Sales + Other Verifiable Uses) / Total Supply is < 0.9 then a full-scale system audit is required. 0.00
3. Does your agency keep necessary data on file to verify the values used to calculate verifiable uses as a percent of total production? no
4. Did your agency complete a full-scale audit during this report year? no
5. Does your agency maintain in-house records of audit results or the completed AWWA audit worksheets for the completed audit? no
6. Does your agency operate a system leak detection program? no
  - a. If yes, describe the leak detection program:

Leak detection is performed on an as needed basis.

### B. Survey Data

1. Total number of miles of distribution system line. 0
2. Number of miles of distribution system line surveyed. 0

### C. System Audit / Leak Detection Program Expenditures

	This Year	Next Year
1. Budgeted Expenditures	0	0
2. Actual Expenditures	0	

### D. "At Least As Effective As"

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP? No
  - a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

### E. Comments

We are not privy to information on distribution lines of the retail agencies to which we supply wholesale water. We do not keep records on the wholesale water sales to verify percentages of use.

Reported as of 10/2

## BMP 07: Public Information Programs

Reporting Unit:

**Elsinore Valley MWD - Wholesale**

BMP Form Status:

**100% Complete**

Year:

**2004**

### A. Implementation

1. Does your agency maintain an active public information program to promote and educate customers about water conservation? yes

a. If YES, describe the program and how it's organized.

We offer the same programs and rebates to our wholesale customers. We do not separately track the data on our programs between wholesale and retail. See retail BMP 7.

2. Indicate which and how many of the following activities are included in your public information program.

Public Information Program Activity	Yes/No	Number of Events
a. Paid Advertising	yes	0
b. Public Service Announcement	yes	0
c. Bill Inserts / Newsletters / Brochures	yes	0
d. Bill showing water usage in comparison to previous year's usage	no	
e. Demonstration Gardens	no	0
f. Special Events, Media Events	yes	0
g. Speaker's Bureau	yes	0
h. Program to coordinate with other government agencies, industry and public interest groups and media	yes	

### B. Conservation Information Program Expenditures

	This Year	Next Year
1. Budgeted Expenditures	0	0
2. Actual Expenditures	0	

### C. "At Least As Effective As"

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP? No

a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

### D. Comments

We offer the same programs and rebates to our wholesale customers. We do not separately track the data on our programs between wholesale and retail. We do not separately track programs for our wholesale customers, the same programs are offered to our entire service area. See retail BMP 7. The two retail agencies we serve are not BMP signatories.

Reported as of 10/2

## BMP 08: School Education Programs

Reporting Unit:  
**Elsinore Valley MWD -  
 Wholesale**

BMP Form Status:  
**100% Complete**

Year:  
**2004**

### A. Implementation

1. Has your agency implemented a school information program to promote water conservation? yes
2. Please provide information on your school programs (by grade level):

Grade	Are grade-appropriate materials distributed?	No. of class presentations	No. of students reached	No. of teachers' workshops
Grades K-3rd	yes	0	0	0
Grades 4th-6th	yes	0	0	0
Grades 7th-8th	yes	0	0	0
High School	yes	0	0	0

3. Did your Agency's materials meet state education framework requirements? yes
4. When did your Agency begin implementing this program? 3/18/1991

### B. School Education Program Expenditures

	This Year	Next Year
1. Budgeted Expenditures	0	0
2. Actual Expenditures	0	

### C. "At Least As Effective As"

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP? No
- a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

### D. Comments

All of our water education programs are offered to our service area schools. We do not track our wholesale and retail customers separately. The retail BMP 8 accurately reflects all materials, students and programs offered throughout. Currently, no locals schools are served by our wholesale customers.

Reported as of 10/2

## BMP 10: Wholesale Agency Assistance Programs

Reporting Unit: **Elsinore Valley MWD - Wholesale**      BMP Form Status: **100% Complete**      Year: **2004**

### A. Implementation

#### 1. Financial Support by BMP

BMP	Financial Incentives Offered?	Budgeted Amount	Amount Awarded	BMP	Financial Incentives Offered?	Budgeted Amount	Amount Awarded
<b>1</b>	yes	0	0	<b>8</b>	yes	0	0
<b>2</b>	yes	0	0	<b>9</b>	yes	0	0
<b>3</b>	No	0	0	<b>10</b>	No	0	0
<b>4</b>	No	0	0	<b>11</b>	No	0	0
<b>5</b>	yes	0	0	<b>12</b>	yes	0	0
<b>6</b>	yes	0	0	<b>13</b>	No	0	0
<b>7</b>	yes	0	0	<b>14</b>	yes	0	0

#### 2. Technical Support

- |   |     |
|---|-----|
| a. Has your agency conducted or funded workshops addressing CUWCC procedures for calculating program savings, costs and cost-effectiveness? | No  |
| b. Has your agency conducted or funded workshops addressing retail agencies' BMP implementation reporting requirements?                     | No  |
| c. Has your agency conducted or funded workshops addressing:  |     |
| 1) ULFT replacement   | yes |
| 2) Residential retrofits  | yes |
| 3) Commercial, industrial, and institutional surveys  | No  |
| 4) Residential and large turf irrigation  | yes |
| 5) Conservation-related rates and pricing   | No  |

#### 3. Staff Resources by BMP

Qualified Staff	No. FTE Staff	Qualified Staff	No. FTE Staff
-----------------	---------------	-----------------	---------------

BMP	Available for BMP?	Assigned to BMP	BMP	Available for BMP?	Assigned to BMP
<b>1</b>	yes	1	<b>8</b>	yes	1
<b>2</b>	yes	1	<b>9</b>	yes	1
<b>3</b>	No	0	<b>10</b>	No	0
<b>4</b>	No	0	<b>11</b>	No	0
<b>5</b>	yes	1	<b>12</b>	yes	1
<b>6</b>	yes	1	<b>13</b>	No	0
<b>7</b>	yes	2	<b>14</b>	yes	0

#### 4. Regional Programs by BMP

---

BMP	Implementation/ Management Program?	BMP	Implementation/ Management Program?
<b>1</b>	yes	<b>8</b>	yes
<b>2</b>	yes	<b>9</b>	yes
<b>3</b>	No	<b>10</b>	No
<b>4</b>	No	<b>11</b>	No
<b>5</b>	yes	<b>12</b>	No
<b>6</b>	yes	<b>13</b>	No
<b>7</b>	yes	<b>14</b>	yes

#### B. Wholesale Agency Assistance Program Expenditures

	<b>This Year</b>	<b>Next Year</b>
1. Budgeted Expenditures	0	0
2. Actual Expenditures	0	

**C. "At Least As Effective As"**

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP? No

a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

**D. Comments**

All of the conservation, public information and water education programs offered to our retail customers are also offered to our wholesale customers. The Farm Mutual Water Company only has 2-3 staff members. The Elsinore Water District has only 10-15 staff which are mostly field, meter reader staff. Neither district has staff to perform public information or outreach programs. We allow for wholesale customer support in all of our outreach programs and do not track separately. The two retail agencies we serve are not BMP signatories.

Reported as of 10/2

# BMP 11: Conservation Pricing

Reporting Unit:  
**Elsinore Valley MWD - Wholesale**

BMP Form  
Status:  
**100% Complete**

Year:  
**2004**

## A. Implementation

### Rate Structure Data Volumetric Rates for Water Service by Customer Class

#### 1. Residential

- a. Water Rate Structure
- b. Sewer Rate Structure
- c. Total Revenue from Volumetric Rates \$
- d. Total Revenue from Non-Volumetric Charges, Fees and other Revenue Sources \$

#### 2. Commercial

- a. Water Rate Structure
- b. Sewer Rate Structure
- c. Total Revenue from Volumetric Rates \$
- d. Total Revenue from Non-Volumetric Charges, Fees and other Revenue Sources \$

#### 3. Industrial

- a. Water Rate Structure
- b. Sewer Rate Structure
- c. Total Revenue from Volumetric Rates \$
- d. Total Revenue from Non-Volumetric Charges, Fees and other Revenue Sources \$

#### 4. Institutional / Government

- a. Water Rate Structure
- b. Sewer Rate Structure
- c. Total Revenue from Volumetric Rates \$
- d. Total Revenue from Non-Volumetric Charges, Fees and other Revenue Sources \$

#### 5. Irrigation

- a. Water Rate Structure
- b. Sewer Rate Structure
- c. Total Revenue from Volumetric Rates \$
- d. Total Revenue from Non-Volumetric Charges, Fees and other Revenue Sources \$

#### 6. Other

a. Water Rate Structure	Uniform
b. Sewer Rate Structure	Uniform
c. Total Revenue from Volumetric Rates	\$402095
d. Total Revenue from Non-Volumetric Charges, Fees and other Revenue Sources	\$9768

**B. Conservation Pricing Program Expenditures**

	<b>This Year</b>	<b>Next Year</b>
1. Budgeted Expenditures	0	0
2. Actual Expenditures	0	

**C. "At Least As Effective As"**

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP? No

a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

**D. Comments**

We are not privy to information on the charges that the retail agencies impose on their customers. Our wholesale water sales to these customers are considered supplemental supply.

Reported as of 10/2

## BMP 12: Conservation Coordinator

Reporting Unit: **Elsinore Valley MWD - Wholesale**      BMP Form Status: **100% Complete**      Year: **2004**

### A. Implementation

1. Does your Agency have a conservation coordinator? yes
2. Is this a full-time position? no
3. If no, is the coordinator supplied by another agency with which you cooperate in a regional conservation program ? no
4. Partner agency's name:
5. If your agency supplies the conservation coordinator:
  - a. What percent is this conservation coordinator's position? 50%
  - b. Coordinator's Name Mary Brown
  - c. Coordinator's Title Public Affairs Representative
  - d. Coordinator's Experience and Number of Years 20
  - e. Date Coordinator's position was created (mm/dd/yyyy) 3/18/1991
6. Number of conservation staff, including Conservation Coordinator. 3

### B. Conservation Staff Program Expenditures

	This Year	Next Year
1. Budgeted Expenditures	0	0
2. Actual Expenditures	0	

### C. "At Least As Effective As"

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP? no
  - a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

### D. Comments

All of the budget information is supplied in the retail BMP 12. No separation of budget or funding is made between retail and wholesale conservation services provided.

Reported as of 10/2

## BMP 01 Coverage: Water Survey Programs for Single-Family and Multi-Family Residential Customers

Reporting Unit:  
**Elsinore Valley MWD - Retail**

Reporting Period:  
**03-04**

### MOU Exhibit 1 Coverage Requirement

No exemption request filed

Agency indicated "at least as effective as" implementation during report period? No

A Reporting Unit (RU) must meet three conditions to satisfy strict compliance for BMP 1.

Condition 1: Adopt survey targeting and marketing strategy on time

Condition 2: Offer surveys to 20% of SF accounts and 20% of MF units during report period

Condition 3: Be on track to survey 15% of SF accounts and 15% of MF units within 10 years of implementation start date.

### Test for Condition 1

Elsinore Valley MWD - Retail to Implement Targeting/Marketing Program by:	2004		
		<u>Single-Family</u>	<u>Multi-Family</u>
Year Elsinore Valley MWD - Retail Reported Implementing Targeting/Marketing Program:			
Elsinore Valley MWD - Retail Met Targeting/Marketing Coverage Requirement:		NO	NO

### Test for Condition 2

			<u>Single-Family</u>	<u>Multi-Family</u>
Survey Program to Start by:	2003	Residential Survey Offers (%)	1.12%	
Reporting Period:	03-04	Survey Offers $\geq$ 20%	NO	NO

### Test for Condition 3

	Completed Residential Surveys	
	<u>Single Family</u>	<u>Multi-Family</u>
Total Completed Surveys 1999 - 2004:	41	
Past Credit for Surveys Completed Prior to 1999 (Implementation of Reporting Database):	11	
<b>Total + Credit</b>	<b>52</b>	
	28,017	408

Residential Accounts in Base Year		
Elsinore Valley MWD - Retail Survey Coverage as % of Base Year Residential Accounts	0.19%	
Coverage Requirement by Year 2 of Implementation per Exhibit 1	1.50%	1.50%
Elsinore Valley MWD - Retail on Schedule to Meet 10-Year Coverage Requirement	NO	NO

---

**BMP 1 COVERAGE STATUS SUMMARY:**

**Water supplier has not met one or more coverage requirements for this BMP.**

## BMP 02 Coverage: Residential Plumbing Retrofit

Reporting Unit:

**Elsinore Valley MWD - Retail**

Reporting Period:

**03-04**

### MOU Exhibit 1 Coverage Requirement

No exemption request filed

Agency indicated "at least as effective as" implementation during report period?

