

**MISSION SPRINGS WATER DISTRICT**

**2010 Urban Water Management Plan**

June 2011



Prepared By:  
**PSOMAS**

**2010  
URBAN WATER  
MANAGEMENT PLAN**



**Mission Springs Water District**

***June 28, 2011***

**P S O M A S**

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## ACRONYMS and ABBREVIATIONS

AB	Assembly Bill
AF	Acre-Feet
AFY	Acre-Feet per Year
AWAC	Alliance for Water Awareness and Conservation
BMP	Best Management Practices
CAWCD	Central Arizona Water Conservation District
CRA	Colorado River Aqueduct
CUWCC	California Urban Water Conservation Council
CVP	Central Valley Project
CVWD	Coachella Valley Water District
DHS	California Department of Health Services
DMM	Demand Management Measure
DWA	Desert Water Agency
DWCV	Desert Water Agency/Coachella Valley Water District
DWR	California Department of Water Resources
EOC	Emergency Operations Center
HECW	High Efficiency Clothes Washer
IRP	Integrated Water Resources Plan
IRWMP	Coachella Valley Integrated Regional Water Management Plan
LRP	Local Resources Program
MAF	Million Acre-Feet
MG	Million Gallon
MGD	Million Gallons per Day
mg/L	milligrams per liter
MOU	Memorandum of Understanding
MSL	Mean Sea Level
MSWD	Mission Springs Water District
MTBE	Methyl Tertiary-Butyl Ether
Metropolitan	Metropolitan Water District of Southern California
NDMA	N-nitrosodimethylamine

**ACRONYMS and ABBREVIATIONS (cont'd)**

pCi/L	picocuries per liter
PSUSD	Palm Springs Unified School District
QSA	Quantification Settlement Agreement
RAP	Resource Action Program
ROA	Result Oriented Activity
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SFR	Single Family Residential
SGPWA	San Gorgonio Pass Water Agency
SWP	State Water Project
SWRCB	State Water Resources Control Board
TDS	Total Dissolved Solids
ULFT	Ultra Low Flush Toilet
USBR	U.S. Bureau of Reclamation
UWMP	Urban Water Management Plan
VOC	Volatile Organic Compounds
WBIC	Weather Based Irrigation Controller
WEWAC	Water Education Water Awareness Committee
WISG	Water Issues Study Group

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# 1 INTRODUCTION

## 1.1 PURPOSE AND UWMP SUMMARY

An Urban Water Management Plan (UWMP or Plan) prepared by a water purveyor is intended to demonstrate reliability of water service sufficient to meet the needs of its various categories of customers during normal, single dry or multiple dry years. The California Water Management Planning Act of 1983 (Act), as amended, requires urban water suppliers to develop an UWMP every five years in the years ending in zero and five. Under normal circumstances, all 2010 UWMPs would have been due for submittal to the California Department of Water Resources (DWR) by December 31, 2010; however, Senate Bill (SB) 7-7 (or SBX7-7) provided an additional six months to retail urban water supply agencies to allow them to conduct additional required water conservation analyses. Thus, the District's 2010 UWMP must now be adopted by July 1, 2011 and submitted to DWR within 30 days of adoption.

In addressing urban water management issues, the legislature made a number of significant declarations including:

- The waters of the state are a limited and renewable resource subject to ever increasing demands;
- Conservation and efficient use of urban water supplies are of statewide concern;
- Successful implementation of plans is best accomplished at the local level;
- Conservation and efficient use of water shall be actively pursued to protect both the people of the state and their water resources;
- Conservation and efficient use of urban water supplies shall be a guiding criterion in public decisions; and
- Urban water suppliers shall be required to develop water management plans to achieve conservation and efficient use.

The Mission Springs Water District (MSWD or District) 2010 UWMP has been prepared in compliance with the requirements of the Act, as amended to 2010<sup>1</sup> (Appendix A), and includes the following discussions:

- Water Service Area
- Water Service Facilities
- Water Sources and Supplies
- Water Quality Information

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<sup>1</sup>California Water Code, Division 6, Part 2.6; §10610, et. seq. Established by Assembly Bill 797 (1983).

- Water Reliability Planning
- Water Use Provisions
- Water Demand Management Measures
- Water Shortage Contingency Plan
- Water Recycling

## 1.2 URBAN WATER MANAGEMENT PLAN UPDATE PREPARATION

The District's 2010 UWMP revises the 2005 UWMP prepared by Psomas for the District and incorporates changes enacted by recent legislation including SB 1087 (2005), California Assembly Bill (AB) 1376 (2007), AB 1465 (2010), and SBX7-7 (2010). A brief summary of each of these legislative changes, as well as related legislation follows:

- SB 1087 (2005) – Requires retail water suppliers to include single family and multiple family projections for lower income and affordable households in their UWMPs. This legislation is intended to assist the water agencies in complying with the requirements Government Code Section 65589.7, which requires water suppliers to grant a priority for provision of service to housing units affordable to lower income households.
- AB 1376 (2007) – Requires each urban water supplier to notify the Planning Department of any City or County within which the supplier provides water with at least 60 days prior notice that the supplier will be reviewing the plan and considering amendments or changes to it.
- AB 1465 (2010) – Clarifies that urban water suppliers that are members of the California Urban Water Conservation Council (CUWCC) and comply with the provisions of the “*Memorandum of Understanding Regarding Urban Water Conservation in California*”<sup>2</sup> dated December 10, 2008, as it may be amended (MOU), may submit their annual reports required under the CUWCC MOU as evidence of compliance without the need for any additional documentation in their UWMPs.
- SBX7-7 (2010) – Requires urban water suppliers to include the following information in their 2010 UWMPs with respect to a targeted 20 percent water conservation reduction by 2020: (1) baseline daily per capita use; (2) urban water use target; (3) interim water use target; and (4) compliance daily per capita water use, including technical bases and supporting data for those determinations.

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<sup>2</sup> The *Memorandum of Understanding Regarding Urban Water Conservation in California* (MOU) was adopted in September 1991 by a large number of water suppliers, public advocacy organizations and other interested groups and most recently amended on December 10, 2008. The MOU created the *California Urban Water Conservation Council* and established 16 Best Management Practices (BMPs) for urban water conservation, recently refined to 14 BMPs.

- SBX7-7 (2010) – Extends the deadline for adoption of urban retail water suppliers 2010 UWMPs until July 1, 2011, to provide sufficient time to prepare the additional required water conservation analyses described in the previous bullet.  
  
Other legislation, which does not directly impact UWMPs, but affects eligibility for grants and loans, includes:
- AB 1420 (2007) – This legislation contains several provisions relating to urban water management plans, including:
  - Conditions eligibility for State grant and loan funding to an urban water supplier awarded or administered by DWR, the State Water Resources Control Board (SWRCB), or California Bay-Delta Authority or its successor agency on the following factors: (1) the implementation of water demand management measures, including the extent of compliance with conservation measures described in the previously referenced “*Memorandum of Understanding Regarding Urban Water Conservation in California.*”
  - Requires DWR, in consultation with the SWRCB and the California Bay-Delta Authority or its successor agency, to develop eligibility requirements to implement the foregoing grant and loan conditions.
  - Requires DWR, in consultation with the CUWCC, to convene a technical panel no later than January 1, 2009 to provide information and recommendations to the Department and the Legislature on new demand management measures, technologies and approaches. The panel and DWR must report to the legislature on their findings no later than January 1, 2010 and each five years thereafter.
- SBX3-27 (2009) – Exempts projects funded by the American Recovery and Reinvestment Act of 2009 from the conditions placed on state funding for water management to urban water suppliers regarding implementation of water conservation measures that were implemented under AB 1420.
- SBX7-7 – Repeals the existing grant funding conditions of AB 1420 on July 1, 2016 if they are not extended or altered prior to this date. After July 1, 2016, urban water retail water suppliers are required to be in compliance with the 20 percent by 2020 water use reduction goals to be eligible for state water management grants or loans.

The sections in this Plan correspond to the outline of the Act, specifically Article 2, Contents of Plans, Sections 10631, 10632, and 10633. The sequence used for the required information, however, differs slightly in order to present information in a manner reflecting the unique characteristics of the District’s water utility.

To Assist DWR staff in reviewing this UWMP, a copy of the DWR's suggested checklist entitled *Urban Water Management Plan Checklist, Organized by Subject*<sup>3</sup> is provided in Appendix B. The left hand column of the checklist notes where the applicable information described to the right can be found within the body of this report.

### **1.2.1 Plan Adoption**

The 2010 UWMP was adopted by resolution of the Board of Directors of MSWD on June 28, 2011, following a public hearing. The adopted Plan was submitted to the DWR and the State Library within 30 days of Board approval. Copies of the Notice of Public Hearing and the Resolution of Plan Adoption are included in Appendix C. Copies of the Plan were made available prior to the public hearing and final copies of the Plan were available within 30 days following District Board adoption and a copy provided to the City of Desert Hot Springs, the City of Palm Springs, and the County of Riverside within 60 days following Board approval.

A draft copy of the Plan was posted on the District's website prior to the public hearing where it was available to the public as well as the City of Desert Hot Springs, City of Palm Springs, County of Riverside, Desert Water Agency, Coachella Valley Water District and all other interested parties.

### **1.2.2 Agency Coordination and Public Participation**

During plan development, the District coordinated the development of this plan with the Desert Water Agency (DWA), the City of Desert Hot Springs, the City of Palm Springs, and the County of Riverside.

The primary source of water supply for each of the District's three water systems is groundwater obtained through production wells. An emergency source of water for MSWD is the Coachella Valley Water District (CVWD). MSWD currently has two inter-connections with the CVWD that can be used to provide emergency water to the Main System on a temporary and very limited basis. A third source of water is obtained through an agreement between the DWA and the Metropolitan Water District of Southern California (Metropolitan) to exchange water from the State Water Project (SWP) for Colorado River water.

Interagency activities included the exchange of data and incorporation of the agencies' comments to the District's Draft UWMP, as appropriate. The intent of this plan is to focus on specific issues unique to the District's water service area. While some regional UWMP issues are introduced in this plan, additional regional information is presented in the Metropolitan, DWA and CVWD UWMPs.

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<sup>3</sup> Checklist provided in DWR's Final Guidebook to Assist Urban Water Suppliers to Prepare a 2010 Urban Water Management Plan, March 2011 and available on DWR website at: <http://www.water.ca.gov/urbanwatermanagement/guidebook/>

To assist District staff in preparation of the District’s 2010 UWMP, District staff and/or Psomas staff attended the following workshops facilitated by DWR and Metropolitan:

- **Metropolitan:** 2010 UWMP Workshop held on August 18, 2010 at Metropolitan Headquarters.
- **DWR:** On-line webinars held on November 30, 2010, December 16, 2010, January 5, 2011 and January 12, 2011.
- **DWR:** 2010 UWMP Workshop at held at Metropolitan on March 2, 2011.
- **DWR:** 2010 UWMP Workshop held at the Irvine Ranch Water District (IRWD) on March 8, 2011.

Table 1.2-1 lists the entities with whom the District coordinated in the development of the District’s 2005 UWMP. The City of Desert Hot Springs, City of Palm Springs, and County of Riverside was notified of the District’s public hearing for consideration of adoption of the Plan at least 60 days prior to the hearing.

**Table 1.2-1**  
**Mission Springs Water District UWMP Development**  
**Coordination and Public Involvement**

Entities	Coordination and Public Involvement Actions					
	Participated in UWMP preparation	Used Agency Data as Information Source	Sent a copy of Draft UWMP	Commented on Draft UWMP	Sent Notice of Public Hearing	Attended Public Hearing
MSWD	X	X	X	X	X	X
City of Desert Hot Springs	X	X	X		X	
DWA		X	X		X	
CVWD		X	X		X	
Metropolitan		X				
Riverside County			X		X	
City of Palm Springs			X		X	
General Public					X	X

This UWMP details the specifics as they relate to MSWD and its service area and will refer to Metropolitan, DWA, CVWD and other agencies, along with reference documents throughout. Appendix D lists the numerous references used in the development of this Plan.

The UWMP is intended to serve as a general, flexible, and open-ended document that periodically can be updated to reflect changes in regional water supply trends, and conservation and water use efficiency policies. This Plan, along with the District's Water Master Plan and other planning documents, will be used by District staff to guide the District's water use and management efforts through the year 2015, when the UWMP is required to be updated.

### 1.2.3 Mission Springs Water District

The District was established in 1953 and was formerly known as Desert Hot Springs County Water District. The District's service area consists of 135 square miles including the City of Desert Hot Springs, 10 smaller communities in Riverside County, and communities in the City of Palm Springs. The District's water source is 100 percent groundwater, drawn from production wells, providing water service to approximately 36,000 people as well as sewer service to approximately 8,000 people in Desert Hot Springs, Desert Crest County Club and Dillon Mobile Home Park.

## 1.3 CLIMATE CHARACTERISTICS

The climate in the valley is typical desert with seasonal temperatures varying from about 115 degrees Fahrenheit in the summer to below freezing in the winter. The high mountains that border the valley to the west and north are an effective barrier against easterly moving coastal storms. The average annual rainfall on the valley floor is less than 6 inches; whereas, the average annual rainfall at the crest of the mountains to the west and north of the valley ranges from 30 to 40 inches (DWR, 1964). Evapotranspiration (ETo)<sup>4</sup> in the overall valley region averages about 72 inches annually but is measured at almost 94 inches at the Mission Lakes Country Club in MSWD's service area.<sup>5</sup> Details of monthly average and annual temperatures are shown in Table 1.3-1

**Table 1.3-1**  
**Mission Springs Water District Service Area Climate**

		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg.
Temp. (Fahrenheit)	Avg.	54	57	61	67	74	82	88	87	82	72	61	54	70
	Max	67	71	76	83	90	99	103	102	97	87	75	67	85
	Min	41	43	47	52	58	65	72	72	66	57	46	40	545

<sup>4</sup> Evapotranspiration (ET) is the loss of water to the atmosphere by the combined processes of evaporation (from soil and plant surfaces) and transpiration (from plant tissues). It is an indicator of how much water crops, lawn, garden, and trees need for healthy growth and productivity. ET from a standardized grass is commonly denoted as ETo.

<sup>5</sup> CVWD Drawing No. 29523 dated May 20, 2003.

### **1.3.1 MSWD Location**

MSWD offices are located in Desert Hot Springs, California. MSWD water supply and distribution system includes three separate and distinct water supply and distribution systems with the largest of the three systems serving the community of Desert Hot Springs and surrounding communities of West Garnet, located south of Interstate 10 (I-10) and West of Indian Avenue, and North Palm Springs. The two smaller systems, Palm Springs Crest System and West Palm Springs Village System, are located approximately five miles west of Desert Hot Springs. These two communities are located on the north side of I-10 abutting the Morongo Indian Reservation. Figure 1-1 shows the MSWD Service Area location.

### **1.3.2 Water System Facilities**

The existing MSWD distribution system consists of three independent water distribution systems: 1) Desert Hot Springs and surrounding area system – encompasses the City of Desert Hot Springs, a portion of the City of Palm Springs and surrounding unincorporated areas of Riverside County including Desert Edge community, 2) Palm Springs Crest System, and 3) West Palm Springs Village System.

The existing Desert Hot Springs and surrounding area water distribution system serves up to 24 different pressure service zones through either a primary pressure zone or a reduced pressure service zone. In general, the MSWD standard pressure zones are reflective of existing storage tank overflow elevations, hence the term “913 zone” in which the water storage tank overflow is at 913 feet above mean sea level (msl). As development of the MSWD occurred, numerous storage tanks were constructed at varying elevations to provide adequate pressure to its service area.

The MSWD system, inclusive of all three distribution systems, has approximately 1.26 million linear feet of pipeline.

District facilities within each pressure zone include supply, storage, booster station, and distribution system components as briefly discussed below and more fully described in the District’s Comprehensive Water System Master Plan.

The Desert Hot Springs System is primarily located over the Mission Creek subbasin with ten active wells, nine active in the Mission Creek subbasin and one standby well (22, 24, 27, 28, 29, 31, 32, 34 & 37 active), and well 30 offline indefinitely due to water quality issues with uranium. MSWD has one well located in the Garnet Sub-Basin, well 33 bringing the total to ten active wells in the Desert Hot Springs System. These active wells can feed only one pressure zone or various pressure zones via various booster pumping station configurations and intersystem connectivity manipulation of normally closed valves. Well 35 is drilled, but has never been outfitted by the developer and it is indeterminate at this time when it will come on line. New well locations and production goals are outlined in the MSWD’s Comprehensive Water Master Plan.

Currently wells 28 and 34 have fulltime uranium treatment to preclude exceeding the MCL and are planned for future replacement (28) or blending (well 34) to alleviate the need for treatment.

The Palm Springs Crest System is located in the San Gorgonio Pass- Cabazon Sub-Basin and has two active wells (25 & 25A).

The West Palm Springs Village System is also located in the San Gorgonio Pass-Cabazon Sub-Basin and has two active wells (26 & 26A). Well 26A also has fulltime uranium treatment to preclude exceeding the MCL and is also planned for future blending to remove the need for wellhead treatment.

## **MSWD System**

### **913 Zone**

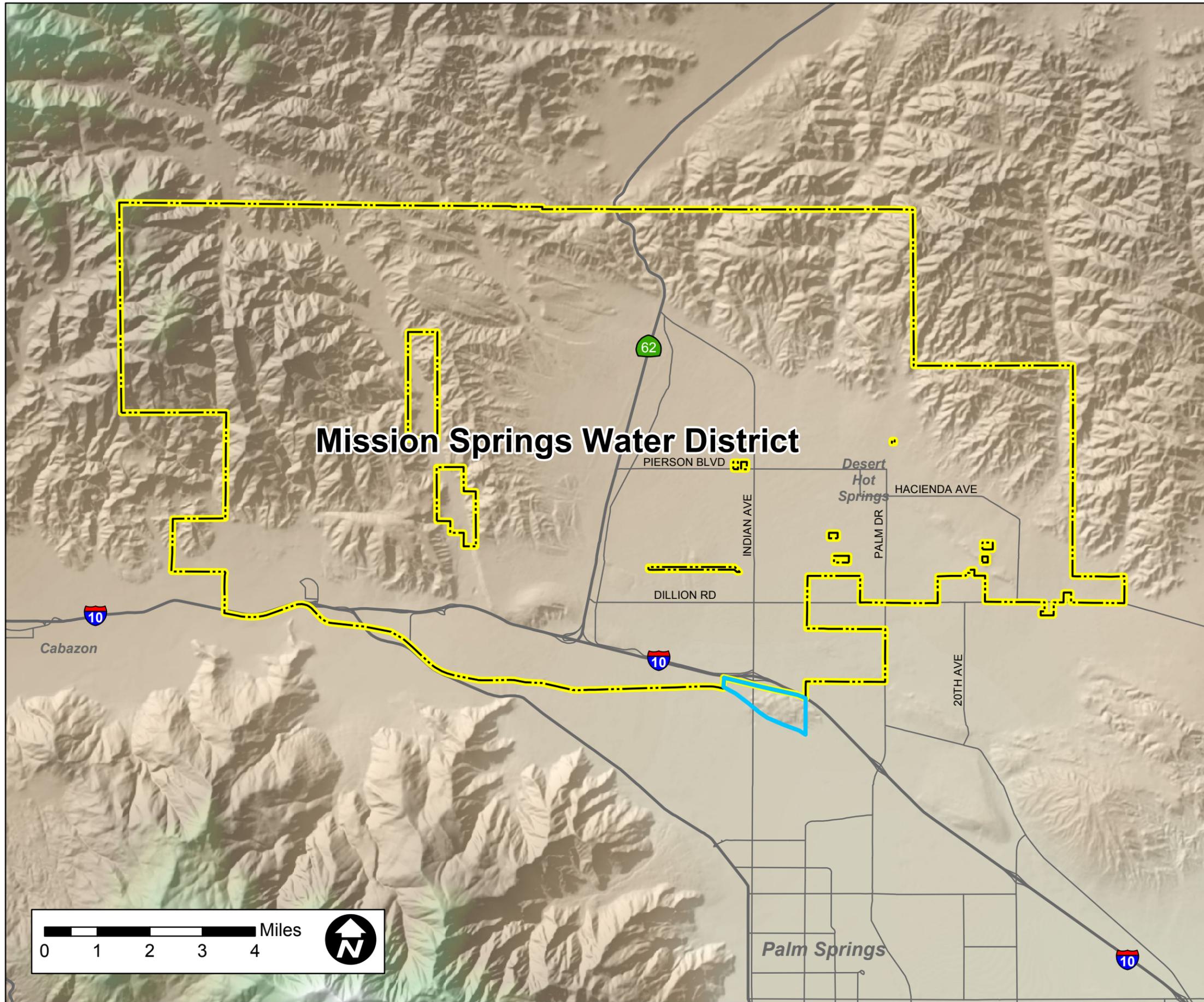
The 913 Zone is the lowest primary service zone in the District with two groundwater wells. Well 32 pumps from the Mission Creek subbasin to a 2 million gallon (mg) tank whose overflow elevation is 913 feet above mean sea level (msl). Well 33 pumps from the Garnet Hill subbasin into a 55,000 gallon storage tank which provides suction head to water being boosted to the 913 tank. These wells provide a combined discharge capacity of 2,800 gpm. The 913 Zone provides water service to residential and commercial customers located between topographic elevations of 635 and 800 msl. Water from the 913 tank may also be boosted to the 1070 Zone.

### **1070 Zone**

The 1070 Zone serves the primary pressure zone within the Two Bunch and Valley View service zones. This zone serves portions of the system from topographic elevation of 800 to 970 feet. The 1070 Zone includes groundwater wells, storage tanks, booster pump stations, and distribution system components, such as pipelines and valves. Well 27 and Well 31 provide a combined maximum groundwater supply of 3,000 gallons per minute (gpm) and serve the Valley View service zone through the Valley View tank, which has a capacity of 0.31 mg. Well 31 provides water to the Two Bunch service zone, which includes two storage tanks with a combined capacity of 1.45 mg. As mentioned above, Wells 32 and 33 from the 913 Zone can also deliver water to the Two Bunch storage facility via the 1070 boosters at the 913 tank. In turn, boosters at the Two Bunch facility can supply water to the 1240 Zone at Terrace. Total well capacity for the 1070 Zone is 5,800 gpm.

**Legend**

-  MSWD Service Area Boundary
-  Sphere of Influence



**MSWD Service Area**



PSOMAS

Figure 1-1

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### **1400 Zone**

The 1400 Zone serves the primary pressure service zones within the Overhill, Annandale, and Desert View service zones, as well as the reduced pressure service areas of Northridge, Annandale, and Overhill. The 1400 Zone includes groundwater wells, storage tanks, booster pump stations, and distribution systems components. The 1400 Zone is supplied groundwater from six wells with a combined capacity of 9,050 gpm, however the 1400 zone is separated by system constraints of normally closed valves into three separate areas. Well 28 and 24 provide source water for the Annandale service zone and tank (1400 Zone Central). Well 27 supplies the source for the Overhill tank and service zone (1400 Zone West) via the boosters at the Valley View tank. Wells 22, 29 and 37 provide source water for the Desert View tank via the boosters at the Terrace tank. Well 37, was added in 2009 providing 1,400 gpm of additional capacity to the zone (1400 Zone East). Four tanks serve the 1400 Zone with a total storage capacity of approximately 4.4 mg.

### **1530 Zone**

The 1530 Zone includes four tanks: Gateway, Worsley, Mission Lakes, Northridge, and Red Bud. The Northridge tank is interconnected via a normally closed valve to the Gateway, Worsley and Mission Lakes Tanks and is normally fed from boosters at the Terrace Tank, fed by wells 22, 29 and 37. The Redbud Tank is an isolated 1535 Zone on the east end of the system and is fed via boosters at Terrace to the Desert View Tank, and then fed to the Gateway Tank via another set of boosters at the Low Desert View site. The 1530 Zone includes storage tanks, booster pump stations, and distribution system components. The 1530 Zone has historically received groundwater from Well 30, which delivered water to the Mission Lakes service zone and storage tank. Well 30 has been out of service since 2008 due to water quality issues. Two new wells, Well 34 in service at 600 gpm since 2007 with Uranium treatment along with water from well 27 via Valley View and Overhill tanks via boosters supplies the 1530 zone (Central and West). Well 35 although drilled is indeterminate when it will be outfitted by the developer and available for production. The four 1530 Zone tanks have a total storage capacity of 3.6 mg.

### **1630 Zone**

The 1630 Zone serves the primary pressures zones within the communities of Vista and Highland. The 1630 Zone also supplies water to the reduced pressure zone within Vista. The 1630 Zone includes storage tanks, booster pumps stations, and distribution system components. The 1630 Zone does not have any groundwater wells. All source water for the 1630 Zone is from the lower zones and is pumped multiple times to reach the higher zones. The 1630 Zone has two water storage tanks with a total storage capacity of 360,000 gallons. The Vista and Highland 1630 zones are completely separate and not interconnected by any available connections.

## **Palm Springs Crest System**

### **Woodridge 1840 Zone**

The Woodridge 1840 Zone exclusively serves the Woodridge service zone. This system includes two groundwater wells (Well 25 and Well 25A) with production capacity of 575 gpm, and the Woodridge storage tank with a storage capacity of 0.12 mg. The entire Woodridge system is independent of the MSWD system and the Cottonwood system.

## **West Palm Springs Village System**

### **Cottonwood 1630 Zone**

The Cottonwood 1630 zone is part of the West Palm Springs Village water system, an independent water system, which is separate from the other systems. This system includes two groundwater wells (Well 26 and Well 26A) with a total capacity of 520 gpm. The Cottonwood 1630 Zone includes one storage facility with a capacity of approximately 0.28 mg. Well 26A is on fulltime Uranium treatment.

### **1.3.3 Demographics**

The MSWD has experienced rapid population growth mirroring the growth pattern across the central and eastern Coachella Valley over the past 20 years. Growth in the more established City of Palm Springs has been slower, as build out in that community is near. Growth was most significant in the cities of Cathedral City, Palm Desert, La Quinta and Indio, while growth was slower in the smaller and more expensive communities of Indian Wells and Rancho Mirage. Growth in the valley was slowest in the furthest east city of Coachella and the furthest west and north city of Desert Hot Springs. Experts and community members expect that as the fast-growing communities approach build out and experience higher land prices, significant growth will spillover into Coachella and Desert Hot Springs over the next 15 years.<sup>6</sup>

The MSWD Comprehensive Water System Master Plan includes two population scenarios to forecast both service connections and water usage: a baseline growth scenario that assumes all single family residential (SFR) developments will occur by 2020, and a second, high growth scenario that assumes the same level of SFR development will occur by 2015. However, uncertainty about SFR growth increases further out in time. The high growth scenario projected 2010 population to equal 35,000. Recent data estimates a 2010 population of 34,800. The high growth scenario is assumed in this study using a population growth rate of 6,500 people every five years, equal to the Master Plan high growth rate for years 2015 through 2035.

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<sup>6</sup> MSWD Comprehensive Water System Master Plan., Section 2.2.

Table 1.3-2 presents projected population growth for the high growth scenario in District service area. In order to be conservative, the high growth scenario is used to project water demands for this UWMP.

**Table 1.3-2**  
**Mission Springs Water District Population Projections**

<b>Population Scenario</b>	<b>2010</b>	<b>2015</b>	<b>2020</b>	<b>2025</b>	<b>2030</b>	<b>2035</b>
<b>High Growth</b>	34,800	41,300	47,800	54,300	60,800	67,300

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## **2 WATER SOURCES AND SUPPLIES**

### **2.1 WATER SOURCES**

The District is organized into three separate water supply and distribution systems, which are defined by the California Department of Health Services (DHS) as:

- Desert Hot Springs System: the largest water system, which includes the City of Desert Hot Springs, a portion of the City of Palm Springs and several surrounding smaller communities including Painted Hills.
- Palm Springs Crest System: the eastern most of the two small systems.
- West Palm Springs Village System: the western most of the two small systems.

The District consists of a consolidation of formerly private water systems. The existing Desert Hot Springs System is a combination of water distribution systems, some of which are interconnected and others that are completely independent. The Palm Springs Crest and West Palm Springs Village systems are located about 5 miles from the Desert Hot Springs System and there are currently no interconnects between the systems.

#### **2.1.1 Groundwater**

MSWD's water source is 100 percent groundwater, drawn from ten active wells that supply the Desert Hot Springs System and two wells each for the Palm Springs Crest System and the West Palm Springs Village System. Additional production from the Mission Creek subbasin comes from CVWD which has six production wells located in an area overlying the south central portion of the subbasin, and from approximately 200 private wells for domestic use.

MSWD is located in the northwestern portion of the Coachella Valley, in eastern Riverside County. Its service area contains a portion of the Upper Coachella Groundwater Basin and includes Mission Creek subbasin, Garnet Hill subbasin, Whitewater subbasin, San Gorgonio Pass subbasin, and the Desert Hot Springs subbasin, as presented in Figure 2-1. These subbasins were formed by the large and active faults that make up the San Andreas Fault system. All of the subbasins, except for Desert Hot Springs can provide potable water. The Desert Hot Springs subbasin is a "hot-water" basin that is highly mineralized with water temperatures exceeding 100 degrees Fahrenheit and is not used to supply potable water. However, this hot, highly mineralized water is important to the economy as it supports numerous spa resorts and hotels in and around the city of Desert Hot Springs.

Although the MSWD service area boundary overlies several subbasins, Figure 2-2 indicates that currently the producing water supply wells for the main MSWD System are primarily located within the Mission Creek subbasin with one new well located in the

Garnet Hill subbasin. The Palm Springs Crest System and the West Palm Springs Village System are both supplied by wells that draw from the Cabazon Storage Unit of the San Gorgonio Pass subbasin.