No

An agency must meet one of three conditions to satisfy strict compliance for BMP 2.

Condition 1: The agency has demonstrated that 75% of SF accounts and 75% of MF units constructed prior to 1992 are fitted with low-flow showerheads.

Condition 2: An enforceable ordinance requiring the replacement of high-flow showerheads and other water use fixtures with their low-flow counterparts is in place for the agency's service area.

Condition 3: The agency has distributed or directly installed low-flow showerheads and other low-flow plumbing devices to not less than 10% of single-family accounts and 10% of multi-family units constructed prior to 1992 during the reporting period.

### Test for Condition 1

Report Year	Report Period	Single-Family		Multi-Family	
		Reported Saturation	Saturation > 75%?	Reported Saturation	Saturation > 75%?
1999	99-00		NO		NO
2000	99-00		NO		NO
2001	01-02		NO		NO
2002	01-02		NO		NO
2003	03-04		NO		NO
2004	03-04	0.01%	NO	2.00%	NO

### Test for Condition 2

Report Year	Report Period	Elsinore Valley MWD - Retail has ordinance requiring showerhead retrofit?
1999	99-00	YES
2000	99-00	YES
2001	01-02	YES
2002	01-02	YES
2003	03-04	YES
2004	03-04	YES

### Test for Condition 3

Reporting Period: 03-04

<u>1992 SF Accounts</u>	<u>Num. Showerheads Distributed to SF Accounts</u>	<u>Single-Family Coverage Ratio</u>	<u>SF Coverage Ratio &gt; 10%</u>
19,729	127	0.6%	NO
<u>1992 MF Accounts</u>	<u>Num. Showerheads Distributed to MF Accounts</u>	<u>Multi-Family Coverage Ratio</u>	<u>MF Coverage Ratio &gt; 10%</u>

347

19

5.5%

NO

---

**BMP 2 COVERAGE STATUS SUMMARY:**

**Water supplier is meeting coverage requirements for this BMP.**

## BMP 03 Coverage: System Water Audits, Leak Detection and Repair

Reporting Unit:  
**Elsinore Valley MWD - Retail**

Reporting Period:  
**03-04**

### MOU Exhibit 1 Coverage Requirement

No exemption request filed

Agency indicated "at least as effective as" implementation during report period?

No

An agency must meet one of two conditions to be in compliance with BMP 3:

Condition 1: Perform a prescreening audit. If the result is equal to or greater than 0.9 nothing more needs be done.

Condition 2: Perform a prescreening audit. If the result is less than 0.9, perform a full audit in accordance with AWWA's Manual of Water Supply Practices, Water Audits, and Leak Detection.

### Test for Conditions 1 and 2

<u>Report Year</u>	<u>Report Period</u>	<u>Pre-Screen Completed</u>	<u>Pre-Screen Result</u>	<u>Full Audit Indicated</u>	<u>Full Audit Completed</u>
1999	99-00	NO			NO
2000	99-00	NO			NO
2001	01-02	NO			NO
2002	01-02	NO			NO
2003	03-04	NO			NO
2004	03-04	NO			NO

### BMP 3 COVERAGE STATUS SUMMARY:

**Water supplier has not met one or more coverage requirements for this BMP.**

## **BMP 04 Coverage: Metering with Commodity Rates for all New Connections and Retrofit of Existing**

Reporting Unit:  
**Elsinore Valley MWD -  
Retail**

Reporting Period:  
**03-04**

### **MOU Exhibit 1 Coverage Requirement**

No exemption request filed

Agency indicated "at least as effective as" implementation during report period?

No

---

An agency must be on track to retrofit 100% of its unmetered accounts within 10 years to be in compliance with BMP 4.

---

### **Test for Compliance**

---

Total Meter Retrofits  
Reported through 2004

No. of Unmetered Accounts  
in Base Year

Meter Retrofit Coverage as  
% of Base Year Unmetered  
Accounts

Coverage Requirement by  
Year 1 of Implementation per  
Exhibit 1

4.5%

RU on Schedule to meet 10  
Year Coverage Requirement

YES

---

### **BMP 4 COVERAGE STATUS SUMMARY:**

**Water supplier is meeting coverage requirements for this BMP.**

## BMP 05 Coverage: Large Landscape Conservation Programs and Incentives

Reporting Unit:  
**Elsinore Valley MWD - Retail**

Reporting Period:  
**03-04**

### MOU Exhibit 1 Coverage Requirement

No exemption request filed

Agency indicated "at least as effective as" implementation during report period?

No

An agency must meet three conditions to comply with BMP 5.

Condition 1: Develop water budgets for 90% of its dedicated landscape meter accounts within four years of the date implementation is to start.

Condition 2: (a) Offer landscape surveys to at least 20% of its CII accounts with mixed use meters each report cycle and be on track to survey at least 15% of its CII accounts with mixed use meters within 10 years of the date implementation is to start OR (b) Implement a dedicated landscape meter retrofit program for CII accounts with mixed use meters or assign landscape budgets to mixed use meters.

Condition 3: Implement and maintain customer incentive program(s) for irrigation equipment retrofits.

#### Test for Condition 1

Year	Report Period	BMP 5 Implementation Year	No. of Irrigation Meter Accounts	No. of Irrigation Accounts with Budgets	Budget Coverage Ratio	90% Coverage Met by Year 4
1999	99-00	-4	693			NA
2000	99-00	-3	716			NA
2001	01-02	-2	747			NA
2002	01-02	-1	780			NA
2003	03-04		828			NA
2004	03-04	1	916			NA

#### Test for Condition 2a (survey offers)

Select Reporting Period:	03-04
Large Landscape Survey Offers as % of Mixed Use Meter CII Accounts	1.4%
Survey Offers Equal or Exceed 20% Coverage Requirement	NO

#### Test for Condition 2a (surveys completed)

Total Completed Landscape Surveys Reported through	2
Credit for Surveys Completed Prior to Implementation of Reporting Database	34
Total + Credit	36
CII Accounts in Base Year	766
RU Survey Coverage as a % of Base Year CII Accounts	4.7%
Coverage Requirement by Year of Implementation per Exhibit 1	0.7%
RU on Schedule to Meet 10 Year Coverage	

Requirement

YES

**Test for Condition 2b (mixed use budget or meter retrofit program)**

<u>Report Year</u>	<u>Report Period</u>	<u>BMP 5 Implementation Year</u>	<u>Agency has mix-use budget program</u>	<u>No. of mixed-use budgets</u>
1999	99-00	-4	NO	
2000	99-00	-3	NO	
2001	01-02	-2	NO	
2002	01-02	-1	NO	
2003	03-04		NO	
2004	03-04	1	NO	
<u>Report Year</u>	<u>Report Period</u>	<u>BMP 4 Implementation Year</u>	<u>No. of mixed use CII accounts</u>	<u>No. of mixed use CII accounts fitted with irrig. meters</u>
1999	99-00	-4		693
2000	99-00	-3		716
2001	01-02	-2		747
2002	01-02	-1		780
2003	03-04			828
2004	03-04	1		916

**Test for Condition 3**

<u>Report Year</u>	<u>Report Period</u>	<u>BMP 5 Implementation Year</u>	<u>RU offers financial incentives?</u>	<u>No. of Loans</u>	<u>Total Amt. Loans</u>
1999	99-00	-4	NO		
2000	99-00	-3	NO		
2001	01-02	-2	NO		
2002	01-02	-1	NO		
2003	03-04		NO		
2004	03-04	1	YES		
<u>Report Year</u>	<u>Report Period</u>	<u>No. of Grants</u>	<u>Total Amt. Grants</u>	<u>No. of rebates</u>	<u>Total Amt. Rebates</u>
1999	99-00				
2000	99-00				
2001	01-02				
2002	01-02				
2003	03-04				
2004	03-04				

**BMP 5 COVERAGE STATUS SUMMARY:**

Water supplier has not met one or more coverage requirements for this BMP.

## BMP 06 Coverage: High-Efficiency Washing Machine Rebate Programs

Reporting Unit:  
**Elsinore Valley MWD - Retail**

Reporting Period:  
**03-04**

### MOU Exhibit 1 Coverage Requirement

No exemption request filed

Agency indicated "at least as effective as" implementation during report period? No

An agency must meet one condition to comply with BMP 6.

Condition 1: Offer a cost-effective financial incentive for high-efficiency washers if one or more energy service providers in service area offer financial incentives for high-efficiency washers.

### Test for Condition 1

<u>Year</u>	<u>Report Period</u>	<u>BMP 6 Implementation Year</u>	<u>Rebate Offered by ESP?</u>	<u>Rebate Offered by RU?</u>	<u>Rebate Amount</u>
1999	99-00	-4	NO	NO	
2000	99-00	-3	NO	NO	
2001	01-02	-2	NO	NO	
2002	01-02	-1	YES	YES	15.00
2003	03-04		YES	YES	15.00
2004	03-04	1	YES	YES	15.00

<u>Year</u>	<u>Report Period</u>	<u>BMP 6 Implementation Year</u>	<u>No. Rebates Awarded</u>	<u>Coverage Met?</u>
1999	99-00	-4		YES
2000	99-00	-3		YES
2001	01-02	-2		YES
2002	01-02	-1	7	YES
2003	03-04		120	YES
2004	03-04	1	248	YES

### BMP 6 COVERAGE STATUS SUMMARY:

**Water supplier is meeting coverage requirements for this BMP.**

## BMP 07 Coverage: Public Information Programs

Reporting Unit:

**Elsinore Valley MWD - Retail**

Reporting Period:

**03-04**

### MOU Exhibit 1 Coverage Requirement

No exemption request filed

Agency indicated "at least as effective as" implementation during report period?

No

An agency must meet one condition to comply with BMP 7.

Condition 1: Implement and maintain a public information program consistent with BMP 7's definition.

#### Test for Condition 1

<u>Year</u>	<u>Report Period</u>	<u>BMP 7 Implementation Year</u>	<u>RU Has Public Information Program?</u>
1999	99-00	-3	YES
2000	99-00	-2	YES
2001	01-02	-1	YES
2002	01-02		YES
2003	03-04	1	YES
2004	03-04	2	YES

#### **BMP 7 COVERAGE STATUS SUMMARY:**

**Water supplier is meeting coverage requirements for this BMP.**

## BMP 08 Coverage: School Education Programs

Reporting Unit:  
**Elsinore Valley MWD - Retail**

Reporting Period:  
**03-04**

### MOU Exhibit 1 Coverage Requirement

No exemption request filed

Agency indicated "at least as effective as" implementation during report period? No

An agency must meet one condition to comply with BMP 8.

Condition 1: Implement and maintain a school education program consistent with BMP 8's definition.

#### Test for Condition 1

<u>Year</u>	<u>Report Period</u>	<u>BMP 8 Implementation Year</u>	<u>RU Has School Education Program?</u>
1999	99-00	-3	YES
2000	99-00	-2	YES
2001	01-02	-1	YES
2002	01-02		YES
2003	03-04	1	YES
2004	03-04	2	YES

#### **BMP 8 COVERAGE STATUS SUMMARY:**

**Water supplier is meeting coverage requirements for this BMP.**

## BMP 09 Coverage: Conservation Programs for CII Accounts

Reporting Unit:

**Elsinore Valley MWD - Retail**

Reporting Period:

**03-04**

### MOU Exhibit 1 Coverage Requirement

No exemption request filed

Agency indicated "at least as effective as" implementation during report period?