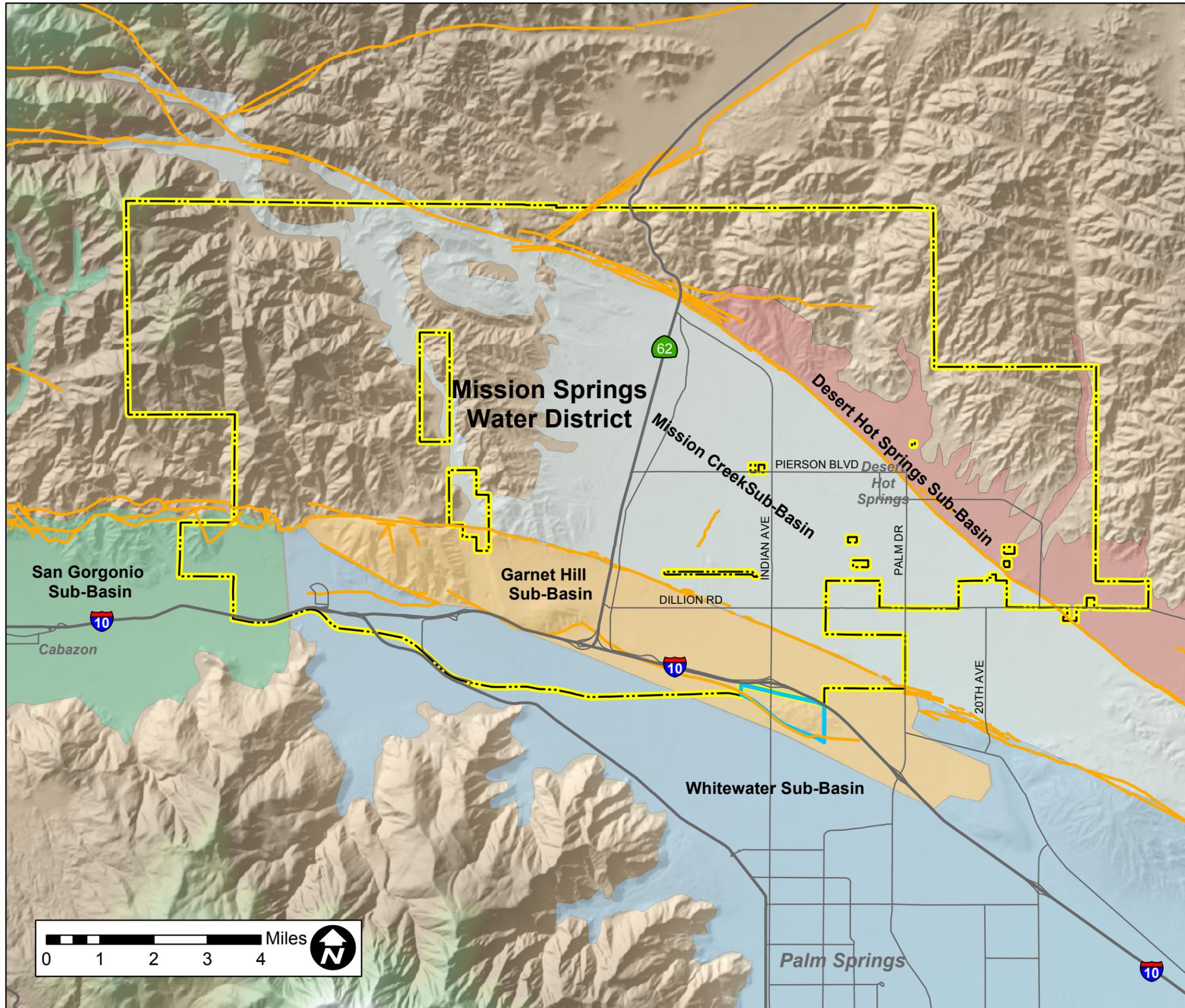
None of the groundwater basins in the Coachella Valley are adjudicated, therefore, there are no legal agreements limiting MSWD's pumping from any of the subbasins. Bulletin 118 (2003) is the most recent DWR bulletin that characterizes the condition of the Coachella Valley aquifer as a whole. Although DWR has not identified the Coachella Valley Groundwater Basin or any of its subbasins as being in overdraft, it does state that overdraft remains a "primary challenge" in the aquifer (DWR bulletin 118, Update 2003).

MSWD is in the development stages of a groundwater management plan and has participated in planning and preparing the Coachella Valley Integrated Regional Water Management Plan (IRWMP), in collaboration with CVWD, DWA, Indio Water Authority, and the Coachella Water Authority. The IRWMP was created by these water purveyors to address water management issues and is intended to be an ongoing process of regional collaboration for the sustainability of water supplies throughout the Coachella Valley (IRWMP 2010).

### **Mission Creek Subbasin**

The Mission Creek subbasin is located in the Upper Coachella Valley in the north central portion of Riverside County, California. The Mission Creek Fault and the Banning Fault bound the northern and southern edges of the subbasin, respectively, and are the major groundwater controls. Both act to limit groundwater movement as these faults have folded sedimentary deposits, displaced water-bearing deposits, and caused once permeable sediments to become impermeable (DWR, 1964). To the west, the subbasin is bounded by the San Bernardino Mountains and to the east by the Indio Hills and the Mission Creek Fault. Artesian conditions have historically been present near a narrow strip along the northwest portion of the Seven Palms Ridge (DWR, 1964), allowing for the development of a unique Willow-Mesquite biological community that includes phreatophytes. Depth to groundwater in other parts of the subbasin averages 300 feet below ground surface. Major surface water features in the area are the Whitewater River, Mission Creek, San Gorgonio River, Little and Big Morongo Washes, and Long Canyon.

The Mission Creek subbasin is filled with Holocene and late Pleistocene unconsolidated sediments eroded from the San Bernardino and Little San Bernardino Mountains. There are three significant water-bearing sedimentary deposits recognized in the subbasin: Pleistocene Cabazon Conglomerate and Pleistocene to Holocene Older alluvium and alluvial deposits. These deposits are generally coarse sand and gravel, poorly sorted alluvial fan and pediment deposits that coalesce with one another.

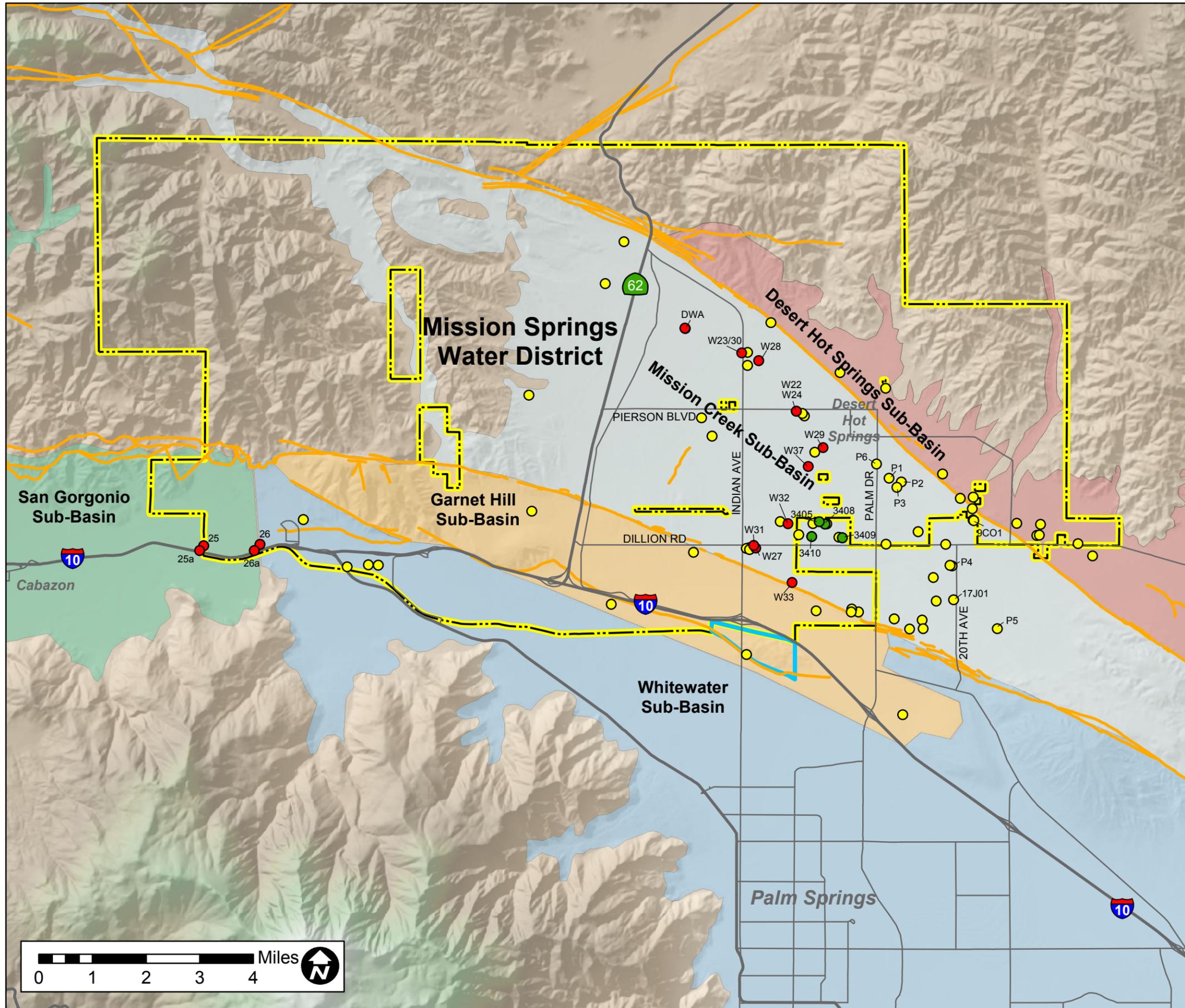


**Legend**

- MSWD Service Area Boundary
- Sphere of Influence
- Known Fault Lines
- UWMP Sub-Basins**
- Desert Hot Springs Sub-Basin
- Mission Creek Sub-Basin
- Garnet Hill Sub-Basin
- Whitewater Sub-Basin
- San Gorgonio Sub-Basin

**MSWD Groundwater  
Sub-Basins**

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**Legend**

- MSWD Service Area Boundary
- Sphere of Influence
- Known Fault Lines
- Private Wells
- Public Wells - MSWD
- Public Wells - CVWD

**UWMP Sub-Basins**

- Desert Hot Springs Sub-Basin
- Mission Creek Sub-Basin
- Garnet Hill Sub-Basin
- Whitewater Sub-Basin
- San Gorgonio Sub-Basin

**MSWD Well Locations**

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The Mission Creek subbasin is considered an unconfined aquifer with a saturated thickness of 1,200 feet or more and an estimated total storage capacity on the order of 2.6 million acre-feet (MAF). The subbasin is naturally recharged by surface and subsurface flow from the Mission Creek, Dry, and Big Morongo Washes, the Painted Hills, and surrounding mountain drainages. Irrigation return flow and discharges from municipal and individual subsurface wastewater disposal systems also contribute to recharge. Natural inflow has been supplemented with artificial recharge of imported water since 2003. Total 2009 inflow to the Mission Creek subbasin is estimated at 23,500 acre-feet per year (afy) (Psomas, 2010).

The primary outflows from the Mission Creek subbasin are through groundwater production for domestic, agricultural and commercial use. While groundwater production has varied over the years, it generally has been increasing from approximately 2,000 AFY in the 1970s to over 15,000 AFY in 2006. In addition, outflow occurs across the Banning Fault to the Garnet Hill subbasin and has been estimated at 7,400 AFY. Outflow also occurs across the semi-waterbearing rocks in the southeastern edge of the subbasin at a rate of approximately 3,500 AFY. Lastly, the consumption of groundwater by phreatophytes in the southern end of the subbasin has been estimated at 1,400 AFY. Total 2009 outflow from the Mission Creek subbasin has been estimated to be approximately 27,800 AFY. Correspondingly, the subbasin water budget (inflow-outflow) is estimated at -4,300 AFY which would indicate that the subbasin is in a negative balance. Table 2.1-1 presents a summary of the estimated inflows and outflows of the Mission Creek subbasin and the basis of estimates.

**Table 2.1-1**  
**Mission Creek subbasin Inflows/Outflows**

<b>Average Current Conditions (2009) Recharge and Discharge</b>	<b>Mission Creek Subbasin (AFY)</b>
<b>Inflow</b>	
Desert Hot Springs Subbasin	1,800
Septic and Irrigation Return Flows	2,900
Horton and Desert Crest Infiltration Ponds	1,000
Mountain Front Recharge and Stream Underflow	10,500
Artificial Recharge Facilities (Average for 2002 to 2009)	7,300
<b>Total Inflow</b>	<b>23,500</b>
<b>Outflow</b>	
Underflow to Garnet Hill Sub-Basin	7,400
Underflow to Semi-Waterbearing Rocks in Southeastern Portion of Sub-Basin	3,500
Pumpage	15,500
Evapotranspiration	1,400
<b>Total Outflow</b>	<b>27,800</b>
<b>Annual Balance</b>	<b>-4,300</b>

Regional water levels have been declining since the early 1950's due to scarce annual precipitation and groundwater extractions (DWR 2003). Water levels have declined in portions of the Mission Creek subbasin approximately 100 feet between the years 1936 and 2003. Based on CVWD's 2010-2011 Engineer's Report for the Mission Creek subbasin, cumulative gross overdraft between 1936 and 2009 is estimated at 118,000 acre-feet (AF). Based on CVWD's 2005-2006 Engineer's Report for the Mission Creek subbasin, it was estimated that approximately 1.78 MAF was in storage in the subbasin at the end of 1997, and estimated cumulative gross overdraft between 1978 and 2004 was 130,000 AF.

In 1976, CVWD and DWA entered into a Joint Water Management Agreement to manage groundwater in the western portion of the Coachella Valley. Due to continuing overdraft conditions in the Mission Creek subbasin, CVWD and DWA began constructing facilities to replenish the Mission Creek subbasin in October 2001. Facilities were completed in June 2002 and in December 2002, DWA and CVWD began recharge activities in the Mission Creek subbasin. The current replenishment program is effectively increasing water levels and is expected to stabilize or reverse the water level decline.

MSWD, DWA, and CVWD now jointly manage the Mission Creek subbasin under the terms of the Mission Creek Settlement Agreement (December, 2004). This agreement and the 2003 Mission Creek Groundwater Replenishment Agreement between CVWD and DWA specify that the available SWP water will be allocated between the Mission Creek and Whitewater River subbasins in proportion to the amount of water produced or diverted from each subbasin during the preceding year. In 2009, production from the Mission Creek subbasin was about 7 percent of the combined production from these two subbasins. CVWD, MSWD and DWA are jointly developing a water management plan for this subbasin.<sup>7</sup>

### **Garnet Hill subbasin**

The Garnet Hill subbasin which lies immediately south of the Mission Creek subbasin, underlies approximately 20 square miles and is subordinate to the Indio subbasin (DWR, 2003). The basin is bounded on the north by the Banning fault, on the south by the Garnet Hill fault, and on the east and west by non-water to semi-water bearing rocks.

The area between the Garnet Hill fault and the Banning fault, named the Garnet Hill subarea by DWR (2003), was considered a distinct subbasin by the USGS because of the effectiveness of the Banning and Garnet Hill faults as barriers to groundwater movement. This is illustrated by a difference of 170 feet in groundwater level elevation in a horizontal distance of 3,200 feet across the Garnet Hill fault, as measured in Spring 1961.

The Garnet Hill subbasin is considered an unconfined aquifer with a saturated thickness of 1,000 feet or more and an estimated total storage capacity on the order of 1.0 MAF

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<sup>7</sup> CVWD Draft 2010 UWMP, May 2011.

(DWR 2003). The subbasin is naturally recharged by subsurface flow from the Mission Creek subbasin and runoff from the Whitewater River watershed on the west. Irrigation return flow and discharges from municipal and individual subsurface wastewater disposal systems also contribute to recharge but is considered very small. Total 2009 inflow to the Garnet Hill subbasin is estimated at 25,150 acre-feet (PSOMAS, 2010).

The primary outflows from the Garnet Hill subbasin are across the Garnet Hill Fault to the Upper Whitewater River subbasin. In addition, limited groundwater production for domestic, agricultural and commercial use also occurs but has only recently been of any significance. Groundwater production has varied over the years, ranging from a high of over 4,000 AFY in the early 1950s to less than 50 AFY in the mid-1980s. Currently, groundwater production is estimated at between 300-500 AFY (PSOMAS, 2010). MCWD constructed Well 33 in the Garnet Hill subbasin with production since 2007.

Currently, there is no replenishment assessment program in the Garnet Hill subbasin. MSWD, CVWD and DWA are jointly developing a water management plan for this subbasin along with the Mission Creek subbasin.

### **Desert Hot Springs subbasin**

The Desert Hot Springs subbasin is bounded to the north by the Little San Bernardino Mountains and to the southeast by the Mission Creek and San Andreas Faults. The San Andreas Fault separates the Desert Hot Springs subbasin from the Whitewater River subbasin and serves as an effective barrier to groundwater flow. The Desert Hot Springs subbasin is not extensively developed except in the area of Desert Hot Springs. Relatively poor groundwater quality has limited the use of this subbasin for potable supply.

Total groundwater storage capacity for the Desert Hot Springs subbasin is estimated to be 4.1 MAF (DWR 2003). No municipal groundwater production is reported to occur in the subbasin (CVWD, 2010).

### **Whitewater River subbasin**

The Whitewater River subbasin, part of what was once referred to as the Indio subbasin, comprises the major portion of the floor of the Coachella Valley and encompasses approximately 400 square miles. Beginning approximately one mile west of the junction of State Highway 111 and Interstate 10, the Whitewater River subbasin extends southeast approximately 70 miles to the Salton Sea. The subbasin is bordered on the southwest by the Santa Rosa and San Jacinto Mountains, and is separated from the Garnet Hill, Mission Creek and Desert Hot Springs subbasins to the north and east by the Garnet Hill and San Andreas Faults.

The limit of the Whitewater River subbasin along the base of the San Jacinto Mountains and the northeast portion of the Santa Rosa Mountains coincides with the Coachella Valley groundwater basin boundary. The Garnet Hill Fault, which extends southeastward from the north side of San Geronimo Pass to the Indio Hills, is a relatively effective

barrier to groundwater movement in the Garnet Hill subbasin. The San Andreas Fault, extending southeastward from the junction of the Mission Creek and Banning faults in the Indio Hills and continuing out of the basin on the east flank of the Salton Sea, is also an effective barrier to groundwater movement.

The historic fluctuations of water levels within the Whitewater River subbasin indicate a steady decline in the levels throughout the subbasin prior to 1949.

### **Cabazon Storage Unit of the San Gorgonio Pass subbasin**

A portion of the MSWD western service area is underlain by the San Gorgonio Pass subbasin. The portion of the Coachella Valley Groundwater Basin that lies entirely within the San Gorgonio Pass is described as the San Gorgonio Pass subbasin (DWR 1964). This subbasin is bounded on the north by the San Bernardino Mountains and by semi-permeable rocks, and on the south by the San Jacinto Mountains. A surface drainage divide between the Colorado River and South Coastal Hydrologic Study Areas bounds the subbasin on the west. The eastern boundary is formed by a bedrock constriction that creates a groundwater cascade into the Indio subbasin (DWR 1964).

The main water bearing deposits in the subbasin are Holocene and Pleistocene age alluvium and Pliocene to Pleistocene age San Timoteo Formation. Holocene alluvium is mostly gravel and sand and, where saturated, would yield water readily to wells. Within the subbasin, these deposits lie largely above the water table and contribute little water to wells. Holocene alluvium is found in the tributaries of the subbasin and allows runoff to infiltrate and recharge the subbasin (DWR, 1987). Older, Pleistocene-age alluvium contains sand and gravel, but also large amounts of clay and silt. These deposits yield moderate amounts of water to wells (DWR 1987).

Groundwater levels throughout the subbasin declined significantly from 1933 through 1939 during the construction of the San Jacinto Tunnel as large quantities of groundwater were pumped and diverted into the Indio subbasin (SGPWA 2001). Groundwater levels in the eastern part of the subbasin rose or stayed the same between 1967 and 1987 (DWR, 1987). Total storage capacity of the subbasin was estimated to be about 2.7 MAF by DWR (1964). A re-evaluation by DWR (1987) estimates total storage capacity to be about 2.2 MAF.

The San Gorgonio Pass subbasin is subdivided into a series of storage units that include: the Banning Bench, Banning, Beaumont, and Cabazon storage units (Boyd, 1969). The Cabazon storage unit within the San Gorgonio Basin is recharged naturally with runoff from the adjacent San Jacinto and San Bernardino Mountains.

The Cabazon storage unit encompasses approximately 11 square miles. The Cabazon storage unit is located near the western boundary of the MSWD boundary. MSWD operates four wells in the Cabazon storage unit. Other groundwater users in the Cabazon storage unit include Desert Hills Premium Outlets and Cabazon Water District.

## 2.1.2 Groundwater Replenishment

CVWD and DWA are remediating the overdraft condition of the groundwater in the Upper Coachella Valley by artificial replenishment with Colorado River and SWP water. Colorado River water is used to recharge the Lower Whitewater River subbasin, while SWP Exchange water is used to recharge the Upper Whitewater and Mission Creek subbasins. These two sources of water are discussed in this section.

Starting in 1973, the Upper Whitewater River subbasin has been replenished using SWP exchange water for groundwater recharge. CVWD and DWA hold an agreement with Metropolitan to exchange, on an acre-foot-for-acre-foot basis, CVWD's and DWA's SWP water for a like amount of Metropolitan's Colorado River water. A replenishment program using SWP exchange water is also established for the Mission Creek subbasin with recharge beginning in 2003.

### State Water Project

To recharge groundwater supplies in the Upper Whitewater River and Mission Creek subbasins, CVWD and DWA obtain imported water supplies from the SWP. The SWP is managed by DWR and includes 660 miles of aqueduct and conveyance facilities extending from Lake Oroville in northern California to Lake Perris in the south. The SWP has contracts to deliver 4.172 million AFY to 29 contracting agencies. Each year, DWR determines the amount of water available for delivery to SWP contractors based on hydrology, reservoir storage, the requirements of water rights licenses and permits, water quality and environmental requirements for protected species in the Sacramento-San Joaquin Delta. The available supply is then allocated according to each SWP contractor's Table A Amount.

CVWD and DWA jointly manage their combined SWP Table A Amounts, allocating costs in proportion to total groundwater production within the Upper Whitewater and Mission Creek portions of their respective service areas. There are no physical facilities to deliver SWP water to the Valley. CVWD's and DWA's Table A water is exchanged with Metropolitan for a like amount of Colorado River water from Metropolitan's Colorado River Aqueduct (CRA) that extends from Lake Havasu, through the Coachella Valley to Metropolitan's Lake Mathews.

Metropolitan, DWA and CVWD executed an advanced delivery agreement in 1985 that allowed Metropolitan to pre-deliver up to 600,000 AF of SWP water into the Coachella Valley. Metropolitan then has the option to deliver the SWP allocation either from the CRA or from water previously stored in the basin. This agreement was subsequently amended to increase the pre-delivery amount to a maximum of 800,000 AF. The amount of water that has been pre-delivered is accounted for annually and reported in the Engineer's Reports on Water Supply and Replenishment prepared by CVWD and DWA.<sup>8</sup>

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<sup>8</sup> CVWD Draft 2010 UWMP, May 2011.

Metropolitan historically has not made full use of its SWP Table A Amounts in normal and wet years. Under the 2003 Exchange Agreement, CVWD and DWA acquired 100,000 AFY of Metropolitan's SWP Table A water as a permanent transfer (CVWD-DWA-Metropolitan, 2003). The water is exchanged for Colorado River water and recharged at the existing Whitewater and Mission Creek Recharge Facilities. Metropolitan has the option to call back the water in years when needed. To estimate the average supply from this transfer conservatively, the CVWMP assumes that Metropolitan would exercise its option to callback the 100,000 AFY in 4 wet years out of every 10 years. The actual frequency of callback would depend on the availability of Metropolitan's water supplies to meet its demands. Since 2003, Metropolitan has called back the water only in 2005.<sup>9</sup>

In 2004 CVWD purchased an additional SWP Table A water from the Tulare Lake Basin Water Storage District (Tulare Lake Basin) in Kings County (DWR, 2004). In 2007, DWA and CVWD purchased Table A SWP water from Tulare Lake Basin and from the Berrenda Mesa Water District in Kern County (DWR, 2007a). DWA's total SWP Table A allocation is 55,750 AFY and CVWD's total allocation is 138,350 AFY for a combined allocation of 195,100 AFY. Table 2.1-2 summarizes CVWD's and DWA's total allocations of Table A SWP water.<sup>10</sup>

**Table 2.1-2**  
**State Water Project Sources**

Agency	Original Table A	Tulare Lake Basin Transfer #1	Tulare Lake Basin Transfer #2	Metropolitan Transfer	Berrenda Mesa Transfer	Total
CVWD	23,100	9,900	5,250	88,100	12,000	138,350
DWA	38,100	0	1,750	11,900	4,000	55,750
<b>Total</b>	<b>61,200</b>	<b>9,900</b>	<b>7,000</b>	<b>100,000</b>	<b>16,000</b>	<b>194,100</b>

Source: CVWD Draft 2010 UWMP, May 2011.

Although CVWD and DWA have contracts for the amount shown in Table 2.1-2, the amount of water they are actually allocated in any given year is based on the amount of SWP water available. For 2010, the allocation was 50% of the total contracted amount.

### Colorado River Water

As discussed above, DWA and CVWD use Colorado River Water to replenish both the Whitewater River and Mission Creek subbasins in exchange for SWP water. Colorado River water has been a major source of supply for the Coachella Valley since 1949 with the completion of the Coachella Canal. In addition to groundwater recharge, this water is used for agricultural and non-urban purposes. The Colorado River is managed and

<sup>9</sup> CVWD Draft 2010 UWMP, May 2011.

<sup>10</sup> CVWD Draft 2010 UWMP, May 2011.

operated in accordance with the *Law of the River*, the collection of interstate compacts, federal and state legislation, various agreements and contracts, an international treaty, a U.S. Supreme Court decree, and federal administrative actions that govern the rights to use of Colorado River water within the seven Colorado River Basin states.

California's apportionment of Colorado River water is allocated by the 1931 *Seven Party Agreement* among Palo Verde Irrigation District (PVID), Imperial Irrigation District (IID), CVWD and Metropolitan. The three remaining parties - the City and the County of San Diego and the City of Los Angeles – are now served by Metropolitan. California's Colorado River supply is protected by the 1968 Colorado River Basin Project Act (PL 90-537, 1968). This act provides that, in years of insufficient supply on the main stream of the Colorado River, supplies to the Central Arizona Project shall be reduced to zero before California will be reduced below 4.4 million AF in any year. This provision assures full supplies to the Coachella Valley except in periods of extreme drought.<sup>11</sup>

## **2.2 WATER SUPPLY**

The primary source of water supply for each of the three water systems is groundwater obtained through production wells. The MSWD service area currently includes ten wells that supply the Desert Hot Springs System and two wells each for the Palm Springs Crest System and the West Palm Springs Village System. An emergency source of water for MSWD is the CVWD. MSWD currently has two inter-connections with the CVWD that can be used to provide emergency water to the main system on a temporary and limited basis.

A third source of water is obtained through an agreement between the DWA and Metropolitan to exchange Colorado River water for SWP water. DWA obtains this water through a turnout from the CRA and manages a recharge facility near the turnout that enables the water (when it is available) to replenish the aquifer used by MSWD and CVWD. Table 2.2-1 provides a comparison of the existing groundwater supply capacity with projected average daily demand (ADD) and maximum daily demand (MDD) in the MSWD service zone. The ADD is based on projected groundwater production shown in Table 2.2-6 and equal to the total projected demand minus projected recycled water supply.

### **2.2.1 Import Connections**

An emergency source of water for MSWD is the CVWD. MSWD currently has two inter-connections with the CVWD that can be used to provide emergency water to the Main System on a temporary and very limited basis.

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<sup>11</sup> CVWD Draft 2010 UWMP, May 2011.

**Table 2.2-1  
Comparison of Existing Water Supply Capacity vs. Projected MDD**

Well Supply Zone	Study Year	Projected ADD (mgd)	Projected MDD <sup>1</sup> (mgd)	Available Supply 24-hr Continuous Pumping <sup>2</sup> (mgd)	Available Supply Off Peak Pumping Only <sup>3</sup> (mgd)	Available Supply 24-hr Pumping w/o Largest Well <sup>4</sup> (mgd)	Most Critical Surplus or Shortfall <sup>5</sup> (mgd)	Number of Additional Wells Needed <sup>6</sup>	Comments
All MSWD Zones	2015	12.77	25.54	24.62	18.46	n/a	n/a	4	capacity varies
	2020	12.86	25.71	24.62	18.46	n/a	n/a	1	capacity varies
	2025	13.39	26.79	24.62	18.46	n/a	n/a	0	capacity varies
	2030	14.73	29.46	24.62	18.46	n/a	n/a	2	capacity varies
<b>Total Wells Needed</b>								<b>7</b>	
<b>West Palm Springs Village System</b>									
Wells 26 & 26A	2015	0.14	0.28	0.75	0.56	0.24	-0.03	1	150 gpm well
	2020	0.17	0.33	0.75	0.56	0.24	-0.09	0	
	2025	0.17	0.34	0.75	0.56	0.24	-0.10	0	
	2030	0.19	0.39	0.75	0.56	0.24	-0.14	0	
<b>Total Wells Needed</b>								<b>1</b>	
<b>Palm Springs Crest System</b>									
Wells 25 & 25A	2015	0.09	0.19	0.83	0.62	0.25	0.07	0	
	2020	0.11	0.22	0.83	0.62	0.25	0.03	0	
	2025	0.11	0.23	0.83	0.62	0.25	0.02	0	
	2030	0.13	0.26	0.83	0.62	0.25	-0.01	0	
<b>Total Wells Needed</b>								<b>0</b>	

<sup>1</sup> MDD computed using the ADD and a multiplier of 2.0. ADD equals total projected demand minus projected recycled water supply.

<sup>2</sup> 24-Hour Pumping Available Supply computed by converting the measured pumping capacity from gpm to mgd.

<sup>3</sup> Off-Peak Pumping is MSWD's normal operating mode in which its wells are only operated during the electrical off-peak hours (18 hours between 5:30 PM and 11:30 AM) as a cost-saving measure. Off-Peak Hour Pumping supply computed by multiplying the 24 hour pumping capacity by the ration of 18/24. .

<sup>4</sup> 24-Hour Pumping w/o Largest Well. Supply computed by subtracting the largest well capacity from the 24-hour continuous pumping supply.

<sup>5</sup> The Most Critical Surplus (Available Supply exceeds Demand) or Shortfall (MDD exceeds Available Supply) is computed by first subtracting the MDD from each of the three pumping scenarios and accounting for whether they are pumping 18 hours or 24 hours. The largest surplus or shortfall that is computed using these three calculations is shown.