No

An agency must meet three conditions to comply with BMP 9.

Condition 1: Agency has identified and ranked by use commercial, industrial, and institutional accounts.

Condition 2(a): Agency is on track to survey 10% of commercial accounts, 10% of industrial accounts, and 10% of institutional accounts within 10 years of date implementation to commence.

OR

Condition 2(b): Agency is on track to reduce CII water use by an amount equal to 10% of baseline use within 10 years of date implementation to commence.

OR

Condition 2(c): Agency is on track to meet the combined target as described in Exhibit 1 BMP 9 documentation.

#### Test for Condition 1

Year	Report Period	BMP 9 Implementation Year	Ranked Com. Use	Ranked Ind. Use	Ranked Inst. Use
1999	99-00	-4	YES	YES	YES
2000	99-00	-3	YES	YES	YES
2001	01-02	-2	YES	YES	YES
2002	01-02	-1	YES	YES	YES
2003	03-04		YES	YES	YES
2004	03-04	1	YES	YES	YES

#### Test for Condition 2a

	Commercial	Industrial	Institutional
Total Completed Surveys Reported through 2004			
Credit for Surveys Completed Prior to Implementation of Reporting Databases			
Total + Credit			
CII Accounts in Base Year	602	94	70
RU Survey Coverage as % of Base Year CII Accounts			
Coverage Requirement by Year 1 of Implementation per Exhibit 1	0.5%	0.5%	0.5%
RU on Schedule to Meet 10 Year Coverage Requirement	NO	NO	NO

#### Test for Condition 2a

Performance

<u>Year</u>	<u>Report Period</u>	<u>BMP 9 Implementation Year</u>	<u>Performance Target Savings (AF/yr)</u>	<u>Performance Target Savings Coverage</u>	<u>Target Savings Coverage Requirement</u>	<u>Coverage Requirement Met</u>
1999	99-00	-4				YES
2000	99-00	-3				YES
2001	01-02	-2				YES
2002	01-02	-1				YES
2003	03-04		1	0.1%		YES
2004	03-04	1	1	0.1%	0.5%	NO

---

**Test for Condition 2c**

---

Total BMP 9 Surveys + Credit		
BMP 9 Survey Coverage		
BMP 9 Performance Target Coverage		0.1%
BMP 9 Survey + Performance Target Coverage		0.1%
Combined Coverage Equals or Exceeds Coverage Requirement?		NO

---

**BMP 9 COVERAGE STATUS SUMMARY:**

**Water supplier is meeting coverage requirements for this BMP.**

## BMP 11 Coverage: Conservation Pricing

Reporting Unit:

**Elsinore Valley MWD - Retail**

Reporting Period:

**03-04**

### MOU Exhibit 1 Coverage Requirement

No exemption request filed

Agency indicated "at least as effective as" implementation during report period?

No

An agency must meet one condition to comply with BMP 11.

Agency shall maintain rate structure consistent with BMP 11's definition of conservation pricing. Implementation methods shall be at least as effective as eliminating non-conserving pricing and adopting conserving pricing. For signatories supplying both water and sewer service, this BMP applies to pricing of both water and sewer service. Signatories that supply water but not sewer service shall make good faith efforts to work with sewer agencies so that those sewer agencies adopt conservation pricing for sewer service.

a) Non-conserving pricing provides no incentives to customers to reduce use. Such pricing is characterized by one or more of the following components: rates in which the unit price decreases as the quantity used increases (declining block rates); rates that involve charging customers a fixed amount per billing cycle regardless of the quantity used; pricing in which the typical bill is determined by high fixed charges and low commodity charges.

b) Conservation pricing provides incentives to customers to reduce average or peak use, or both. Such pricing includes: rates designed to recover the cost of providing service; and billing for water and sewer service based on metered water use. Conservation pricing is also characterized by one or more of the following components: rates in which the unit rate is constant regardless of the quantity used (uniform rates) or increases as the quantity used increases (increasing block rates); seasonal rates or excess-use surcharges to reduce peak demands during summer months; rates based upon the longrun marginal cost or the cost of adding the next unit of capacity to the system.

#### Test for Condition 1

<u>Year</u>	<u>Report Period</u>	<u>RU Employed Non Conserving Rate Structure</u>	<u>RU Meets BMP 11 Coverage Requirement</u>
1999	99-00	NO	YES
2000	99-00	NO	YES
2001	01-02	NO	YES
2002	01-02	NO	YES
2003	03-04	NO	YES
2004	03-04	NO	YES

#### BMP 11 COVERAGE STATUS SUMMARY:

**Water supplier is meeting coverage requirements for this BMP.**

## BMP 12 Coverage: Conservation Coordinator

Reporting Unit:

**Elsinore Valley MWD - Retail**

Reporting Period:

**03-04**

### MOU Exhibit 1 Coverage Requirement

No exemption request filed

Agency indicated "at least as effective as" implementation during report period?

No

Agency shall staff and maintain the position of conservation coordinator and provide support staff as necessary.

### Test for Compliance

<u>Report Year</u>	<u>Report Period</u>	<u>Conservation Coordinator Position Staffed?</u>	<u>Total Staff on Team (incl. CC)</u>
1999	99-00	YES	2
2000	99-00	YES	2
2001	01-02	YES	2
2002	01-02	YES	2
2003	03-04	YES	3
2004	03-04	YES	3

### BMP 12 COVERAGE STATUS SUMMARY:

**Water supplier is meeting coverage requirements for this BMP.**

## BMP 13 Coverage: Water Waste Prohibition

Reporting Unit:

**Elsinore Valley MWD - Retail**

Reporting Period:

**03-04**

### MOU Exhibit 1 Coverage Requirement

No exemption request filed

Agency indicated "at least as effective as" implementation during report period?

No

An agency must meet one condition to comply with BMP 13.

Implementation methods shall be enacting and enforcing measures prohibiting gutter flooding, single pass cooling systems in new connections, non-recirculating systems in all new conveyer car wash and commercial laundry systems, and non-recycling decorative water fountains.

#### Test for Condition 1

#### Agency or service area prohibits:

Year	Gutter Flooding	Single-Pass Cooling Systems	Single-Pass Car Wash	Single-Pass Laundry	Single-Pass Fountains	Other	RU has ordinance that meets coverage requirement
1999	yes	no	no	no	no	no	NO
2000	yes	no	no	no	no	no	NO
2001	yes	no	no	no	no	no	NO
2002	yes	no	no	no	no	no	NO
2003	yes	no	no	no	no	no	NO
2004	no	no	no	no	no	no	NO

#### BMP 13 COVERAGE STATUS SUMMARY:

**Water supplier has not met one or more coverage requirements for this BMP.**

## BMP 14 Coverage: Residential ULFT Replacement Programs

Reporting Unit:

### MOU Exhibit 1 Coverage Requirement

A Reporting Unit (RU) must meet one of the following conditions to be in compliance with BMP 14.

Condition 1: Retrofit-on-resale (ROR) ordinance in effect in service area.

Condition 2: Water savings from toilet replacement programs equal to 90% of Exhibit 6 coverage requirement.

An agency with an exemption for BMP 14 is not required to meet one of the above conditions. This report treats an agency with missing base year data required to compute the Exhibit 6 coverage requirement as out of compliance with BMP 14.

### Status: as of

<u>Coverage</u> <u>Year</u>	<u>BMP 14 Data</u> <u>Submitted to</u> <u>CUWCC</u>	<u>Exemption</u> <u>Filed with</u> <u>CUWCC</u>	<u>ROR</u> <u>Ordinance</u> <u>in Effect</u>	<u>Exhibit 6</u> <u>Coverage</u> <u>Req'mt</u> <u>(AF)</u>	<u>Toilet</u> <u>Replacement</u> <u>Program</u> <u>Water Savings*</u> <u>(AF)</u>
--------------------------------	---	---	--	---	---

\*NOTE: Program water savings listed are net of the plumbing code. Savings are cumulative (not annual) between 1991 and the given year. Residential ULFT count data from unsubmitted forms are NOT included in the calculation.

---

### BMP 14 COVERAGE STATUS SUMMARY:



**BMP 14 Residential ULFT Replacement Program**

1. MOU requires implementation to start by July 1, 2004.
2. Calculated ULFT replacement program water savings at the end of each reporting should be within 10% of (equal or exceed) calculated retrofit-on-resale water savings, using Exhibit 6 methodology and water savings estimates.
3. Number of toilets replaced by rebate

Year	# SFR	# MFR
2003-2004	135	4

4. A toilet retrofit-on-resale ordinance is NOT in effect.
5. Data

	SFR	MFR	Data Source
1992 Housing Stock	19729	347	Base Year Data
Average rate of natural replacement (% of remaining stock)	4	4	MOU Exhibit 6 recommendation
Average rate of housing demolition (% of remaining stock)	0	0	assumption
Estimated Housing Units with 3.5+ gpf Toilets in 1992	19729	347	conservative estimate
Average resale rate (using 2003 data)	11.1%	11.1%	CA Department of Finance & Lake Elsinore Economic Report 2004 by John Husing
Average persons per unit	3.27	3.27	US Census Bureau
Average toilets per unit	2	2	Base Year Data
Average savings per home (gpd)	41.9	59.3	MOU Exhibit 6 Tables 1 and 2

## **Total Water Savings (AF) Report**

Reporting Unit:

**Elsinore Valley MWD - Retail**

### **Estimated Water Savings from BMP Annual Report Data**

<b>BMP01:</b> Water Survey Programs for Single-Family and Multi-Family Residential Customers	<b>3</b>
<b>BMP02:</b> Residential Plumbing Retrofit	<b>1</b>
<b>BMP04:</b> Metering with Commodity Rates for all New Connections and Retrofit of Existing	<b>0</b>
<b>BMP05:</b> Large Landscape Conservation Programs and Incentives	<b>5</b>
<b>BMP06:</b> High-Efficiency Washing Machine Rebate Programs	<b>14</b>
<b>BMP09:</b> Conservation Programs for CII Accounts	<b>8</b>
<b>BMP09a:</b> CII ULFT Water Savings	<b>0</b>
<b>BMP14:</b> Residential ULFT Replacement Programs	<b>87</b>
<b>Total:</b>	<b>117</b>

**Water Savings (AFY) Detail Report for  
BMP 01: Water Survey Programs for Single-Family and Multi-Family Residential Customers**

Reporting Unit:  
Elsinore Valley MWD - Retail

Estimated Water Savings from BMP Annual Report Data

---

<b>Year</b>	<b>Water Savings (AF)</b>
1991	0
1992	0
1993	0
1994	0
1995	0
1996	0
1997	0
1998	0
1999	0
2000	0
2001	0
2002	1
2003	1
2004	1
2005	1
<b>TOTAL:</b>	<b>3</b>

# Water Savings (AFY) Detail Report for BMP 02: Residential Plumbing Retrofit

Reporting Unit:  
Elsinore Valley MWD - Retail

## Estimated Water Savings from BMP Annual Report Data

---

Year	Gross Water Savings (AFY)	Water Savings (AFY) Net of Plumbing Code
1991	0	0
1992	0	0
1993	0	0
1994	0	0
1995	0	0
1996	0	0
1997	0	0
1998	0	0
1999	0	0
2000	0	0
2001	0	0
2002	0	0
2003	0	0
2004	0	0
2005	0	0
<b>TOTALS:</b>	<b>1</b>	<b>1</b>

---

**Water Savings (AFY) Detail Report for  
BMP 04: Metering with Commodity Rates for all New Connections  
and Retrofit of Existing**