<sup>6</sup> The number of required wells (if any) is computed by dividing the Most Critical Shortfall by the minimum assumed capacity of each well (typically up to a maximum of 1500 gpm or 1.62 mgd for an 18-hour pumping period per day for any one well). Includes Well 35 in Mission Creek subbasin that is already drilled but not yet outfitted.

DWA is the MSWD's wholesale supplier for the SWP. As a State Water Contractor, DWA is entitled to SWP water. A conveyance system to provide SWP water directly to the Coachella Valley currently does not exist. However, the CRA does go through the valley. DWA has entered into an agreement with Metropolitan to exchange SWP water for CRA water.

In 1997, Metropolitan tapped into the CRA for DWA and installed a 48-inch turnout just south of Indian Avenue and west of Worsley Road. DWA acquired approximately 190 acres of land in the vicinity of the turnout in order to construct spreading ponds to hold the Colorado River water as it percolates downward into the Mission Creek subbasin. DWA completed construction of 60 acres of recharge basins as the Mission Creek Recharge Facilities in June 2002. The replenishment program began in the 2003-2004 fiscal year and has replenished the Mission Creek subbasin with a cumulative total of approximately 60,625 AF of supplemental water (CVWD, 2010 Engineer's Report).

A summary of the recharge water deliveries to Mission Creek subbasin for 2005-2010 is provided in Table 2.2-2. The variation in recharge water deliveries is due to the variability of SWP deliveries. The year 2010 was a very successful year for groundwater replenishment due to relatively wet conditions in Northern California with over 33,000 AF of water replenished.

**Table 2.2-2**  
**Groundwater Recharge Deliveries**  
**Mission Creek Subbasin**

<b>Year</b>	<b>Recharge Deliveries (AFY)</b>
2005	24,723
2006	19,901
2007	1,011
2008	503
2009	4,090
2010	33,210

The possibility of continued recharge depends largely on the reliability of future water supplies from the SWP and on Metropolitan's exchange agreements with DWA and CVWD. This source of water does provide a significant amount of inflow to the northwesterly portion of the Mission Creek subbasin and reduces the amount of overdrafting of the aquifer.

**2.2.2 Reservoirs/Tanks**

The MSWD water supply system does not contain any open reservoirs but does consist of assorted water tanks distributed throughout the MSWD service area to supply general water requirements on an as-needed basis. Table 2.2-3 provides a summary of the available water storage capabilities within the MSWD service area.

**Table 2.2-3  
Summary of Available Water Storage Capacity in  
MSWD Service Area**

<b>Area</b>	<b>No. of Tanks</b>	<b>Total Storage Capacity (million gallons)</b>
<b>Mission Creek Subbasin</b>		
913 Zone	1	2.00
1070 Zone	3	1.76
1240 Zone	4	7.14
1400 Zone	4	4.42
1530 Zone	4	3.57
1630 Zone	2	0.36
<i>Sub-Total</i>		<i>19.25</i>
<b>Cabazon Storage Unit</b>		
1630 Cottonwood	1	0.28
1840 Woodridge	1	0.12
<i>Sub-Total</i>		<i>0.40</i>
<b>TOTAL</b>		<b>19.65</b>

### 2.2.3 Groundwater

MSWD draws 100 percent of its water supply from groundwater. Table 2.2-4 lists the active wells including age, depth and capacity.

**Table 2.2-4  
 MSWD Wells**

<b>Well No.</b>	<b>Age (years)</b>	<b>Depth (feet)</b>	<b>Capacity (gpm)</b>
Mission Creek Sub-Basin			
MW-22	40	800	1,750
MW-24	37	800	2,000
MW-27	30	400	1,100
MW-28	21	900	1,900
MW-29	18	1,070	1,700
MW-30 <sup>(1)</sup>	18	1,100	850
MW-31	17	1,000	1,900
MW-32	6	1,000	1,900
MW-34	4	1,050	600
MW-35 <sup>(2)</sup>	0	1,000	0
MW-37	1	1,100	1,400
Garnet Hill Sub-Basin			
MW-33	6	670	900
San Gorgonio Pass Sub-Basin, Cabazon Unit			
MW-25	53	465	400
MW-25A	8	600	175
MW-26	79	575	350
MW-26A	9	285	170

(1) Well 30 offline indefinitely.

(2) Well 35 indeterminate when it will be completed.

Table 2.2-5 summarizes the amount of groundwater pumped by the District for the last six years. Table 2.2-6 projects the amount of water that will be pumped from each groundwater subbasin in the future.

**Table 2.2-5  
Historic Groundwater Production  
(AFY)**

Well No.	2005	2006	2007	2008	2009	2010
<i>Mission Creek Sub-Basin</i>						
MW-22	2,322.67	2,077.79	1,313.77	928.85	1,079.95	980.03
MW-24	1,126.41	927.47	1,563.50	2,433.48	1,356.35	788.76
MW-27	656.25	449.87	494.19	517.61	1,040.94	466.19
MW-28	1,547.56	1,704.95	1,345.22	1,326.43	964.48	378.43
MW-29	1,982.70	2,134.18	1,796.41	1,429.04	1,775.05	1,513.29
MW-30 <sup>(1)</sup>	765.59	777.24	751.60	89.86	0.00	0.00
MW-31	1,671.67	1,220.20	1,410.27	1,361.53	1,756.38	1,612.93
MW-32	519.00	1,866.15	1,096.60	972.25	494.14	643.63
MW-34	0.00	0.00	115.50	411.26	0.00	505.19
MW-35 <sup>(2)</sup>	0.00	0.00	0.00	0.00	0.00	0.00
MW-37	0.00	0.00	0.00	0.00	329.35	1,344.51
<i>Garnet Hill Sub-Basin</i>						
MW-33	0.00	0.00	515.89	330.18	357.32	287.88
<i>San Geronio River Sub-Basin - Cabazon Unit</i>						
MW-25	25.00	24.77	35.57	25.70	20.65	20.29
MW-25A	78.59	51.10	46.80	37.65	50.09	43.60
MW-26	105.91	64.05	77.61	68.52	74.64	72.16
MW-26A	0.00	51.36	44.97	31.19	15.79	7.83

(1) Well 30 is currently inactive due to water quality issues. Offline indefinitely.

(2) Well 35 is drilled but not yet outfitted. It is indeterminate when it will be online.

**Table 2.2-6  
Projected Groundwater Production  
(AFY)**

Basin	2010	2015	2020	2025	2030	2035
Mission Creek and Garnet Hill Sub-Basins	8,520	14,040	14,090	14,680	16,140	17,710
SGPGWB – Cabazon Unit	140	260	310	320	360	390
<b>Total<sup>(1)</sup></b>	<b>8,660</b>	<b>14,300</b>	<b>14,400</b>	<b>15,000</b>	<b>16,500</b>	<b>18,100</b>

(1) Based on total water demand from Table 5.1-1 minus recycled water use from Table 8.2.

## **2.2.4 Recycled Water**

Recycled water is defined by the California Water Code as “water, which, as a result of treatment of waste, is suitable for a direct beneficial use or a controlled use that would not otherwise occur and is therefore considered a valuable resource.” The availability of recycled water is limited to water generated as part of the wastewater treatment associated with sewage collected from sewer residential, commercial, and industrial properties.

MSWD currently operates two wastewater treatment plants serving a total of approximately 7,300 developed parcels. The plants are the Horton Treatment Plant and the Desert Crest Treatment Plant with capacities of 2,300,000 gal/day (2,800 AFY) and 180,000 gal/day (202 AFY), respectively. The disposal of effluent from both the Horton and Desert Crest treatment plants is accomplished by utilizing percolation ponds located within the plants on the southwest (potable water) side of the Mission Creek Fault. In addition, effluent is used for irrigation and maintenance at the treatment plants. The District’s wastewater treatment plants currently treat wastewater using an aerobic secondary treatment process.

MSWD is currently evaluating the potential for establishing a new wastewater treatment plant as well as upgrading the existing treatment plants to use the generated recycled water for other uses including landscape irrigation for golf courses and parks. MSWD is proceeding with an Engineer’s Preliminary Report for the assessment for a reclamation facility near I-10 and Indian Avenue. The District is also preparing a preliminary sewer collection system design to be completed in the next fiscal year. MSWD has prepared an Appraisal Report evaluating the potential to develop a recycled water system within the District through the United States Bureau of Reclamation’s (USBR) Title XVI of Public Law 102-575 process. To date, financing for this program has been through federal grants and matching District funds. Once this planning process is complete, it is envisioned that the District will move forward to recycle most, if not all, of its wastewater to help provide additional water supplies to its customers.

For the purposes of this UWMP, it is assumed that MSWD will pursue wastewater reclamation and recycled water use. It is further assumed that the plan will be initially operable by 2020 and by 2025 will reclaim and reuse all of the wastewater generated within the service area for irrigation of golf courses and other suitable landscaping purposes. The wastewater flow projections are reduced by 10% to account for treatment system losses and the remainder is projected as a source of water supply. The District currently percolates treated effluent into the groundwater basin. Though this does not reduce the demand for pumped groundwater, it does provide recharge that benefits basin as a whole and lessens the impact of pumping. If a recycled water system is delayed past the 2020 projection or proves to be infeasible, effluent will continue to be percolated into the groundwater basin for future reuse. In this case, groundwater return flow will provide the volume needed to meet irrigation demands that were projected to be supplied through recycled water.

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### **3 WATER QUALITY**

#### **3.1 WATER QUALITY OF EXISTING SOURCES**

Water quality for public drinking water systems is regulated by the U.S. Environmental Protection Agency (U.S. EPA) and the DHS. The Safe Drinking Water Act has established national primary and secondary drinking water standards for public water systems. Through primacy, the State of California has established more stringent standards than those enacted by EPA. Primary drinking water standards include regulations over the following type of constituents: turbidity, microorganisms, disinfection byproducts, disinfectants, inorganic chemicals, organic chemicals, and radionuclides. Secondary drinking water standards include the following components: aluminum, chloride, color, corrosivity, fluoride, foaming agents, and odor.

As required by the Safe Drinking Water Act, which was reauthorized in 1996, the District provides annual Water Quality Reports to its customers; also known as Consumer Confidence Reports (CCR). This mandate is governed by the EPA and the DHS to ensure the safety of potable water. As mentioned earlier, the District's source of water is 100 percent from groundwater.

##### **3.1.1 Groundwater**

Historic groundwater quality data for the Mission Creek subbasin was evaluated by Slade (2000) from samples taken from MSWD and CVWD wells between 1961 and 1998 and is summarized as follows:

- Groundwater in the subbasin ranges in character from a calcium-magnesium bicarbonate type in the northwest to sodium chloride-sulfate type in the southeast.
- Total dissolved solids (TDS) concentrations in groundwater samples taken from MSWD/CVWD municipal wells ranged from 271 milligrams per liter (mg/L) to 490 mg/L. All samples analyzed were below the State of California recommended Secondary Maximum Contamination Level (MCL) of 500 mg/L for TDS.
- Total hardness has historically ranged from 56 mg/L to 252 mg/L as measured in municipal wells. These concentrations indicate moderately hard to hard water.
- The pH concentration of groundwater in the MCGS has ranged from 7.2 to 8.3.
- Nitrate as NO<sub>3</sub> concentrations have ranged from not detected (ND) to 7.6 mg/L.
- Iron (Fe) concentrations have ranged from ND to 0.242 mg/L, below its State of California Secondary MCL of 0.300 mg/L.

- Magnesium (Mg) ranged in concentration from ND to 0.010 mg/L, below its State of California Secondary MCL of 0.050 mg/L.

Additional samples have since been taken and the overall characteristics of the basin have not significantly changed. Table 3.1-1 presents general water quality characteristics of groundwater produced from selected wells in each subbasin and data provided in the District's 2009 CCR.

**Table 3.1-1**  
**Summary of Groundwater Quality**

Constituent	Year	Range
<i>Mission Creek Sub-Basin</i>		
Nitrates as NO <sub>3</sub> (mg/L)	2009	ND-5.9
Total Dissolved Solids (mg/L)	2008	230-570
VOCs	2005	ND
MTBE	2005	ND
NDMA	2005	NT
<i>San Gorgonio River Sub-Basin - Cabazon Unit</i>		
Nitrates as NO <sub>3</sub> (mg/L)	2009	3.4-13
Total Dissolved Solids (mg/L)	2008	290-430
VOCs	2005	ND
MTBE	2005	ND
NDMA	2005	NT

Notes: ND=Not Detected; NT=Not tested.

### **Nitrates**

Nitrates as NO<sub>3</sub> was detected but all samples were below the MCL of 45 mg/L.

### **Total Dissolved Solids**

Total dissolved solids ranged from 230 mg/L to 570 mg/L. Well 24 reported that the highest TDS levels in excess of 500 mg/L but within the secondary MCL of 1,000 mg/L.

### **Volatile organic compounds (VOC)**

VOCs were reported as being not detected in all samples.

### **Methyl Tertiary-Butyl Ether (MTBE)**

MTBE was reported as not detected in all samples collected and reported by MSWD.

### ***N-nitrosodimethylamine (NDMA)***

NDMA was not tested for in any samples reported by MSWD.

### ***Emerging Contaminants***

No emerging contaminants have been identified in any samples reported by MSWD.

### ***Other***

In addition, URS (2005) reviewed the water quality testing data received from the respective agencies and has identified water quality parameters that equaled or exceeded the published regulatory standards. The wells and the specific standards in question are presented below and are based on laboratory data received between the years 1989 and 2003 and the District's 2009 CCR.

- Well 24 reported to have a gross alpha value of 15 picocuries per liter (pCi/L) that is the maximum limit for primary drinking water and Title 22 standards. Average gross alpha for the Desert Hot Springs system in 2008 equaled 4 pCi/L and ranged between ND to 20 pCi/L. Although individual samples may exceed the MCL, compliance with standard is based on a 4-quarter average, which was below the MCL.
- Well 24 had a violation of the concentration of Lindane (a pesticide) at 0.4 µg/L in 1989. The recommended primary drinking water and Title 22 limit is 0.2 mg/L. In the year 1992 Lindane was not detected.
- Well 26 had a reading of 6 µg/L for antimony that is also the maximum recommended value under the primary drinking water and Title 22 standards.
- Well 26A had high uranium values from 19 to 21.3 pCi/L for 6 consecutive samples in the years 2001 to 2004. The maximum Title 22 drinking water concentration is 20 pCi/L. This site is currently on fulltime treatment for uranium and has never received a citation from the Health Department for exceeding the MCL. These values were reported before the well went into service for domestic use. There was a period of time from 2001 to 2004 when the MSWD was exploring other options prior to finally putting it in service with fulltime treatment.
- Well 26A had gross alpha counts of 23 to 27 pCi/L for three samples taken in 2001 through 2002. The Title 22 standard is 15 pCi/L. Based on 2008 measurements of the West Palm Springs Village system, gross alpha counts were not detected. This site is currently on fulltime treatment.
- Well 28 and Well 34 are both on fulltime treatment for uranium to preclude exceeding the MCL. Neither of these sites have ever received a citation from the Health Department for exceeding the MCL.

## **Water Quality Programs**

The MSWD's existing groundwater quality was reviewed and found to be excellent. All urban water served by MSWD meets state and federal drinking water quality standards (MSWD, Water Quality Report, 2009). Based on trends extrapolated from water quality data for the period ranging from 1984 to 2009, future groundwater quality is also expected to be of high quality.

### **3.1.2 Imported Water**

DWA and CVWD continue to recharge the Mission Creek subbasin with CRA water. Specific concerns arise related to the existing water quality and salinity and other compounds that have been detected in CRA water. The following discussion provides an overview of potential concerns related to imported water use in the District.

### **3.1.3 Salinity**

Water from the CRA has the highest level of salinity of all Metropolitan's sources of supply. SWP Exchange water is Colorado River water delivered via the CRA. Based on historical and projected variations in Colorado River water quality, the TDS range for the SWP Exchange water recharged at the Whitewater River Recharge Facility is 530 to 750 mg/L, averaging 636 mg/L since 1973 (CVWD Draft 2010 UWMP). Several actions have been taken on the state and federal level to control the salinity of the river such as the Colorado River Basin Salinity Control Act in 1974 and formation of the Colorado River Basin Salinity Control Forum. In 1975, water quality standards and a plan for controlling salinity were approved by the Environmental Protection Agency.

CVWD and DWA, along with other partner agencies, are evaluating the feasibility of importing SWP water to the Coachella Valley via a direct connection to the SWP. If constructed, a SWP extension would terminate at the Whitewater and Mission Creek spreading facilities.

### **3.1.4 Perchlorate**

Perchlorate is a contaminant of concern and is known to have adverse effects on the thyroid. Currently, there is no federal MCL for perchlorate; however, the state MCL for perchlorate is 6 µg/L. In January 2011, the California Office of Environmental Health Hazard Assessment (OEHHA) released for public comment a new draft Public Health Goal (PHG) of 1 µg/L for perchlorate in drinking water. Perchlorate is difficult to remove from water supplies with conventional water treatment. Successful treatment technologies include nanofiltration, reverse osmosis, biological treatment, and fluidized bed bioreactor treatment.

Perchlorate has been detected at low levels in the Colorado River water supply. Perchlorate was found in Colorado River water imported to the Coachella Valley in the

late 1990s. Treatment was initiated in 1999 in Nevada at three different locations. This has resulted in significant reduction in perchlorate concentration in the Colorado River. Concentrations have steadily declined since the initiation of treatment and have reached levels below the state reporting level of 2 µg/L. Metropolitan continues to monitor perchlorate contamination of the Colorado River as well as research various treatment options. Based on the current state MCL, perchlorate would not affect water supply reliability.

### **3.1.5 Uranium**

There are two possible sources of uranium in the Coachella Valley. The first is naturally occurring uranium in the geologic formations of the basin. The second is contamination along the Colorado River. A review of data from the SWRCB Groundwater Ambient Monitoring and Assessment (GAMA) program over the past ten years indicates no wells having uranium levels exceeding the 20 pCi/L MCL. There are uranium mine tailings located approximately 600 feet from the river. Rainfall seeps through the tailings and contaminates the local groundwater which flows to the river. The site is currently under the control of the U.S. Department of Energy (DOE). The DOE is undertaking a project to move 10.8 million tons of radioactive tailings by rail to a lined pit about 30 miles from the Colorado River. The removal is expected to take approximately 20 years. Based on sampling in the Canal, uranium concentrations over the last four years have varied from 3.5 pCi/L to 6.1 pCi/L, with the most recent reading of 3.5 pCi/L (May 2010), which is well below the California MCL of 20 pCi/L. MSWD and other Valley agencies (CVWD, DWA, City of Indio, City of Coachella) continue to monitor for radioactive materials in well water and Colorado River water. Currently MSWD wells 28, 34, and 26A have fulltime uranium treatment to preclude exceeding the MCL and are planned for future replacement (well 28) or blending (well 34) to alleviate the need for treatment.

### **3.1.6 N-nitrosodimethylamine (NDMA)**

NDMA is an emerging contaminant that may have an impact on the water supply. Although Metropolitan's water supplies are non-detect for NDMA, there is a concern that chlorine and monochloramine can react with organic nitrogen precursors to form NDMA.

### **3.1.7 Hexavalent Chromium (Chromium-6)**

Chromium-6 (hexavalent chromium) is currently regulated in California under the 50 µg/L maximum contaminant level (MCL) for total chromium. California's MCL for total chromium was established in 1977 under what was then a "National Interim Drinking Water Standard" for chromium. The total chromium MCL was established to address exposures to chromium-6, which is considered to be the more toxic form of chromium. California State's Office of Environmental Health Hazard Assessment (OEHHA) released a draft PHG for public comment of 0.06 µg/L for chromium-6 in August 2009. In December 2010, OEHHA released a revised draft PHG of chromium-6 of 0.02 µg/L for public comment. The public comment period closed on February 15, 2011. Once the chromium PHG is finalized, DPH can proceed with the MCL process (DPH, 2011). In

September, 2010, U.S. Environmental Protection Agency (USEPA) released a draft of the scientific assessment (Toxicological Review of Hexavalent Chromium) for public comment and external peer review. When this human health assessment is completed in 2011, USEPA will review the conclusions and consider all relevant information to determine if a new standard needs to be set (USEPA, 2011).

Currently, there are no wells in the Coachella Valley that exceed the 50 µg/L MCL for total chromium. Based on that monitoring in early 2000's, there are over 100 wells in the Valley that have detectable levels of chromium-6. None of these wells were located in the Mission Creek subbasin. In January 2011, the USEPA recommended enhanced monitoring for chromium-6 by public water systems to better inform their consumers about the levels of chromium-6 in their drinking water, evaluate the degree to which other forms of chromium are transformed into chromium-6 in their drinking water and assess the degree to which existing treatment is affecting the levels of chromium-6 (USEPA, 2011).

### **3.2 WATER QUALITY EFFECT ON WATER MANAGEMENT STRATEGIES AND SUPPLY RELIABILITY**

The Mission Creek subbasin is located beneath both developed and undeveloped areas. Given the high permeability of the surface sediments and the presence of residential/commercial/industrial activities within the subbasin boundaries, there is a possibility that the underlying groundwater could be impacted by various activities currently occurring or proposed in the subbasin. While not all inclusive, the following activities may pose the greatest threat to the existing groundwater quality in the subbasin:

- Recharge of imported water
- Abandoned/inactive wells
- Commercial/industrial discharges
- Septic systems

MSWD is actively pursuing a program to properly place residences/businesses in the district on the MSWD water supply system and promoting the proper abandonment of unused/inactive wells. In addition, MSWD is converting residences/businesses currently on septic systems to the MSWD sewer collection and treatment system. Since 2005, 1,300 parcels have been converted to sewer service for a total of 7,300 parcels. 5,600 additional parcels will be converted by 2015.

## **4 WATER RELIABILITY PLANNING**

### **4.1 RELIABILITY OF WATER SUPPLIES FOR MISSION SPRINGS WATER DISTRICT**

Reliability is a measure of a water service system's expected success in managing water shortages. The combination of demand management and supply augmentation options help to reduce the frequency and severity of shortages.

MSWD and all Southern California communities and water suppliers are facing increasing challenges in their role as stewards of water resources in the region. Although the District is currently 100 percent dependent on groundwater, the region faces a growing gap between its water requirements and its firm water supplies. Increased environmental regulations and the collaborative competition for water from outside the region have resulted in reduced supplies of imported water, making local supplies even more vital. Continued population and economic growth also contribute toward increased water demands within the region, putting an even larger burden on local supplies.

The only current direct water source to MSWD is local groundwater. The reliability of the District's water supply is dependent on the reliability of groundwater supplies, supplemented by recycled and imported water. Imported supplies are managed and delivered by Metropolitan through DWA. The following sections will discuss these agencies as well as the Regional Water Quality Control Board, their roles in water supply reliability, and the near and long-term efforts they are involved with to ensure future reliability of water supplies to the District and the region as a whole.

#### **4.1.1 Water Reliability and Regional Agencies**

##### ***Desert Water Agency***

Desert Water Agency (DWA) has implemented Ground Water Replenishment and Assessment Programs for both the Mission Creek and Whitewater subbasins. These programs were established to augment groundwater supplies and arrest or retard declining water table conditions within the Upper Coachella Valley, specifically the Whitewater River subbasin within DWA's retail service area and the Mission Creek subbasin within DWA's boundary and MSWD's service area. The intention of the program is to optimize and protect the use of groundwater in addition to providing sound management of the groundwater supplies.

DWA is a retail water agency that operates a groundwater replenishment program for the MSWD service area. As such, both agencies are responsible for ensuring that adequate water supplies are available to MSWD customers, now and into the future. Because MSWD and CVWD have retail customers served from the Mission Creek subbasin, and because CVWD is also a retailer operating groundwater replenishment programs, DWA, CVWD, and MSWD are all working together to ensure an adequate quantity and quality

of water produced from the Mission Creek subbasin. DWA and CVWD are also SWP contractors and through their exchange agreement with Metropolitan, began recharging CRA water into the Mission Creek subbasin in 2002. The replenishment program has replenished the Mission Creek subbasin with a cumulative total of approximately 60,625 AF of supplemental water (CVWD, 2010 Engineers Report).

This recharge program is jointly administered by DWA and CVWD with facilities constructed and operated by DWA and is expected to increase as groundwater extraction increases to meet projected growth. Based on DWA's Draft 2010 UWMP, Mission Creek subbasin is capable of meeting the demands that will be placed on it, provided it continues to be replenished with sufficient quantities of imported water to meet future needs.<sup>12</sup>

### **Metropolitan Water District of Southern California**

Metropolitan acquires water from Northern California via the SWP and from the Colorado River via the CRA to supply water to most of Southern California. As a wholesaler, Metropolitan has no retail customers, and distributes treated and untreated water directly to its 26 member agencies.

Through a series of Integrated Resources Plans initiated in 1996 and most recently updated in 2010, Metropolitan has worked toward identifying and developing water supplies to provide 100 percent reliability. Due to competing needs and uses for all of the water sources and regional water operational issues, Metropolitan undertook a number of planning processes: the Integrated Resources Planning (IRP) Process, the Water Surplus and Drought Management Plan, the Strategic Planning Process, the Report on MWDSC Water Supplies: A Blueprint for Water Reliability, and most recently, the October 2010 IRP update and the November 2010 Regional UWMP. Combined, these documents provide a framework and guidelines for optimum water planning into the future. The reliability and operational issues related to Metropolitan's various sources of supply are discussed in detail by major source below. Although Metropolitan has no customers in the Coachella Valley and its programs do not directly affect Coachella Valley water supply reliability, their advance delivery and exchange agreements to deliver DWA and CVWD State Water Project supplies are relevant and provide an overall understanding of water supply to the region in general.

### **State Water Project**

The SWP is owned and operated by DWR. The reliability of the SWP impacts Metropolitan's member agencies' ability to plan for future growth and supply. On an annual basis, each of the 29 SWP contractors, including Metropolitan, request an amount of SWP water based on their anticipated yearly demand. In most cases, Metropolitan's

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<sup>12</sup> Desert Water Agency, Desert Water Agency 2010 Draft UWMP, February 2010.

requested supply is equivalent to its full Table A Amount,<sup>13</sup> currently at 1,911,500 AFY, and in certain wetter years additional supply may be made available. The full Table A amount is defined as the maximum amount of imported water to be delivered and is specified in the contract between the DWR and the contractor. After receiving the requests, DWR assesses the amount of water supply available based on precipitation, snow pack on northern California watersheds, volume of water in storage, projected carry over storage, and Sacramento-San Joaquin Bay Delta regulatory requirements.

Due to the uncertainty in water supply, contractors are not typically guaranteed their full Table A Amount, but instead a percentage of that amount based on the available supply. The table below lists the historical SWP deliveries to Metropolitan and the delivery's percentage compared to the full Table A amount. Once the percentage is set early in the water year, the agency can count on that amount of supply or more in the coming year. The percentage is typically set conservative and then held or adjusted upwards later in the year based on a reassessment of precipitation, snow pack, etc.

Litigation filed by several environmental interest groups (NRDC v. Kempthorne (Case No. 05CV01207-OWW-GSA); Pacific Coast Federation of Fishermen's Associations v. Gutierrez (Case No. 06CV00245-OWW)) has alleged that certain biological opinions and incidental take permits granted by state and federal agencies for water permits in the Sacramento-San Joaquin Bay Delta inadequately analyzed impacts on species listed as endangered under the Federal Endangered Species Act (ESA). In 2007, Federal District Judge Wanger issued a decision, finding the United States Fish and Wildlife Service's biological opinion for Delta smelt to be invalid. Judge Wanger issued an Interim Remedial Order and Findings of Fact and Conclusions of Law requiring that the SWP and Central Valley Project (CVP) operate according to certain specified criteria until a new biological opinion for the Delta smelt was issued by the United States Fish and Wildlife Service.

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<sup>13</sup> Two types of deliveries are assumed for the SWP contractors: Table A and Article 21. Table A Amount is the contractual amount of allocated SWP supply, set by percentage amount annually by DWR; it is scheduled and uninterruptible. Article 21 water refers to the SWP contract provision defining this supply as water that may be made available by DWR when excess flows area available in the Delta (i.e., Delta outflow requirements have been met, SWP storage south of the Delta is full, and conveyance capacity is available beyond that being used for SWP operations and delivery of allocated and scheduled Table A supplies). Article 21 water is made available on an unscheduled and interruptible basis and is typically available only in average to wet years, generally only for a limited time in the later winter.

**Table 4.1-1**  
**SWP Deliveries to Metropolitan (AF)**

<b>Year</b>	<b>SWP Delivery</b>	<b>% of Full Table A Amount</b>
1981	826,951	43%
1982	856,996	45%
1983	385,308	20%
1984	501,682	26%
1985	740,410	39%
1986	756,142	40%
1987	769,603	40%
1988	957,276	50%
1989	1,215,139	64%
1990	1,457,676	76%
1991	624,861	33%
1992	746,991	39%
1993	663,390	35%
1994	845,305	44%
1995	451,305	24%
1996	642,871	34%
1997	724,393	38%
1998	521,255	27%
1999	790,538	41%
2000	1,442,615	75%
2001	1,119,408	59%
2002	1,413,745	74%
2003	1,560,569	82%
2004	1,792,246	94%
2005	1,720,350	90%
2006	1,911,500	100%
2007	1,146,900	60%
2008	669,025	35%
2009	764,600	40%
2010	955,750	50%
2011	1,529,200	80%

Source: Table A data extracted from DWR Website; 2011 data represents the initial allocation of 25% plus the subsequent notices to SWP Contractors in December 2010, January 2011, and April 2011, increasing the allocation to 50%, 60%, and 80%, respectively. Metropolitan's full Table A amount is 1,911,500 AFY

DWR bi-annually prepares a report on the current and future for SWP water supply conditions. The 2009 State Water Project Delivery Report (2009 Report) is the most current of these reports dated August 2010. The 2009 Report shows a continuing erosion of the ability of the SWP to deliver water. For current conditions, the dominant factor for these reductions is the restrictive operational requirements contained in the federal biological opinions. For future conditions, it is these requirements combined with the forecasted effects of climate change.