Reporting Unit:  
Elsinore Valley MWD - Retail

Estimated Water Savings from BMP Annual Report Data

---

Year	Water Savings (AF)
1991	0
1992	0
1993	0
1994	0
1995	0
1996	0
1997	0
1998	0
1999	0
2000	0
2001	0
2002	0
2003	0
2004	0
2005	0
<b>TOTAL:</b>	<b>0</b>

# Water Savings (AFY) Detail Report for BMP 05: Large Landscape Conservation Programs and Incentives

Reporting Unit:  
Elsinore Valley MWD - Retail

## Estimated Water Savings from BMP Annual Report Data

---

Year	Water Savings (AF)
1991	0
1992	0
1993	0
1994	0
1995	0
1996	0
1997	0
1998	0
1999	0
2000	0
2001	0
2002	1
2003	1
2004	1
2005	1
<b>TOTAL:</b>	<b>5</b>

# Water Savings (AFY) Detail Report for BMP 06: High-Efficiency Washing Machine Rebate Programs

Reporting Unit:  
Elsinore Valley MWD - Retail

## Estimated Water Savings from BMP Annual Report Data

---

Year	Gross Water Savings (AFY)	Water Savings (AFY) Net of Program Freeridership Effects
1991	0	0
1992	0	0
1993	0	0
1994	0	0
1995	0	0
1996	0	0
1997	0	0
1998	0	0
1999	0	0
2000	0	0
2001	0	0
2002	0	0
2003	2	2
2004	6	5
2005	6	5
<b>TOTAL:</b>	<b>14</b>	<b>12</b>

---

# Water Savings (AFY) Detail Report for BMP 09: Conservation Programs for CII Accounts

Reporting Unit:  
Elsinore Valley MWD - Retail

## Estimated Water Savings from BMP Annual Report Data

---

Year	Water Savings (AF)
1991	0
1992	0
1993	0
1994	0
1995	0
1996	0
1997	0
1998	0
1999	0
2000	0
2001	0
2002	0
2003	5
2004	3
2005	0
<b>TOTAL:</b>	<b>8</b>

---

# Water Savings (AFY) Detail Report for BMP 09a: CII ULFT Water Savings

Reporting Unit:  
Elsinore Valley MWD - Retail

## Estimated Water Savings from BMP Annual Report Data

---

Year	Gross Water Savings (AFY)	Water Savings (AFY) Net of Plumbing Code	Water Savings (AFY) Net of Plumbing Code and Program Freeridership Effects
1991	0	0	0
1992	0	0	0
1993	0	0	0
1994	0	0	0
1995	0	0	0
1996	0	0	0
1997	0	0	0
1998	0	0	0
1999	0	0	0
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	0	0	0
2004	0	0	0
2005	0	0	0
<b>TOTALS:</b>	<b>0</b>	<b>0</b>	<b>0</b>

---

# Water Savings (AFY) Detail Report for BMP 14: Residential ULFT Replacement Programs

Reporting Unit:  
Elsinore Valley MWD - Retail

## Estimated Water Savings from BMP Annual Report Data

Year	Gross Water Savings (AFY)	Water Savings (AFY) Net of Plumbing Code	Water Savings (AFY) Net of Plumbing Code and Program Freeridership Effects
1991	0	0	0
1992	0	0	0
1993	0	0	0
1994	0	0	0
1995	0	0	0
1996	0	0	0
1997	0	0	0
1998	0	0	0
1999	0	0	0
2000	0	0	0
2001	4	4	2
2002	14	14	7
2003	20	20	10
2004	24	23	11
2005	24	22	11
<b>TOTALS:</b>	<b>87</b>	<b>82</b>	<b>41</b>

**Appendix E**

**EVMWD Drought Shortage Ordinances 78 and 81**

**THIS PAGE INTENTIONALLY LEFT BLANK**

Ordinance No. 78

AN ORDINANCE OF THE BOARD OF DIRECTORS OF THE  
ELSINORE VALLEY MUNICIPAL WATER DISTRICT FINDING THE  
NECESSITY OF, AND PROVIDING FOR THE IMPLEMENTATION  
AND ENFORCEMENT OF MANDATORY WATER CONSERVATION  
MEASURES TO MITIGATE EFFECTS OF THE 1991 DROUGHT

WHEREAS, California is in the fifth consecutive year of below normal precipitation, and reduced supplies in storage will cause shortfalls in imported water deliveries to the region unless appropriate conservation measures are implemented; and

WHEREAS, more than 50% of the District's total water supply is imported from the Metropolitan Water District of Southern California; and

WHEREAS, on Tuesday, January 8, 1991 the Board of Directors of the Metropolitan Water District of Southern California adopted a Stage III drought response effective February 1, 1991, that sets a total water savings goal of 430,000 acre-feet for an overall reduction in water consumption of 17% in fiscal year '90-91; and

WHEREAS, Stage III of MWD's Incremental Interruption and Conservation Plan sets target water savings goals of 30% for interruptible deliveries and 10% for firm deliveries for the remainder of FY '90-91; and

WHEREAS, the Metropolitan Water District of Southern California has called upon its member agencies and subagencies to comply with its mandatory water conservation program to mitigate a water supply shortfall and related impacts;

WHEREAS, the Elsinore Valley Municipal Water District has the power and the authority to adopt and enforce water conservation measures within its district boundaries pursuant to Water Code Sections 350 et seq., 375 et seq., and 71640 et seq.; and

NOW THEREFORE the Board of Directors of Elsinore Valley Municipal Water District does hereby resolve, determine and order as follows:

Section 1. Definitions.

The following terms are defined for the purposes of the Ordinance:

- (a) "Emergency supply shortage" means any water shortage caused by an earthquake, loss of electrical power, pipeline breakage, or any other threatened or existing water shortage caused by a disaster or facility failure which results in District inability to meet the water demands of its customers.
- (b) "Waste" means any unreasonable or nonbeneficial use of water, or any unreasonable method of use of water, including, but not limited to, the specific uses prohibited and restricted by this Ordinance as hereinafter set forth.
- (c) "Customer" means any person, firm, partnership, association, corporation, or local political entity using water obtained from the water system of Elsinore Valley Municipal Water District.
- (d) "Water" means water supplied by Elsinore Valley Municipal Water District.
- (e) "New Construction" means any construction of a previously non-existent structure requiring a discretionary or ministerial permit issued after the effective date of this Ordinance. "New Construction" shall include additions, modifications, or structural improvements which add square footage to floor space of existing structures.
- (f) "IICP," or *Incremental Interruption and Conservation Plan*, is the water conservation contingency plan adopted by the Metropolitan Water District of Southern California.
- (g) "MWD" is an abbreviated term for the Metropolitan Water District of Southern California.

Section 2. Purpose and Scope.

- (a) The purpose of this Ordinance is to provide a mandatory water conservation plan to minimize the effect of a shortage of water supplies on the customers of the District during a water shortage emergency. Pursuant to Water Code Sections 350 et seq., 375 et seq., and 71640 et seq., The Board of Directors is authorized to declare a water shortage emergency and adopt water conservation measures to (1) protect the

health, safety, and welfare of the inhabitants and customers of the District, (2) assure the maximum beneficial use of the water supplies of the District, and (3) ensure that there will be sufficient water supplies to meet the basic needs of human consumption, sanitation and fire protection.

- (b) This Ordinance adopts regulations to implement a mandatory water conservation plan consistent with the goals of Metropolitan Water District of California's *Incremental Interruption and Conservation Plan*.
- (c) This Ordinance shall remain in effect until the Board of Directors finds and declares by resolution that the provisions of the Ordinance are no longer applicable to existing water supply conditions and until the supply of water available for distribution within the District's service area has been replenished or augmented.

#### Section 3. Declaration of Policy.

As a result of five consecutive years of drought which has depleted water reserves normally held in storage for emergency use, it is hereby declared that the general welfare requires that the existing water resources available to the District be put to the maximum beneficial use to the extent to which they are capable, and that waste or unreasonable use be prevented, and that the conservation of such water be practiced with a view to the reasonable and beneficial use thereof in the interest of the people of the District and for the public welfare.

#### Section 4. Authorization to Implement Water Conservation Ordinance.

- (a) The Board of Directors, after compliance with the notice and hearing procedures of Water Code Sections 351 and 352, and 375 et seq., may declare a Water Emergency as set forth in the Water Conservation Ordinance whenever it finds and determines that the ordinary demands and requirements of water consumers are either under threat of being insufficient to satisfy, or cannot be satisfied, without depleting the water supply of the District to the extent that there would be insufficient water for human consumption, sanitation and fire protection (Authority: Water Code, Section 355).
- (b) The Board of Directors is authorized to implement the provisions of this Ordinance, following the public hearing required by sub-Section (c), upon its determination that such implementation is necessary to protect the public welfare and safety.

- (c) Prior to implementation of this Ordinance, the Board of Directors shall hold a public hearing for the purpose of determining whether a shortage exists and which measures provided by this Ordinance should be implemented. Notice of the time and place of the public hearing shall be published not less than ten (10) days before the hearing in a newspaper of general circulation within the District.
  
- (d) The Board of Directors shall issue its determination of shortage and corrective measures by Ordinance effective immediately upon adoption and by public proclamation published in a daily newspaper of general circulation within the District. Any prohibitions on the use of water shall become effective immediately upon adoption. Any provisions requiring curtailment in the use of water shall become effective within the first full billing period commencing on or after the date of such adoption.

Section 5. Findings.

The Board of Directors finds, determines and declares that the following conditions exist:

1. Factoring for growth and historic water consumption for the area, additional imported water supplies will be needed to meet increasing seasonal demand;
  
2. Without regional water conservation efforts, imminent water shortages in State Water Project and MWD's Colorado River supplies and critically low levels of stored water supplies throughout the state will affect the District's ability to serve its customers;
  
3. The regulations set forth herein are necessary and proper to manage and protect the water supply for human consumption, sanitation and fire protection in anticipation of short-term water supply reductions or in the event of a water emergency condition.

Section 6. General Prohibition.

No customer of the District shall make, cause, use, or permit the use of water from the District in a manner contrary to any provision of this Ordinance or in an amount in excess of that use permitted by any curtailment provisions then in effect pursuant to action taken by the governing board in accordance with the provisions of this Ordinance.

Section 7. Determination of Water Condition Stages I, II and III.

The General Manager, after consultation with the Board of Directors, is hereby authorized and directed to determine when the water supply conditions prevailing in the District meet the Stage I through Stage III criteria set forth in the water conservation Ordinance.

Wherever appropriate, conservation measures and target reduction goals will be consistent with regional policies set by the Metropolitan Water District of Southern California and Western Municipal Water District, which wholesale imported water to the District.

*Retail Water User Measures*(a) **STAGE I. Voluntary Compliance—Water Watch**

Allows for voluntary compliance and indicates the possibility exists that the District may not be able to meet all the demands of its customers. In compliance with MWD's *Incremental Interruption and Conservation Plan*, establishes a voluntary reduction goal of 10% for firm deliveries and an unspecified voluntary conservation reduction goal in non-firm deliveries.

*Elements of Stage I for retail water users:*

- 1) Use of running water to wash driveways, sidewalks, patios, and other paved areas is prohibited, except as required for sanitary purposes;
- 2) Failure to repair a controllable leak is defined as "waste of water" and is prohibited;
- 3) Parks, school grounds, and golf courses shall be watered before 11:00 A.M. or after 5:00 P.M., with the exception of those using reclaimed water;
- 4) Irrigation of lawns and landscaping shall occur before 11:00 A.M. or after 4:00 P.M.;
- 5) Failure to prevent excessive runoff from irrigation activities is prohibited;
- 6) Sprinklers and irrigation systems shall be adjusted to avoid overspray, runoff, and waste. Watering on windy days is to be avoided;

- 7) Using a hand-held bucket or hose equipped with an automatic shut-off nozzle shall be required for car washing, unless car washing takes place at a commercial car wash or service station which utilizes reclaimed or recycled water;
- 8) Installation of water saving devices, such as low flow shower heads and faucet aerators, is encouraged;
- 9) Selection of low-water-demand shrubs, groundcovers and trees for all new landscaping is strongly encouraged;
- 10) Limitation of turf areas except in active areas of residential yards or public landscapes is encouraged. Use of turfgrass in medians, dividers and in other non-active areas is discouraged;

(b) **STAGE II. Mandatory Compliance—Water Alert**

Requires mandatory compliance during periods when the probability exists that the District will not meet all the demands of its customers. The following restrictions shall apply to all persons. In compliance with MWD's *Incremental Interruption and Conservation Plan*, establishes a mandatory reduction goal of 5% for firm deliveries and a 20% conservation reduction in non-firm deliveries from the base year.

***Elements of Stage II for retail water users:***

The restrictions listed in Stage I shall remain in effect with the additions below:

- 1) Using movable or permanent sprinkler systems for lawn irrigation and watering of plants, trees, shrubs or other landscaped areas is prohibited between 6:00 A.M. and 6:00 P.M.. Sprinkler operation shall be permitted no more than once every third (3<sup>rd</sup>) day. However, irrigation of lawns, gardens, landscaped areas, trees, shrubs or other plants is permitted at anytime if:
  - a. A hand-held hose is used, or
  - b. A hand-held bucket is used, or
  - c. A drip irrigation system is used, or
  - d. Reclaimed wastewater is used.

EXCEPTION: Commercial nurseries, commercial sod farmers and similarly situated establishments are exempt from Stage II irrigation scheduling restrictions, but will be required to follow all other restrictions to curtail all nonessential water use;

- 2) Washing of motor vehicles, trailers, boats and other kinds of mobile equipment shall be done only with a hand-held bucket or hose equipped with a positive shutoff nozzle for quick rinses, except where washing is done on the immediate premises of a commercial car wash or service station using recycled water.

EXCEPTION: Such washings are exempted from these regulations where the health, safety and welfare of the public is contingent upon frequent vehicle cleaning, such as garbage trucks and vehicles to transport food and perishables;

- 3) The filling, refilling or adding of water to uncovered outdoor swimming pools, wading pools or spas is prohibited except on designated irrigation days after 6:00 P.M. and before 6:00 A.M.;
- 4) The use of water for irrigation of golf courses is permissible after 5:00 P.M. and before 10:00 A.M.; however, the irrigation of golf courses utilizing reclaimed wastewater shall not be subject to irrigation prohibitions;
- 5) No new construction services or meters will be issued;
- 6) All restaurants, cafes, and other public food service establishments are prohibited from serving drinking water unless specifically requested by their customers;
- 7) The operation of any exterior ornamental fountain or similar structure is prohibited.
- 8) Water shall not be used to wash down sidewalks, driveways, parking areas, tennis courts, patios or other paved areas, except to alleviate immediate fire or sanitation hazards or unless reclaimed wastewater is used.

(c) **STAGE III. Mandatory Compliance—Water Warning**

Upon implementation by the District, the following restrictions shall apply to all persons. In compliance with MWD's *Incremental Interruption and Conservation Plan*, establishes a mandatory reduction goal of 10% for firm deliveries and a 30% conservation reduction in non-firm deliveries from the base year.

*Elements of Stage III:*

Measures addressed previously remain in effect with the following additions:

- 1) All sprinkler irrigation of vegetation shall occur only after 6:00 P.M. and before 6:00 A.M.. Sprinkler operation shall be permitted no more than once every fourth (4<sup>th</sup>) day. However, irrigation of lawns, gardens, landscaped areas, trees, shrubs or other plants is permitted on odd/even calendar days corresponding to the last two digits of a service address, provided:
  - a. A hand-held hose is used, or
  - b. A hand-held bucket is used, or
  - c. A drip irrigation system is used, or
  - d. Reclaimed wastewater is used.
- 2) The washing of private automobiles, trucks, trailers, boats, and other kinds of mobile equipment, except in the immediate interest of the public health, safety and welfare, shall be permitted only on the immediate premises of commercial car washes or commercial service stations using recycled water;
- 3) The filling, refilling or adding of water to uncovered outdoor swimming pools, wading pools or spas is prohibited.
- 4) The watering of all golf course areas, except greens, is prohibited unless done with reclaimed wastewater. Irrigation of golf greens shall occur only between the hours of 11:00 P.M. and 6:00 A.M. unless done with reclaimed wastewater;

- 5) Use of water from fire hydrants shall be limited to fire fighting, related activities and/or other activities necessary to maintain the health, safety and welfare of the citizenry;
- 6) Commercial nurseries, golf courses and other water-dependent industries shall be prohibited from watering lawn, landscaping and other turf areas more often than every third (3<sup>rd</sup>) day. Such watering shall occur between the hours of 6:00 P.M. and 6:00 A.M. only ; except that there shall be no restriction on watering using reclaimed water.

Section 8. Declaration of Water Condition Stage IV—Water Shortage Emergency.

- a) **System Breakage or Failure.** The General Manager is authorized and directed to declare a Stage IV Water Emergency whenever, in his sole discretion, there has been a breakage or failure of a dam, pump, pipeline or damage to facilities causing an immediate emergency. In the event of such an emergency, the General Manager shall notify Board members of the need for Stage IV emergency measures within a reasonable period.
- b) **Water Supply Shortage.** The Board of Directors, after compliance with the notice and hearing procedures of Water Code Sections 351 and 352, may declare a Stage IV Water Emergency as set forth in the Water Conservation Ordinance whenever it finds and determines that the ordinary demands and requirements of water consumers cannot be satisfied without depleting the water supply of the District to the extent that there would be insufficient water for human consumption, sanitation and fire protection (Authority: Water Code, Section 355). The regulations and restrictions under a Stage IV Water Shortage Emergency shall remain in full force and effect during the period of the emergency and until the supply of water available for distribution within the District has been replenished or augmented, all as determined by the Board of Directors (Authority: Water Code, Section 355).
- (c) **STAGE IV. Mandatory Compliance—Water Emergency**  
Upon implementation by the District, the following restrictions shall apply to all persons. In compliance with MWD's *Incremental Interruption and Conservation Plan*, establishes a mandatory reduction goal of 15% for firm deliveries and a 40% conservation reduction in non-firm deliveries from the base year.

*Elements of Stage IV include:*

Includes all measures within prior stages and the following additional measures:

- 1) All sprinkler irrigation of vegetation shall be allowed only between the hours of 6:00 P.M. and 6:00 A.M., unless done with reclaimed water. Sprinkler operation shall be permitted no more than once every fifth (5<sup>th</sup>) day. However, irrigation of lawns, gardens, landscaped areas, trees, shrubs or other plants is permitted on odd/even days provided:
  - a. a hand-held hose is used, or
  - b. a hand-held bucket is used, or
  - c. a drip irrigation system is used, or
  - d. reclaimed wastewater is used.
- 2) Commercial nurseries, golf courses, and water-dependent industries shall be prohibited from watering lawn, landscaping and other turf areas more often than every third (3<sup>rd</sup>) day between the hours of 6:00 P.M. and 6:00 A.M.; except there shall be no restriction on watering using reclaimed water;
- 3) The washing of private automobiles, trucks, trailers, boats, and other types of mobile equipment shall be permissible only at commercial car washes using recycled water;
- 4) The watering of all golf course areas, except greens, is prohibited unless done with reclaimed wastewater. Irrigation of golf greens shall occur only between the hours of 6:00 P.M. and 6:00 A.M. unless done with reclaimed wastewater;
- 5) Use of water from fire hydrants shall be limited to fire fighting and/or other activities immediately necessary to maintaining the health, safety and welfare of the citizenry;
- 6) Water shall not be used to wash down sidewalks, driveways, parking areas, except to alleviate immediate fire or sanitation hazards, or unless done with reclaimed wastewater;

- 7) No water shall be used for evaporative air conditioning purposes.

Section 9. Wholesale Water Users.

Elsinore Valley Municipal Water District serves wholesale water to retailers within its service area, including the Elsinore Water District and the Farm Mutual Water Company. The District's conservation plan for wholesalers consists of a direct pass through of MWD's IICP penalty payments for deliveries greater than adjusted targets for each wholesale entity. Target reduction goals for each stage of the IICP program are illustrated in the table below:

STAGE	REDUCTION IN FIRM DELIVERIES
I	Voluntary Goal 10%
II*	5%
III*	10%
IV*	15%
V*	20%
* Indicates Mandatory Compliance	

The monthly procedure for implementing MWD's IICP with each wholesale customer will be as follows:

1. The base allocation for FY '90-91 will be the actual amount of water delivered in FY '89-90 less the target reduction goal for the stage currently in effect as set by the Elsinore Valley Municipal Water District.
2. The difference between the FY '89-90 target amount and the actual amount delivered during the month will be determined.
3. If the actual usage is greater than the FY '89-90 target amount for the same monthly period, a disincentive charge, calculated at the amount of \$394 per acre foot (or the prevailing rate and penalty factor set by MWD), will be added to the regular bill.

These wholesale entities are hereby urged to adopt mandatory conservation measures within their boundaries to reduce water consumption commensurate with the target

reduction goals adopted by the District, and to take immediate steps to inform their retail customers of the urgent need to conserve and protect water because of a critical shortage in the supplemental water supplies for their area.

Section 10. Retail Agricultural Water Users.

Elsinore Valley Municipal Water District serves agricultural water users within its service area, including the Temescal Division. Agricultural users are subject to the terms and conditions of MWD's interruptible water program, which was designed to provide supplemental imported water at a reduced cost subject to availability. As MWD restricts the availability of interruptible water, the District's conservation plan for agricultural water users consists of a direct pass through of MWD's IICP penalty payments for deliveries greater than adjusted reduction targets for each agricultural customer.

Target reduction goals for each stage of the IICP program are illustrated in the table below:

STAGE	INTERRUPTIBLE REDUCTION GOALS
I	Non-Specific Voluntary Savings
II*	20%
III*	30%
IV*	40%
V*	50%
* Indicates Mandatory Compliance	

The monthly procedure for implementing MWD's IICP with each agricultural customer will be as follows:

1. The base allocation for FY '90-91 will be the actual amount of water delivered in FY '89-90 less the target reduction goal for the stage currently in effect by MWD.
2. The difference between the FY '89-90 target amount and the actual amount delivered during the month will be determined.
3. If the actual usage is greater than the FY '89-90 target amount for the same monthly period, a disincentive charge, calculated at the amount of \$394 per acre

foot (or the prevailing rate and penalty factor set by MWD), will be added to the regular bill.

Section 11. Moratorium on Service Commitments and Connections.

Effective at such time as may be required to ensure there will be sufficient water supplies to meet the basic needs of human consumption, sanitation and fire protection and to protect the health, safety and welfare of the inhabitants and customers of EVMWD, the District shall not make any oral or written commitments to provide new retail service and shall not approve the installation of a turnout to any new wholesale customer, until otherwise determined by this Board. Any such commitment shall be without authority from this Board and shall be void and unenforceable. Furthermore, the District's wholesale customers are urged to impose a temporary moratorium on new service commitments.

Section 12. District Actions.

The Board hereby directs staff to take immediate steps to implement water conservation measures and to intensify its public information and education programs accordingly:

1. Immediately notify all retail water users of the conservation measures required by this Ordinance;
2. Immediately provide all wholesale customers with a copy of the Ordinance, together with a letter signed by the General Manager explaining the Board's request that wholesale customers adopt similar conservation measures;
3. Develop emergency water management plans for consideration by the Board for use in the event more stringent mandatory conservation measures are required.

Section 13. Relief from Compliance.

- (a) A customer may file an application for relief from any provisions of this Ordinance. The General Manager shall develop such procedures as he considers necessary to resolve such applications and shall, upon the filing by a customer of an application for relief, take such steps as he or she deems reasonable to resolve the application for relief. A customer shall have the right to appeal the General Manager's decision by writing the Board of Directors. The decision of the Board of Directors shall be final. The General Manager may delegate his duties and responsibilities under this section as appropriate.