Deliveries estimated for the 2009 Report are reduced by the operational restrictions of the biological opinions issued by the U.S. Fish and Wildlife Service in December 2008 and the National Marine Fisheries Service in June 2009 governing the SWP and CVP operations. To illustrate the effect of these operational restrictions, the median value estimated for the primary component of SWP Table A deliveries for Current Conditions in the 2005 Report is 3,170 thousand acre feet (taf); in the 2007 Report is 2,980 taf; and in the 2009 Report is 2,680 taf; for a reduction of almost 500 taf. For the 2009 studies, the changes in run-off patterns and amounts are included along with a potential rise in sea level. Sea level rise has the potential to require more water to be released to repel salinity from entering the Delta in order to meet water quality objectives established for the Delta.

The effect of the operational restrictions in addition to the incorporation of potential climate change impacts amounts to an estimated reduction of 970 taf when the median value for annual SWP deliveries for Future Conditions in the 2005 Report (3,750 taf) is compared to the updated value in the 2009 Report (2,600 taf). DWR has altered the operations of the SWP to accommodate species of fish listed under the Federal and California Endangered Species Acts (ESAs). These changes in operations have influenced the manner in which water is diverted from the Bay-Delta and SWP deliveries to the southern part of the State. Restrictions on Bay-Delta pumping beginning in 2008 under the Interim Remedial Order in *NRDC v. Kempthorne* have resulted in reduced deliveries of SWP water to Metropolitan.

Based on DWR estimates of SWP deliveries under the Interim Remedial Order, and assuming an equal division of curtailments between the SWP and CVP.<sup>14</sup> Metropolitan has met firm demands in calendar years 2008, 2009 and 2010. However, Metropolitan has been withdrawing supplies from surface and groundwater storage to meet current demands. Anticipating that storage could be significantly reduced by the end of 2010, Metropolitan and its member agencies are calling for voluntary water conservation to lower demands and reduce drawdown from water storage. In fact on April 14, 2009, Metropolitan adopted a Level 2 Allocation, which equates to a 10 percent reduction in regional water supplies. Based on similar water supply conditions, this same level of

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<sup>14</sup> Assuming an equal division of curtailments between the SWP and the CVP is conservative and may have the effect of overstating the amount of SWP curtailment. As an example, in January the Bureau of Reclamation, which operates the CVP, provided notice to agricultural customers that it intended to not provide any water deliveries to agricultural customers in 2009. Thus, in the short term it appears as though agricultural users which receive water through the CVP may suffer deeper water cuts as compared to water purveyors which receive water from the SWP.

allocation was adopted on April 13, 2010 for this current fiscal year by Metropolitan. If necessary, mandatory water allocations could be imposed in the future to cause further reductions in water use and reduce drawdown from water storage reserves. Metropolitan's member agencies and retail water suppliers in Metropolitan's service area also have the ability to implement water conservation and allocation programs, and some of the retail suppliers in Metropolitan's service area have initiated conservation measures.

To create a systemic solution to the issue facing the Delta (which have existed since the 1970's), Governor Schwarzenegger created the Delta Vision process, which is aimed at identifying long-term solutions to the conflicts in the Bay-Delta, including natural resource, infrastructure, land use and governance issues. The Delta Vision Blue Ribbon Task Force presented findings and recommendations for a sustainable Delta as a healthy ecosystem and water supply source on January 17, 2008. In addition, state and federal resource agencies and various environmental and water user entities are currently engaged in the development of the Bay-Delta Conservation Plan, which is aimed at addressing ecosystem needs and securing long-term operating permits for the SWP. Recently, statewide officials have expressed support for the construction of the peripheral canal, which would alleviate some of the delta species considerations by transferring river water south before it reaches the Bay Delta.

The issues, such as the recent decline of some fish species in the Delta and surrounding regions and certain operational actions in the Delta, may impact Metropolitan's water supply from the Delta. SWP operational requirements may be further modified through the consultation process for new biological opinions for listed species under the Federal ESA or from the California Department of Fish and Game's actions regarding the California ESA. Decisions in current or future litigation, listings of additional species (such as the longfin smelt), or new regulatory requirements could adversely affect SWP operations in the future by requiring additional export reductions, releases of additional water from storage, or other operational changes impacting water supply operations. However, based on information provided by DWR and Metropolitan, a 22 to 30 percent cutback in SWP deliveries to the south could be foreseeable in the future years until statewide systemic solutions are provided.<sup>15</sup>

### **Colorado River Aqueduct**

The Colorado River was Metropolitan's original source of water after Metropolitan's establishment in 1928. Metropolitan has a legal entitlement to receive water from the Colorado River under a permanent service contract with the Secretary of the Interior. Water from the Colorado River or its tributaries is also available to other users in California, as well as to users in the states of Arizona, Colorado, Nevada, New Mexico, Utah, and Wyoming (the "Colorado River Basin States"), resulting in both competition and the need for cooperation among these holders of Colorado River entitlements. In

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<sup>15</sup> Metropolitan Water District of Southern California, 2007 IRP, October 2007, and Metropolitan Water District of Southern California, Appendix A, Water Revenue Refunding Bonds 2008, Series C, July 10, 2008.

addition, under a 1944 treaty, Mexico has an allotment of 1.5 MAF of Colorado River water annually, except in the event of extraordinary drought or serious accident to the delivery system in the United States, when the water allotted to Mexico would be curtailed. Mexico also can schedule delivery of an additional 200,000 acre-feet of Colorado River water per year if water is available in excess of the requirements in the United States and the 1.5 MAF allotted to Mexico.

The CRA, which is owned and operated by Metropolitan, transports water from the Colorado River approximately 242 miles to its terminus at Lake Mathews in Riverside County. After deducting for conveyance losses and considering maintenance requirements, up to 1.2 MAF of water a year may be conveyed through the CRA to Metropolitan's member agencies, subject to availability of Colorado River water for delivery to Metropolitan as described below.

California is apportioned the use of 4.4 MAF of water from the Colorado River each year plus one-half of any surplus that may be available for use collectively in Arizona, California and Nevada. In addition, California has historically been allowed to use Colorado River water apportioned to, but not used by, Arizona and Nevada when such supplies have been requested for use in California. Under the 1931 priority system that has formed the basis for the distribution of Colorado River water made available to California, Metropolitan holds the fourth priority right to 550,000 acre-feet per year. This is the last priority within California's basic apportionment of 4.4 MAF. In addition, Metropolitan holds the fifth priority right to 662,000 acre-feet of water, which is in excess of California's basic apportionment.

Until 2002, Metropolitan had been able to take full advantage of its fifth priority right as a result of the availability of surplus water and apportioned but unused water. However, Arizona and Nevada increased their use of water from the Colorado River, leaving no unused apportionment available for California since the late 1990s. In addition, a severe drought in the Colorado River Basin has reduced storage in system reservoirs, resulting in no surplus water being available since 2002. Prior to 2002, Metropolitan could divert over 1.2 MAF in any year, but since that time, Metropolitan's deliveries of Colorado River water varied from a low of 535,000 acre-feet in 2006 to a projected high of 1,150,000 acre-feet in 2010.

Metropolitan has taken steps to augment its share of Colorado River water through agreements with other agencies that have rights to use such water. Under a 1988 water conservation agreement (the "1988 Conservation Agreement") between Metropolitan and the Imperial Irrigation District (IID), IID has constructed and is operating a number of conservation projects that are currently conserving 105,000 acre-feet of water per year. In 2007, the conserved water augmented the amount of water available to Metropolitan by 85,000 acre-feet and, by prior agreement, to CVWD by 20,000 acre-feet.

In 1992, Metropolitan entered into an agreement with the Central Arizona Water Conservation District (CAWCD) to demonstrate the feasibility of CAWCD storing

Colorado River water in central Arizona for the benefit of an entity outside of the State of Arizona. Pursuant to this agreement, CAWCD created 80,909 acre-feet of long-term storage credits that may be recovered by CAWCD for Metropolitan. Metropolitan, the Arizona Water Banking Authority, and CAWCD executed an amended agreement for recovery of these storage credits in December 2007. In 2007, 16,804 acre-feet were recovered. Metropolitan has requested that 25,000 acre-feet be recovered in 2008, and expects to request the balance of the storage credits over the next several years. Water recovered by CAWCD under the terms of the 1992 agreement allows CAWCD to reduce its use of Colorado River water, resulting in Arizona having an unused apportionment. The Secretary of the Interior is making this unused apportionment available to Metropolitan under its Colorado River water delivery contract.

In April 2008, Metropolitan's Board authorized the expenditure of \$28.7 million to join the CAWCD and the Southern Nevada Water Authority (SNWA) in funding the construction by the USBR of the new 8,000 acre-foot off-stream regulating reservoir near Drop 2 of the All-American Canal in Imperial County. The Drop 2 Reservoir is expected to save up to 70,000 acre-feet of water per year by capturing and storing water that would otherwise be lost. In return for its funding, Metropolitan received 100,000 acre-feet of water that is stored in Lake Mead until recovered. Besides the additional water supply, the new reservoir will add to the flexibility of Colorado River operations.

Metropolitan and the Palo Verde Irrigation District (PVID) signed the program agreement for a Land Management, Crop Rotation and Water Supply Program in August 2004. This program provides up to 133,000 acre-feet of water available to Metropolitan in certain years. The term of the program is 35 years. Fallowing of approximately 20,000 acres of land began on January 1, 2005. In 2005, 2006, 2007, 2008 and 2009 approximately 108,700, 105,000, 72,300, 94,300 and 102,200 acre-feet, respectively, of water were saved through these programs.<sup>16</sup>

With Arizona's and Nevada's increasing use of their respective apportionments and the uncertainty of continued Colorado River surpluses, in 1997 the Colorado River Board of California, in consultation with Metropolitan, IID, PVID, CVWD, the Los Angeles Department of Water and Power and the San Diego County Water Authority (SDCWA), embarked on the development of a plan for reducing California's use of Colorado River water to its basic apportionment of 4.4 MAF when use of that basic allotment is necessary (California Plan). In 1999, IID, CVWD, Metropolitan and the State of California agreed to a set of Key Terms aimed at managing California's Colorado River supply. These Key Terms were incorporated into the Colorado River Board's May 2000 California Plan that proposed to optimize the use of the available Colorado River supply through water conservation, transfers from higher priority agricultural users to Metropolitan's service area and storage programs.

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<sup>16</sup> Metropolitan Water District of Southern California, Regional Urban Water Management Plan, November 2010.

To implement these plans, a number of agreements have been executed. One such agreement, the Quantification Settlement Agreement (QSA), is a landmark agreement signed by the four California Colorado River water use agencies and the U.S. Secretary of the Interior, which will guide reasonable and fair use of the Colorado River by California through the year 2037. The QSA was authorized in October 2003 and defined Colorado River water deliveries to the four California agencies as well as facilitated transfers from agricultural agencies to urban users. The QSA is a critical component of the California's Colorado River Water Use Plan.

### **Water Transfer and Exchange Programs**

California's agricultural activities consume approximately 34 MAF of water annually, which is 80 percent of the total water used for agricultural and urban uses and 40 percent of the water used for all consumptive uses. Voluntary water transfers and exchanges can make a portion of this agricultural water supply available to support the State's urban areas. Such existing and potential water transfers and exchanges are an important element for improving the water supply reliability within Metropolitan's service area and accomplishing the reliability goal set by Metropolitan's Board of Directors. Metropolitan is currently pursuing voluntary water transfer and exchange programs with state, federal, public and private water districts and individuals. The following information on these programs has been extracted from Metropolitan's 2010 Regional UWMP:

- *Semitropic Storage Program:* Metropolitan has a groundwater storage program with Semitropic Water Storage District located in the southern part of the San Joaquin Valley. The maximum storage capacity of the program is 350 TAF. The specific amount of water Metropolitan can store in and subsequently expect to receive from the programs depends upon hydrologic conditions, any regulatory requirements restricting Metropolitan's ability to export water for storage, and the demands placed on the Semitropic Program by other program participants. During the recent dry year of 2008, the storage program delivered 125 TAF to Metropolitan. During wet years, Metropolitan has the discretion to use the program to store portions of its SWP entitlement water that are in excess of the amounts needed to meet Metropolitan's service area demand. In Semitropic, the water is delivered to district farmers who use the water in-lieu of pumping groundwater. During dry years, the districts return Metropolitan's previously stored water to Metropolitan by direct groundwater pump-in return and the exchange of S entitlement water.

- *Arvin-Edison Storage Program:* Metropolitan amended the groundwater storage program with Arvin-Edison Water Storage District in 2008 to include the South Canal Improvement Project. The project increases the reliability of Arvin-Edison returning higher water quality to the California Aqueduct. The program storage capacity is 350 TAF. The specific amount of water Metropolitan can expect to store in and subsequently receive from the programs depends upon hydrologic conditions and any regulatory requirements restricting Metropolitan's ability to export water for storage. The storage program is estimated to deliver 75 TAF. During wet years, Metropolitan has the discretion to use the program to store portions of its SWP Table A supplies which are in excess of the amounts needed to meet Metropolitan's service area demand. The water can be either directly recharged into the groundwater basin or delivered to district farmers who use the water in-lieu of pumping groundwater. During dry years, the district returns Metropolitan's previously stored water to Metropolitan by direct groundwater pumping in return or by exchange of surface water supplies.
- *San Bernardino Valley Metropolitan Storage Program:* The San Bernardino Valley Metropolitan Storage program allows for the purchase of a portion of San Bernardino Valley Municipal Water District's SWP supply. The program includes a minimum purchase provision of 20 TAF and the option of purchasing additional supplies when available. This program can deliver between 20 TAF and 70 TAF in dry years, depending on hydrologic conditions. The expected delivery for a single dry year similar to 1977 is 70 TAF. The agreement with San Bernardino Valley Metropolitan also allows Metropolitan to store up to 50 TAF of transfer water for use in dry years.
- *Kern-Delta Water District Storage Program:* This groundwater storage program has 250 TAF of storage capacity. When fully developed, it will be capable of providing 50 TAF of dry-year supply. The water can be either directly recharged into the groundwater basin or delivered to district farmers who use the water in-lieu of pumping groundwater. During dry years, the district returns Metropolitan's previously stored water to Metropolitan by direct groundwater pumping in return or by exchange of surface water supplies.
- *Mojave Storage Program:* Currently operated as a demonstration program, the program will store SWP supply delivered in wet years for subsequent withdrawal during dry years. When fully developed, the program is expected to have a dry-year yield of 35 TAF depending on hydrologic conditions.
- *Central Valley Transfer Programs:* Metropolitan expects to secure Central Valley water transfer supplies via spot markets and option contracts to meet its service area demands when necessary. Hydrologic and market

conditions, and regulatory measures governing Delta pumping plant operations will determine the amount of water transfer activity occurring in any year. Transfer market activity in 2003, 2005, 2008, and 2009 provide examples of how Metropolitan has secured water transfer supplies as a resource to fill anticipated supply shortfalls needed to meet Metropolitan's service area demands.

- In 2003, Metropolitan secured options to purchase approximately 145 TAF of water from willing sellers in the Sacramento Valley during the irrigation season. These options protected against potential shortages of up to 650 TAF within Metropolitan's service area that might have arisen from a decrease in Colorado River supply or as a result of drier than expected hydrologic conditions. Using these options, Metropolitan purchased approximately 125 TAF of water for delivery to the California Aqueduct.
- In 2005, Metropolitan, in partnership with seven other State Water Contractors, secured options to purchase approximately 130 TAF of water from willing sellers in the Sacramento Valley, of which Metropolitan's share was 113 TAF. Metropolitan also had the right to assume the options of the other State Water Contractors if they chose not to purchase the transfer water. Due to improved hydrologic conditions, Metropolitan and the other State Water Contractors did not exercise these options.
- In 2008, Metropolitan in partnership with seven other State Water Contractors, secured approximately 40 TAF of water from willing sellers in the Sacramento Valley, of which Metropolitan's share was approximately 27 TAF.
- In 2009, Metropolitan in partnership with eight other buyers and 21 sellers participated in a statewide Drought Water Bank, which secured approximately 74 TAF, of which Metropolitan's share was approximately 37 TAF.