- (b) The application for relief may include a request that the customer be relieved, in whole or in part, from the water use curtailment provisions of sections 6, 7(a)–(c), and 8(c).
  
- (c) In determining whether to grant relief, and the nature of any relief, the General Manager shall take into consideration all relevant factors including, but not limited to:
  - 1) Whether any additional reduction in water consumption will result in unemployment;
  - 2) Whether additional members have been added to the household;
  - 3) Whether any additional landscaped property has been added to the property since the corresponding billing period of the prior calendar year;
  - 4) Changes in vacancy factors in multi-family housing;
  - 5) Increased number of employees in commercial, industrial, and governmental offices;
  - 6) Increased production requiring increased process water;
  - 7) Water uses during new construction;
  - 8) Adjustments to water use caused by emergency health or safety hazards;
  - 9) First filling of a permit-constructed swimming pool;
  - 10) Water use necessary for reasons related to family illness or health; and
  - 11) Livestock on property.
  
- (d) In order to be considered, an application for relief must be filed with the District within (15) fifteen days from the date the provision from which relief is sought becomes applicable to the applicant. No relief shall be granted unless the customer shows that he or she has achieved the maximum practical reduction in water consumption other than in the specific areas in which relief is being sought. No relief shall be granted to any customer who, when requested by the General Manager, fails to provide any information necessary for resolution of the customer's application for relief.

Section 14. Failure to Comply.

Violation by any customer of the water use prohibitions of Section 6, 7(a)–(c), and 8(c), shall be penalized as follows:

a) **First Violation—Notice of Non-Compliance.** The General Manager is authorized and directed to issue a written warning notice of non-compliance to any District customer who, in the judgment of the General Manager, has failed or refused in a significant way to comply with the provisions of the water conservation ordinance. Any such warning notice shall specify the time, place and manner of non-compliance and shall specify a reasonable period to achieve compliance. Any warning notice of non-compliance shall be directed to the customer of record for the premises where the non-compliance was observed. Delivery may be by regular mail or by personal delivery with a declaration of delivery returned to the General Manager.

b) **Second Violation—Fine, Flow Restriction, or Water Service Shutoff.**

1) For a second violation by any customer of the water use curtailment provisions of Sections 7(a)–(c), or 8(c), a surcharge shall be imposed in an amount equal to the percentage of the customer’s most recent water bill, excluding sewer charges, for the stage in effect upon the occurrence of the most recent violation. The penalty surcharge for each stage is shown below:

Stage II.....	25%
Stage III.....	50%
Stage IV.....	75%

2) If a water customer fails or refuses to comply with the requirements of a warning notice of non-compliance issued according to sub-Section (a) of Section 11, or if the water customer repeats the infraction noted in a prior warning notice of non-compliance, the General Manager has discretionary authority to provide for a flow-restricting device to be installed at the meter to minimize water availability to the customer's service address. If installation of a flow restrictor is infeasible, impractical or is unlikely to induce compliance with the water conservation ordinance, the General Manager may authorize a shutoff of service to the premises involved (Authority: Water Code Sections 377 and 35423).

c) **Referral of Misdemeanor Charges.** When warranted, the General Manager may refer evidence of non-compliance to the District Attorney of Riverside County

with a request for misdemeanor prosecution as authorized by Water Code Section 377 and/or Section 35423. Pursuant to Water Code Section 377, any conviction resulting from a violation of a water conservation program restriction, prohibition or requirement published in this Ordinance shall be punishable by imprisonment in the County jail for not more than thirty (30) days or by fine not exceeding one thousand dollars (\$1,000), or both.

Section 15. Hearing Regarding Violations.

- (a) Any customer receiving notice of a second or subsequent violation of sections 6, 7(a)-(c), or 8(c) shall have a right to a hearing by the General Manager of the District within (15) fifteen days of mailing or other delivery of the notice of violation.
- (b) The customer's timely written request for a hearing shall automatically stay installation of a flow-restricting device on the customer's premises until the General Manager renders his decision.
- (c) The customer's timely written request for a hearing shall not stay the imposition of a surcharge unless within the time period to request a hearing, the customer deposits with the District money in the amount of any unpaid surcharge due. If it is determined that the surcharge was wrongly assessed, the District will refund any money deposited to the customer.
- (d) The decision of the General Manager may be appealed to the Board of Directors, whose decision shall be final, except for judicial review.
- (e) The General Manager may delegate his duties and responsibilities under this section as appropriate.

Section 16. Additional Water Shortage Measures—Pricing Incentives, Disincentives, and Alternative Measures.

The Board of Directors may order implementation of alternative water conservation measures in addition to those set forth in Sections 7 and 8. The need for water rate incentive or disincentive pricing to achieve target water conservation goals may also be taken into consideration by the Board of Directors at any time it is determined that existing measures may be insufficient to achieve target reductions. Such alternative water

conservation measures or pricing incentives/disincentives shall be implemented in the manner provided in Section 4(c).

Section 17. Incompatible Provisions.

To the extent any provision of this ordinance is incompatible with or at variance with any prior adopted ordinance or resolution, the provisions of this ordinance shall take precedence, and all prior ordinance shall be interpreted to harmonize with and not change the provisions of this Ordinance.

Section 18. Severability.

If any section, subsection, paragraph, sentence, clause, phrase or word of this Ordinance is declared by a court of competent jurisdiction, adjudicated to a final determination, to be void, this Board of Directors finds that said voided part is severable, and that this Board of Directors would have adopted the remainder of this Ordinance without the severed and voided part, and that the remainder of this Ordinance shall remain in full force and effect.

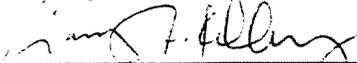
Section 19. Public Health and Safety Not to be Affected.

Nothing in this ordinance shall be construed to require the District to curtail the supply of water to any customer when such water is required by that customer to maintain an adequate level of public health and safety.

Section 20. Exemption from California Environmental Quality Act.

The Board of Directors hereby determines that this Ordinance is exempt from review under the California Environmental Quality Act (California Public Resources Code Section 21080 (b) {4} et seq.) because it is an action taken to mitigate a water shortage emergency. The Board of Directors hereby directs the General Manager or his designee to prepare and file a Notice of Exemption as soon as possible following adoption of this Ordinance.

APPROVED, ADOPTED AND SIGNED this 6th day of February, 1991.

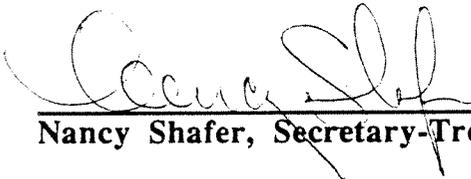
  
\_\_\_\_\_  
GARY KELLEY, President of the Board of Directors  
Elsinore Valley Municipal Water District

ATTEST

  
\_\_\_\_\_  
NANCY SHAFER, Secretary of the Board of Directors  
Elsinore Valley Municipal Water District

I, NANCY SHAFER, Secretary-Treasurer of the Board of Directors of Elsinore Valley Municipal Water District certify that the foregoing is a full, true and correct copy of ORDINANCE NO. 78 adopted by said Board at a Special Meeting held February 6, 1991 by the following roll call vote:

AYES: Shafer, Bryant, Kelley, Jeffries, Attridge  
NOES: None  
ABSENT: None  
ABSTAIN: None

  
\_\_\_\_\_  
Nancy Shafer, Secretary-Treasurer

Ordinance No. 81

AN ORDINANCE OF THE BOARD OF DIRECTORS OF THE ELSINORE VALLEY MUNICIPAL WATER DISTRICT FINDING THE NECESSITY OF, AND PROVIDING FOR THE IMPLEMENTATION AND ENFORCEMENT OF MANDATORY WATER CONSERVATION MEASURES TO MITIGATE EFFECTS OF THE 1991 DROUGHT AND AMENDING ORDINANCE NO. 79 TO PROVIDE IN PART FOR THE RESCISSION OF THE EXISTING MORATORIUM ON NEW SERVICE CONNECTIONS

WHEREAS, California is in the fifth consecutive year of below normal precipitation, and reduced supplies in storage will cause shortfalls in imported water deliveries to the region unless appropriate conservation measures are implemented; and

WHEREAS, more than 60% of the Elsinore Valley Municipal Water District's ("District") total water supply is imported from the Metropolitan Water District of Southern California ("MWD"); and

WHEREAS, on Tuesday, January 8, 1991 the Board of Directors of MWD adopted a Stage III drought response effective February 1, 1991, that sets a total water savings goal of 430,000 acre-feet for an overall reduction in water consumption of 17% in fiscal year '90-91; and

WHEREAS, Stage III of MWD's Incremental Interruption and Conservation Plan sets target water savings goals of 30% for interruptible deliveries and 10% for firm deliveries for the remainder of FY '90-91 and imposes economic penalties for failure to meet such goals; and

WHEREAS, the MWD has called upon its member agencies and subagencies to comply with its mandatory water conservation program to mitigate a water supply shortfall and related impacts; and

WHEREAS, the District has the power and the authority to adopt and enforce water conservation measures within its district boundaries pursuant to Water Code Sections 350 et seq., 375 et seq., and 71640 et seq.; and

WHEREAS, the Board of Directors of the District ("Board of Directors") adopted Ordinance No. 78 on February 6, 1991, which makes the finding of a water shortage emergency and implements a mandatory water conservation plan ("Plan") and continues in full force and effect, as amended and set forth herein; and

WHEREAS, on February 6, 1991, the District's General Manager, in consultation with the District's Board of Directors, declared and implemented Stage III of the Plan and adopted a sixty (60) day moratorium on new service connections; and

WHEREAS, on April 9, 1991, MWD implemented Stage V of its Incremental Interruption and Conservation Plan, which requires its member agencies to achieve a minimum reduction of fifty percent (50%) in the use of water for interruptible deliveries and twenty

percent (20%) for firm deliveries and imposes economic penalties for failure to meet such goals; and

WHEREAS, on March 6, 1991, the Board of Directors adopted Ordinance No. 79 which modified the moratorium on new service connections and adopted a formal appeals procedure; and

WHEREAS, due to the reduction in supply, the District currently has a water supply deficit in that it has insufficient supply for the ordinary demands and requirements of the District's existing consumers, including sufficient water for human consumption, sanitation and fire protection, but the recent rain has decreased the water supply deficit to allow some new connections without jeopardizing the public health, safety and welfare.

NOW THEREFORE the Board of Directors of Elsinore Valley Municipal Water District does hereby resolve, determine and order as follows:

Section 1. Definitions.

The following terms are defined for the purposes of the Ordinance:

- (a) "Board" means the Board of Directors of the Elsinore Valley Water District.
- (b) "Emergency supply shortage" means any water shortage caused by an earthquake, loss of electrical power, pipeline breakage, or any other threatened or existing water shortage caused by a disaster or facility failure which results in District inability to meet the water demands of its customers.
- (c) "District" means the Elsinore Valley Municipal Water District.
- (d) "Waste" means any unreasonable or nonbeneficial use of water, or any unreasonable method of use of water, including, but not limited to, the specific uses prohibited and restricted by this Ordinance as hereinafter set forth.
- (e) "Customer" means any person, firm, partnership, association, corporation, or local political entity using water obtained from the water system of the District.
- (f) "Water" means water supplied by the District.
- (e) "New Construction" means the construction of a previously non-existent structure requiring a discretionary or

ministerial permit issued after the effective date of this Ordinance.

(f) "IICP" means the Incremental Interruption and Conservation Plan adopted by MWD.

(g) "MWD" means the Metropolitan Water District of Southern California.

Section 2. Purpose and Scope.

(a) The purpose of this Ordinance is to provide a mandatory water conservation plan to minimize the effect of a shortage of water supplies on the customers of the District during a water shortage emergency. Pursuant to Water Code Sections 350 et seq., 375 et seq., and 71640 et seq., the Board of Directors is authorized to declare a water shortage emergency and adopt water conservation measures to (1) protect the health, safety, and welfare of the inhabitants and customers of the District, (2) assure the maximum beneficial use of the water supplies of the District, and (3) ensure sufficient water supplies to meet the basic needs of human consumption, sanitation and fire protection.

- (b) This Ordinance adopts regulations to implement a mandatory water conservation plan consistent with the goals of MWD's IICP and projected water supply availability.
  
- (c) This Ordinance shall remain in effect until the Board of Directors finds and declares by ordinance that the provisions of this Ordinance are no longer applicable to existing water supply conditions and the supply of water available for distribution within the District's service area has been replenished or augmented.

Section 3. Authorization to Implement Water Conservation Ordinance.

- (a) The Board of Directors, after compliance with the notice and hearing procedures of Water Code Sections 351 and 352, and 375 et seq., may declare a water emergency as set forth in this Ordinance whenever it finds and determines that the ordinary demands and requirements of water consumers are either under threat of being insufficient to satisfy, or cannot be satisfied, without depleting the water supply of the District to the extent that there would be insufficient water for human consumption, sanitation and fire protection.
  
- (b) The Board of Directors is authorized to implement the provisions of this Ordinance, following the public hearing

required by sub-Section (c), upon its determination that such implementation is necessary to protect the public welfare and safety.

- (c) Prior to implementation of this Ordinance, the Board of Directors shall hold a public hearing for the purpose of determining whether a shortage exists and which measures provided by this Ordinance should be implemented. Notice of the time and place of the public hearing shall be published not less than ten (10) days before the hearing in a newspaper of general circulation within the District.
  
- (d) The Board of Directors shall issue its determination of shortage and corrective measures by Ordinance effective immediately upon adoption and by public proclamation published in a daily newspaper of general circulation within the District. Any prohibitions on the use of water shall become effective immediately upon adoption. Any provisions requiring curtailment in the use of water shall become effective at the start of the first full billing period commencing on or after the date of such adoption.

Section 4. Findings.

The Board of Directors finds that a drought emergency and existing water shortage exists which requires the enactment and enforcement of this Ordinance. The Board of Directors finds that the following conditions exist:

1. Factoring for growth and historic water consumption for the area, additional imported water supplies will be needed to meet increasing seasonal demand;
2. Without regional water conservation efforts, imminent water shortages in State Water Project and critically low levels of stored water supplies throughout the state will affect the District's ability to serve its customers;
3. MWD requires its member agencies to achieve a substantial reduction in water use, which will directly impact the customers of the District;
4. The regulations set forth herein are necessary and proper to manage and protect the water supply for human consumption, sanitation and fire protection in anticipation of short-term water supply reductions or in the event of a water emergency condition.

5. The ordinary demands and requirements of water consumers are either under threat of being insufficient to satisfy, or cannot be satisfied, without depleting the water supply of the District to the extent there would be insufficient water for human consumption, sanitation and fire protection, however the recent rain has decreased the water supply deficit to allow some new connections without jeopardizing the public health, safety and welfare.

Section 5. General Prohibition.

No customer of the District shall make, cause, or permit the use of water from the District in a manner contrary to any provision of this Ordinance or in excess of the amount permitted by any curtailment provisions in effect. The waste or unreasonable use of water shall be prevented.

Section 6. Determination and Declaration of Water Condition Stages I, II and III.

The General Manager, after consultation with the Board of Directors, is hereby authorized and directed to determine when the water supply conditions prevailing in the District meet the Stage I through Stage III criteria set forth in this Ordinance. Wherever appropriate, conservation measures and target reduction goals will

be consistent with regional policies set by MWD and Western Municipal Water District, which wholesale imported water to the District.

Retail Water User Measures

(a) **STAGE I. Voluntary Compliance-Water Watch**

Stage I allows for voluntary compliance and indicates that the possibility exists that the District may not be able to meet all the demands of its customers. Based on projected water supply availability, Stage I establishes a voluntary reduction goal of 10% for firm deliveries and an unspecified voluntary conservation reduction goal in non-firm deliveries. Stage I also imposes the following mandatory restrictions on water use:

**Elements of Stage I for retail water users:**

- 1) Use of running water to wash driveways, sidewalks, patios, and other paved areas is prohibited, except as required for sanitary purposes;
- 2) Failure to repair a controllable leak is defined as "waste of water" and is prohibited;

- 3) Commercial nurseries, golf courses and other water-dependent industries shall water before 11:00 a.m. or after 5:00 p.m., with the exception of those using reclaimed water;
- 4) All public use and governmental facilities, including but not limited to schools, churches, parks, cemeteries and hospitals shall water before 11:00 a.m. or after 5:00 p.m., except as required for sanitary purposes;
- 5) Irrigation of lawns, landscaping and other turf areas shall occur before 11:00 a.m. or after 4:00 p.m.;
- 6) Failure to prevent excessive runoff from irrigation activities is prohibited;
- 7) Sprinklers and irrigation systems shall be adjusted to avoid overspray, runoff and waste. Watering on windy days is to be avoided;
- 8) Use of a hand-held bucket or hose equipped with an automatic shut-off nozzle shall be required for car washing, except where car washing occurs on the immediate

premises of a commercial car wash or service station using reclaimed or recycled water;

- 9) Installation of water saving devices, such as low flow shower heads and faucet aerators, is encouraged;
- 10) Selection of low-water-demand shrubs, groundcovers and trees for all new landscaping is strongly encouraged;
- 11) Limitation of turf areas except in active areas of residential yards or public landscapes is encouraged. Use of turfgrass in medians, dividers and in other non-active areas is discouraged;

(b) **STAGE II. Mandatory Compliance-Water Alert**

Stage II requires mandatory compliance during periods when the probability exists that the District cannot meet all the demands of its customers. Based on projected water supply availability, Stage II establishes a mandatory reduction goal of 10% for all deliveries from the base year. The restrictions required by Stage II apply to all retail users.

**Elements of Stage II for retail water users:**

The restrictions listed in Stage I shall remain in effect with the following additions:

- 1) Use of movable or permanent sprinkler systems for lawn irrigation and watering of plants, trees, shrubs or other landscaped areas is prohibited between 6:00 a.m. and 6:00 p.m. Sprinkler operation shall be permitted no more than three times per week. However, irrigation of lawns, gardens, landscaped areas, trees, shrubs or other plants is permitted at anytime if:
  - a. A hand-held hose is used, or
  - b. A hand-held bucket is used, or
  - c. A drip irrigation system is used, or
  - d. Reclaimed wastewater is used.

EXCEPTION: Commercial nurseries, commercial sod farmers and similarly situated establishments are exempt from Stage II irrigation scheduling restrictions, but will be required to follow all other restrictions to curtail all nonessential water use;

- 2) Washing of motor vehicles, trailers, boats, aircraft and other kinds of mobile equipment shall be done only with a hand-held bucket or hose equipped with a positive shutoff nozzle for quick rinses, except where washing occurs on the immediate premises of a commercial car wash or commercial service station using recycled or reclaimed water.

EXCEPTION: Such washings are exempted from these regulations where the health, safety and welfare of the public is contingent upon frequent vehicle cleaning, such as garbage trucks and vehicles to transport food and perishables;

- 3) The filling, refilling or adding of water to uncovered outdoor swimming pools, wading pools or spas is prohibited except after 6:00 p.m. and before 6:00 a.m.;
- 4) The use of water for irrigation of golf courses is permissible after 6:00 p.m. and before 6:00 a.m.; however, the irrigation of golf courses utilizing reclaimed wastewater shall not be subject to irrigation prohibitions;

- 5) Construction meters utilizing potable water shall be issued only in those instances where non-potable sources are not reasonably available to those persons who have been issued valid grading and/or building permits.
- 6) All restaurants, cafes, and other public food service establishments are prohibited from serving drinking water unless specifically requested by their customers;
- 7) The operation of any exterior ornamental fountain or similar structure is prohibited.
- 8) Water shall not be used to wash down sidewalks, driveways, parking areas, tennis courts, patios or other paved areas, except to alleviate immediate fire or sanitation hazards or unless reclaimed wastewater is used.

(c) **STAGE III. Mandatory Compliance-Water Warning**

Upon implementation of Stage III by the District, the following restrictions shall apply to all persons. Based on projected water supply availability, Stage III establishes a mandatory reduction goal of 20% for all deliveries from the base year.

**Elements of Stage III:**

The restrictions listed in Stage I and II shall remain in effect with the following additions:

- 1) All sprinkler irrigation of vegetation shall occur only after 6:00 p.m. and before 6:00 a.m. Sprinkler operation shall be permitted no more than two times a week. However, irrigation of lawns, gardens, landscaped areas, trees, shrubs or other plants is permitted on odd/even calendar days corresponding to the last two digits of a service address, provided:
  - a. A hand-held hose is used, or
  - b. A hand-held bucket is used, or
  - c. A drip irrigation system is used, or
  - d. Reclaimed wastewater is used.
  
- 2) The washing of private automobiles, trucks, trailers, boats, aircraft and other kinds of mobile equipment, except in the immediate interest of the public health, safety and welfare, shall be permitted only where washing occurs on the immediate premises of a commercial car wash or commercial service stations using recycled or reclaimed water;

- 3) The filling, refilling or addition of water to uncovered outdoor swimming pools, wading pools or spas is prohibited;
- 4) The watering of all golf course areas, except greens, is prohibited unless done with reclaimed wastewater. Irrigation of golf greens shall occur only between the hours of 6:00 p.m. and 6:00 a.m. unless using reclaimed wastewater;
- 5) Use of water from fire hydrants shall be limited to fire fighting, related activities and/or other activities necessary to maintain the health, safety and welfare of the citizenry and shall not be used for construction uses;
- 6) Commercial nurseries, golf courses and other water-dependent industries shall be prohibited from watering lawn, landscaping and other turf areas more often than twice a week. Such watering shall occur between the hours of 6:00 p.m. and 6:00 a.m. only; except that no such restriction on the intervals of water use shall be imposed on watering using reclaimed water;

- 7) All public use and governmental facilities, including but not limited to schools, churches, parks and hospitals, shall be prohibited from watering lawns, landscaping and other areas more often than twice a week. Such watering shall occur between the hours of 6:00 p.m. and 6:00 a.m. only, except that no such restriction on the intervals of water use shall be imposed on the use of reclaimed water for watering purposes;
  
- 8) No District water, with the exception of reclaimed water or as provided herein, shall be used for construction purposes except for system pressurization and/or testing.

Section 7. Declaration of Water Condition Stage IV-Water Rationing.

Pursuant to Water Code Section 355, the Board of Directors, after compliance with the notice and hearing procedures of Water Code Sections 351 and 352, is authorized and directed to declare a Stage IV Water Emergency as set forth in this Ordinance whenever it finds and determines that the ordinary demands and requirements of water consumers cannot be satisfied without depleting the water supply of the District to the extent that there would be insufficient water for human consumption, sanitation and fire protection. The regulations and restrictions under a Stage IV

Water Shortage Emergency shall remain in full force and effect during the period of the emergency and until the supply of water available for distribution within the District has been replenished or augmented, as determined by the Board of Directors.

(c) **STAGE IV. Mandatory Compliance-Water Emergency**

Upon implementation of Stage IV by the District, the following restrictions shall apply to all persons. Based on projected water supply availability, Stage IV establishes a mandatory usage limit.

**Elements of Stage IV include:**

The restrictions listed in Stage I, II and III shall remain in effect with the following additions:

- 1) Sprinkler irrigation of vegetation shall be permitted no more than once a week. However, irrigation of lawns, gardens, landscaped areas, trees, shrubs or other plants is permitted on odd/even calendar days corresponding to the last two digits of a service address, provided:
  - a. A hand-held hose with automatic shut off nozzle is used, or
  - b. A hand-held bucket is used, or
  - c. A drip irrigation system is used, or

d. Reclaimed wastewater is used.

2) The District shall ration water to its customers by establishing allocations for each class of service based upon projected water availability to the District.

Section 8. Wholesale Water Users.

The District serves wholesale water to retailers within its service area, including the Elsinore Water District and the Farm Mutual Water Company. The District's conservation plan for wholesalers consists of a direct pass through of MWD's IICP penalty payments for deliveries greater than adjusted targets for each wholesale entity. Target reduction goals for each stage of the IICP program are illustrated in the table below:

STAGE	REDUCTION IN FIRM DELIVERIES
I	Voluntary Goal 10%
II*	5%
III*	10%
IV*	15%
V*	20%
* Indicates Mandatory Compliance	

The District will directly pass through any other Stages and corresponding reduction goals as implemented by MWD. The monthly procedure for implementing MWD's IICP with each wholesale customer will be as follows:

1. The base allocation for FY '90-91 will be the actual amount of water delivered in FY '89-90 less the target reduction goal for the stage currently in effect as set by the District.
2. The difference between the FY '89-90 target amount and the actual amount delivered during the month will be determined.
3. If the actual usage is greater than the FY '89-90 target amount for the same monthly period, a disincentive charge, calculated at the amount of \$394 per acre foot (or the prevailing rate and penalty factor set by MWD), will be added to the regular bill.

These wholesale entities are required to adopt mandatory conservation measures within thirty (30) days of the effective date of this Ordinance to reduce water consumption commensurate with the target reduction goals adopted by the District, and to take steps

to inform their retail customers of the urgent need to conserve and protect water because of a critical shortage in the supplemental water supplies for their area.

Section 9. Retail Agricultural Water Users.

The District serves agricultural water users within its service area, including the Temescal Division. The agricultural users of the Temescal Division are subject to the terms and conditions of MWD's interruptible water program, subject to water availability from the Division's alternative water sources prior to implementation of MWD's program, which was designed to provide supplemental imported water at a reduced cost subject to availability. If MWD's program is implemented and restricts the availability of interruptible water, the District's conservation plan for agricultural water users consists of a direct pass through of MWD's IICP penalty payments for deliveries greater than adjusted reduction targets for each agricultural customer.

Target reduction goals for each stage of the IICP program are illustrated in the table below:

STAGE	INTERRUPTIBLE REDUCTION GOALS
I	Non-Specific Voluntary Savings
II*	20%
III*	30%
IV*	40%
V*	50%
* Indicates Mandatory Compliance	

The District will directly pass through any other stages and corresponding reduction goals as implemented by MWD. The monthly procedure for implementing MWD's IICP with each agricultural customer will be as follows:

1. The base allocation for FY '90-91 will be the actual amount of water delivered in FY '89-90 less the target reduction goal for the stage currently in effect by MWD.
2. The difference between the FY '89-90 target amount and the actual amount delivered during the month will be determined.
3. If the actual usage is greater than the FY '89-90 target amount for the same monthly period, a disincentive charge, calculated at the amount of \$394 per acre foot

(or the prevailing rate and penalty factor set by MWD), will be added to the regular bill.

Section 10. Rescission of Moratorium on Service Commitments and Connections.

The District hereby declares that the moratorium on service commitments and connections is rescinded effective immediately. New service connections will be issued subject to all District rules, regulations and procedures.

Section 11. District Actions.

The Board hereby directs staff to take immediate steps to implement water conservation measures and to intensify its public information and education programs accordingly:

1. Immediately notify all retail water users of the conservation measures required by this Ordinance;
2. Immediately provide all wholesale customers with a copy of the Ordinance, together with a letter signed by the General Manager explaining the Board's request that wholesale customers adopt similar conservation measures;

3. Develop emergency water management plans for consideration by the Board for use in the event more stringent mandatory conservation measures are required.
4. Meet with appropriate cities and counties to adopt and implement water conservation measures as necessary.
5. Establish a task force, including but not limited to, representatives of the building industry, homeowner and consumer organizations and local and regional public officials, to develop ongoing measures for the implementation of water conservation programs.

Section 12. Relief from Compliance.

An applicant may file a request for relief from any provisions of this Ordinance. Such a written request shall include all information he or she deems necessary for resolution of the request. The General Manager shall review all requests for relief and may grant relief from the provisions of this Ordinance where he determines that the requested relief is necessary to protect public health, sanitation, safety or welfare of the customers and inhabitants of the District. The General Manager may at his discretion receive oral information from the person applying for relief.

The General Manager may grant, deny or modify the request for relief, or impose any conditions he deems proper. The General Manager shall make his determination within a reasonable period of time following receipt of the request for relief and shall inform the applicant of the decision in writing. The General Manager may delegate his duties and responsibilities under this section as appropriate.

An applicant shall have the right to appeal the General Manager's decision regarding his or her application to the Board of Directors or its designee. The appeal must be in writing and received by the District within ten (10) days of the date of the General Manager's written decision. The appeal shall be heard by the Board of Directors or its designee within a reasonable period of time from the date the appeal is filed. The District shall provide written notice of said hearing to applicant of the time and date of the hearing. The Board may at its discretion provide the applicant with the opportunity to be heard.

The Board of Directors or its designee, at its discretion, may affirm, reverse or modify the General Manager's decision and impose any conditions it deems proper. The decision of the Board shall be final.

Section 13. Failure to Comply.

Violation by any customer of the water use prohibitions of Sections 6, 7, and 8 of this Ordinance, shall be penalized as follows:

- a) **First Violation-Notice of Non-Compliance.** The General Manager is authorized and directed to issue a written warning notice of non-compliance to any District customer who, in the judgment of the General Manager, has failed or refused in a significant way to comply with water use curtailment provisions of Sections 6, 7 and 8 of this ordinance. Any such warning notice shall specify the time, place and manner of non-compliance and shall specify a reasonable period to achieve compliance. Any warning notice of non-compliance shall be directed to the customer of record for the premises where the non-compliance was observed. Delivery may be by regular mail or by personal delivery with a declaration of delivery returned to the General Manager.
  
- b) **Second Violation-Fine, Flow Restriction, or Water Service Shutoff.**
  - 1) For a second violation by any customer of the water use curtailment provisions of Sections 7(a)-(c), or 8(c), a surcharge shall be imposed in an amount equal to the per-

centage of the customer's most recent water bill, excluding sewer charges, for the stage in effect upon the occurrence of the most recent violation. The penalty surcharge for each stage is shown below:

Stage II . . . . .	25%
Stage III . . . . .	50%
Stage IV . . . . .	75%

- 2) If a water customer fails or refuses to comply with the requirements of a warning notice of non-compliance issued according to sub-Section (a) of Section 14, or if the water customer repeats the infraction noted in a prior warning notice of non-compliance, the General Manager has discretionary authority pursuant to Water Code Section 375 to cause a flow-restricting device to be installed at the meter to minimize water availability to the customer's service address. Pursuant to Water Code Section 35423, if installation of a flow restrictor is infeasible, impractical or is unlikely to induce compliance with this ordinance, the General Manager may authorize a shutoff of service to the premises involved.

- c) **Referral of Misdemeanor Charges.** The General Manager may at his discretion refer evidence of non-compliance to the District Attorney of Riverside County with a request for misdemeanor prosecution as authorized by Water Code Section 377 and/or Section 35423. Pursuant to Water Code Section 377, any conviction resulting from a violation of a water conservation program restriction, prohibition or requirement published in this Ordinance shall be punishable by imprisonment in the County jail for not more than thirty (30) days or by fine not exceeding one thousand dollars (\$1,000), or both.

Section 14. Hearing Regarding Violations.

- (a) Any customer receiving notice of a second or subsequent violation of Sections 6, 7(a)-(c), or 8(c) shall have a right to a hearing by the General Manager within fifteen (15) days of mailing or other delivery of the notice of violation.
- (b) The customer's written request for a hearing within the fifteen (15) day period shall automatically stay installation of a flow-restricting device on the customer's premises until the General Manager renders his decision.

- (c) The customer's timely written request for a hearing shall stay the imposition of a surcharge if the customer deposits with the District money in the amount of any unpaid surcharge within such fifteen (15) day period. If it is determined that the surcharge was wrongly assessed, the District will refund any money deposited to the customer.
- (d) The decision of the General Manager may be appealed to the Board of Directors, whose decision shall be final, except for judicial review.
- (e) The General Manager may delegate his duties and responsibilities under this section as appropriate.

Section 15. Additional Water Shortage Measures-Pricing Incentives, Disincentives, and Alternative Measures Use Restrictions.

The Board of Directors may order implementation of alternative water conservation measures in addition to those set forth in Sections 7 and 8. The need for water rate incentive or disincentive pricing to achieve target water conservation goals may also be taken into consideration by the Board of Directors at any time it is determined that existing measures may be insufficient to achieve target reductions. Such alternative water conservation measures or

pricing incentives/disincentives shall be implemented in the manner consistent with in Section 4(c).

Section 16. Incompatible Provisions.

To the extent any provision of this Ordinance is incompatible with or at variance with any prior adopted ordinance or resolution, the provisions of this Ordinance shall take precedence, and all prior ordinance shall be interpreted to harmonize with and not change the provisions of this Ordinance.

Section 17. Severability.

If any section, subsection, paragraph, sentence, clause, phrase or word of this Ordinance is declared by a court of competent jurisdiction, adjudicated to a final determination, to be void, this Board of Directors finds that said voided part is severable, and that this Board of Directors would have adopted the remainder of this Ordinance without the severed and voided part, and that the remainder of this Ordinance shall remain in full force and effect.

Section 18. Continuing Applicability of Ordinance No. 79. as Amended.

Ordinance No. 79, as adopted on March 6, 1991, is amended as set forth herein and the provisions of Ordinance 79, except as amended

or superseded by this Ordinance No. 80, shall continue in full force and effect.

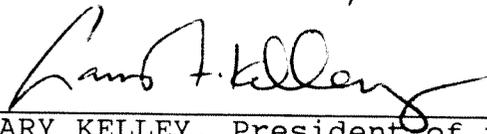
Section 19. Public Health and Safety Not to be Affected.

Nothing in this Ordinance shall be construed to require the District to curtail the supply of water to any customer when such water is required by that customer to maintain an adequate level of public health and safety.

Section 20. Exemption from California Environmental Quality Act.

The Board of Directors hereby determines that this Ordinance is exempt from review under the California Environmental Quality Act (California Public Resources Code Section 21080(b) (4) ) because it is an action taken to mitigate a water shortage emergency. The Board of Directors hereby directs the General Manager or his designee to prepare and file a Notice of Exemption as soon as possible following adoption of this Ordinance.

APPROVED, ADOPTED AND SIGNED this 24 day of April, 1991.

  
\_\_\_\_\_  
GARY KELLEY, President of the Board  
of Directors Elsinore Valley  
Municipal Water District

ATTEST

  
\_\_\_\_\_  
NANCY SHAFER, Secretary of the  
Board of Directors Elsinore Valley  
Municipal Water District

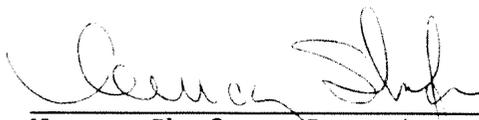
I, NANCY SHAFER, Secretary-Treasurer of the Board of Directors of Elsinore Valley Municipal Water District certify that the foregoing is a full, true and correct copy of ORDINANCE NO. 81 adopted by said Board at a Special Meeting held April 24, 1991 by the following roll call vote:

AYES: Kelley, Bryant, Shafer, Attridge, Jeffries

NOES: None

ABSENT: None

ABSTAIN: None



---

Nancy Shafer, Secretary-Treasurer

# Appendix F

# Groundwater Management Plan

---

**INCLUDED AS A CD**