Metropolitan's recent water transfer activities have demonstrated its ability to develop and negotiate water transfer agreements either working directly with the agricultural districts who are selling the water or through a statewide Drought Water Bank. Because of the complexity of cross-Delta transfers and the need to optimize the use of both CVP and SWP facilities, DWR and USBR are critical players in the water transfer process, especially when shortage conditions increase the general level of demand for transfers and amplify ecosystem and water quality issues associated with through-Delta conveyance of water. Therefore, Metropolitan views state and federal cooperation to facilitate voluntary, market-based exchanges and sales of water as a critical component of its overall water transfer strategy.

In addition to the previously mentioned programs, Metropolitan also manages or participates in the following existing SWP programs located outside of its service area:

- *Sacramento Valley Water Management Agreement (Phase 8 Settlement)*: Metropolitan is a signatory to the Sacramento Valley Water Management Agreement (Phase 8 Settlement) that includes work plans to develop and manage water resources to meet Sacramento Valley in-basin needs, environmental needs under the SWRCB's Water Quality Control Plan, and export supply needs for both water demands and water quality. The agreement specifies about 60 water supply and system improvement projects by 16 different entities in the Sacramento Valley.
- *Monterey Amendment*: Metropolitan was a signatory to the 1994 Monterey Amendment to resolve disputes between the urban and agricultural SWP contractors over how contract supplies are to be allocated in times of shortage by amending certain provisions of the long-term water supply contracts with DWR. The Monterey Amendment altered the water allocation procedures such that both shortages and surpluses would be shared in the same manner for all contractors, eliminating the prior "agriculture first" shortage provision. In turn, the agricultural contractors agreed to permanently transfer 130,000 AF to urban contractors and permanently retire 45,000 AF of their contracted supply.
- *SWP Terminal Storage*: Metropolitan has contractual rights to 65,000 AF of flexible storage at Lake Perris (East Branch terminal reservoir) and 153,940 AF of flexible storage at Castaic Lake (West Branch terminal reservoir). This storage provides Metropolitan with additional options for managing SWP deliveries to maximize yield from the project.
- *Yuba Dry-year Water Purchase Program*: In December 2007, Metropolitan entered into an agreement with DWR providing for Metropolitan's participation in the Yuba Dry Year Water Purchase Program between Yuba County Water Agency and DWR through 2025.
- *Desert Water Agency/Coachella Valley Water District (DWCV) SWP Table A Transfer*: Under the transfer agreement, Metropolitan transferred 100,000 AF of its SWP Table A amount to DWCV effective January 1, 2005. DWCV pays all SWP charges for this water, including capital costs associated with capacity in the SWP to transport this water to Perris Reservoir as well as the associated variable costs. The amount of water actually delivered in any given year depends on that year's SWP allocation. Water is delivered through the existing exchange agreements between Metropolitan and DWCV. While Metropolitan transferred 100,000 AF of its Table A amount, it retained other rights, including interruptible water service, its full carryover amounts in San Luis Reservoir, its full use of flexible storage in Castaic and Perris Reservoirs, and any rate-management credits associated with the 100,000 AF. In addition, Metropolitan is able to recall the SWP transfer water in years in

which Metropolitan determines it needs the water to meet its water management goals. The main benefit of the agreement is to reduce Metropolitan's SWP fixed costs in wetter years when there are more than sufficient supplies to meet Metropolitan's water management goals, while at the same time preserving its dry-year SWP supply.

- *DWCV Advance Delivery Program:* Under this program, Metropolitan delivers Colorado River water to DWCV in advance of the exchange for their SWP Contract Table A allocations. By delivering enough water in advance to cover Metropolitan's exchange obligations, Metropolitan is able to receive DWCV's available SWP supplies in years in which Metropolitan's supplies are insufficient without having to deliver an equivalent amount of Colorado River water.
- *DWCV Other SWP Deliveries:* Since 2008, Metropolitan has provided DWCV's written consent to take delivery from the SWP facilities non-SWP supplies separately acquired by each agency. These deliveries include water acquired from the Yuba Dry Year Water Purchase Program and the 2009 Drought Water Bank.

## Supply Management Strategies

On the regional level, Metropolitan has taken a number of actions to secure a reliable water source for its member agencies. Metropolitan recently adopted a water supply allocation plan for dealing with potential shortages that takes into consideration the impact on retail customers and the economy, changes and losses in local supplies, the investment in and development of local resources, and conservation achievements.<sup>17</sup> Additional actions taken by Metropolitan during the first half of 2008 include the adoption of a \$1.9 billion spending plan, increased rates and charges,<sup>18</sup> and the funding of a new reservoir to benefit Colorado River supply capabilities.<sup>19</sup> Metropolitan's approved budget for 2010/11 included rate increases of 7.5 percent with another 7.5 percent increase planned for 2011/12 to maintain these this spending for the improvement of water conveyance facilities, water transfers, and providing financial assistance to member agency's local conservation, recycling, and groundwater clean-up efforts<sup>20</sup>.

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<sup>17</sup> Metropolitan Water District Press Release dated February 12, 2008.

<sup>18</sup> Metropolitan Water District Board Meeting, March 11, 2008, and Press Release of same date, regarding spending plan and adoption of rates and charges.

<sup>19</sup> Metropolitan Water District Board Meeting, April 8, 2008, and Press Release of same date, regarding new reservoir.

<sup>20</sup> Metropolitan Water District, Annual Budget, website [mwdh2o.com](http://mwdh2o.com).

## **Regional Water Quality Control Board – Region 7**

### **Background**

The SWRCB and the nine Regional Water Quality Control Boards (RWQCB) are responsible for the protection and, where possible, the enhancement of the quality of California's waters. The SWRCB sets statewide policy, and together with Regional Boards, implements state and federal laws and regulations. Each of the nine Regional Boards adopts a Water Quality Control Plan or Basin Plan, which recognizes and reflects regional differences in existing water quality, the beneficial uses of the region's ground and surface waters, and local water quality conditions and problems.<sup>21</sup>

The Basin Plan is more than just a collection of water quality goals and policies, descriptions of conditions, and discussions of solutions. It is also the basis for the RWQCB's regulatory programs. The Basin Plan establishes water quality standards for all the ground and surface waters of the region. The RWQCB also regulates water discharges to minimize and control their effects on the quality of the region's ground and surface water. Permits are issued under a number of programs and authorities.

Potential and actual water quality problems in the region are listed in the Basin Plan, along with the causes, where they are known. For water bodies with quality below the levels necessary to allow all the beneficial uses of the water to be met, plans for improving water quality are included. Legal basis and authority for the RWQCB reflects, incorporates, and implements applicable portions of a number of national and statewide water quality plans and policies, including the California Water Code (Porter-Cologne Water Quality Control Act) and the Clean Water Act.<sup>22</sup>

## **4.2 DEMAND AND SUPPLIES RELIABILITY COMPARISON**

Water supply and demand projections presented in this section of the UWMP are based on information provided by District studies as well as pertinent data extracted from CVWD's Draft 2010 UWMP. Nearly 100 percent of the District's current supply is pumped from the Mission Creek subbasin. This pattern would change somewhat with the development of a recycled water system within the next decade. A recycled water system could supply a number of landscape and irrigation users that are currently dependent on potable water, thus reducing the demand on groundwater pumping. The District currently percolates treated effluent into the groundwater basin. Though this does not reduce the demand for pumped groundwater, it does provide recharge that benefits basin as a whole and lessens the impact of pumping.

Table 4.2-1 shows a projected water balance for the Mission Creek subbasin, which is the primary source of water supply to MSWD with the exception of future recycled water.

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<sup>21</sup> Colorado River Basin Regional Water Quality Control Board. Region 7 Water Quality Control Plan. Amended to October 2005.

<sup>22</sup> Colorado River Basin Regional Water Quality Control Board. Region 7 Water Quality Control Plan. Amended to October 2005.

The projections in five-year increments for years 2015 through 2035 assume Normal Year conditions whereas the 2005 and 2010 year are recognized as a wet-year conditions as reflected by the imported water recharge in the first column. Actual amounts of water recharged at Mission Creek facilities is the joint responsibilities of CVWD and DWA and will vary based on hydrologic conditions and groundwater pumping.

**Table 4.2-1**  
**MSWD Water Balance**  
**(AF - all numbers rounded to nearest 100 AF)**

Year	Mission Creek Subbasin Recharge <sup>[1]</sup>	CVWD Subbasin Production <sup>[2]</sup>	Surplus GW Recharge <sup>[3]</sup>	Total MSWD Demand <sup>[4]</sup>	Recharge from 40% Return Flow <sup>[5]</sup>	Net Recharge Available <sup>[6]</sup>	Total MSWD GW Demand <sup>[7]</sup>	Net Balance <sup>[8]</sup>
2005	24,700	3,000	21,700	10,800	4,300	26,000	10,800	15,200
2010	33,200	3,100	30,100	8,700	3,500	33,600	8,700	24,900
2015	9,900	5,000	4,900	14,300	5,700	10,600	14,300	(3,700)
2020	10,700	6,000	4,700	16,400	6,600	11,300	14,400	(3,100)
2025	10,700	6,900	3,800	18,500	7,400	11,200	15,000	(3,800)
2030	10,700	7,100	3,600	20,500	8,200	11,800	16,500	(4,700)
2035	11,100	7,700	3,400	22,600	9,000	12,400	18,100	(5,700)

<sup>[1]</sup> Projected values from Table 3-16 in CVWD 2010 UWMP for Mission Creek Spreading Facility. 2005 and 2010 values based on recharge water deliveries.

<sup>[2]</sup> From Table 4-7 in CVWD 2010 UWMP for Mission Creek subbasin

<sup>[3]</sup> Difference between Mission Creek subbasin Recharge and CVWD Production

<sup>[4]</sup> Total Projected MSWD demand.

<sup>[5]</sup> Naturally occurring recharge from return flow (40% of Total MSWD Demand)

<sup>[6]</sup> Net Recharge Available = Surplus GW Recharge + Recharge from Return Flow

<sup>[7]</sup> Total MSWD GW Demand (excludes recycled water demand)

<sup>[8]</sup> Net Balance = Total MSWD GW Demand – Net Recharge Available

The estimate of total available storage within the Mission Creek subbasin is approximately 1.7 MAF<sup>23</sup>. The projected future water balance included in Table 4.2-1 would equate to a loss of available storage over the next 25 years. Although relatively small compared to the basin capacity, it is nevertheless MSWD's intent to continue to work with DWA and CVWD to develop a strategic groundwater management program that will protect the Mission Creek subbasin for generations to come.

Tables 4.2-2 through 4.2-8 present the normal year, single dry year and multiple dry year supply and demand projections for MSWD through 2035. The supply and demand projections assume:

<sup>23</sup> 1.7 MAF as noted in Section 2.1 of this 2010 UWMP.

- Imported water is not available for direct delivery to MSWD. State Project Water can be exchanged for CRA water through the auspices of DWA and CVWD, that water is ultimately used for groundwater recharge and is thus pumped from the aquifer by MSWD. Because this water is not directly supplied to the MSWD distribution system, it is not accounted for as imported water.
- Recycled water use will begin in approximately 2020 and will begin to reduce the demand on pumped water at that time. If a recycled water system proves infeasible at that time, effluent will continue to be percolated into the groundwater basin for future reuse. In this case, groundwater return flow will provide the volume needed to meet irrigation demands that were projected to be supplied through recycled water.
- Given the large capacity of the Mission Creek subbasin, it is not reasonable to assume the entire 1.7 MAF will be available to MSWD in any given year (primarily because of limitations on the District's well depths and pumping capacity). A reasonably conservative assumption of 40,000 AFY, which is less than 3 percent of the estimate of total storage within the subbasin, has therefore been assumed as the supply capability.
- Groundwater recharge will continue to occur as noted above.
- All projections are based on an assumed high growth water demand pattern.
- Groundwater demands are estimated to increase approximately 1% over normal year demands during all single and multiple dry years. This projection is based on actual demand increases typically experienced in many Southern California locales (generally in the 3% to 7% range). Most of the increased water usage during dry periods in other Southern California locales is used outside the home, primarily for irrigation. That being the case, these percentage factors have been adjusted downward to take into account the limited lawn and landscape irrigation in MSWD (a review of aerial photographs in the MSWD service area suggest that approximately 20% of single family homes have lawns as compared to approximately 95% of homes in the metropolitan Los Angeles region).
- Recycled water will be used primarily for turf irrigation. As previously noted, potable groundwater demands during dry years are estimated to increase only one percent, primarily due to the limited amount of single family residential turf irrigation. However, because recycled demands will be primarily used for turf irrigation, those demands are more likely to reflect the same pattern as recycled demands experienced during dry years in other areas of Southern California, i.e., they will be about 5 percent higher than normal during single dry years and during the first year of a three year dry cycle, about 3 percent higher during the second year and about 5 percent higher during the third year of the three year dry cycle.

Given these assumptions, the water reliability analysis suggests that MSWD will be able to meet all of its demands during all normal, single dry year and multiple dry year periods. The analysis also suggests that MSWD will have significant surpluses ranging between 49 and 64 percent of demand during normal years, 48 and 64 percent during single dry years, and 48 and 70 percent during the third year of multiple dry years. It should be noted that these surplus percentages are significantly greater than surplus water supplies typically available to water purveyors that are primarily dependent on imported supplies.

**Table 4.2-2**  
**Mission Springs Water District**  
**Projected Water Supply and Demand**  
**Normal Water Year**  
**(AFY – All projections rounded to nearest 10 AF)**

<b>Water Sources</b>	<b>2015</b>	<b>2020</b>	<b>2025</b>	<b>2030</b>	<b>2035</b>
<b>Supply</b>	<b>Normal Water Years</b>				
Imported <sup>[1]</sup>	0	0	0	0	0
Recycled <sup>[2]</sup>	0	2,000	3,500	4,000	4,500
Local (Groundwater) <sup>[3]</sup>	40,000	40,000	40,000	40,000	40,000
<b>Total Supply</b>	<b>40,000</b>	<b>42,000</b>	<b>43,500</b>	<b>44,000</b>	<b>44,500</b>
% of Normal Year	100	100	100	100	100
<b>Demand</b>					
Imported <sup>[1]</sup>	0	0	0	0	0
Recycled <sup>[2]</sup>	0	2,000	3,500	4,000	4,500
Local (Groundwater) <sup>[4]</sup>	14,300	14,400	15,000	16,500	18,100
<b>Total Demand</b>	<b>14,300</b>	<b>16,400</b>	<b>18,500</b>	<b>20,500</b>	<b>22,600</b>
Per Capita Demand (gpcd)	309.2	231.6	-	-	-
<b>Supply/ Demand Difference</b>	<b>25,700</b>	<b>25,600</b>	<b>25,000</b>	<b>23,500</b>	<b>21,900</b>
<b>Difference as % of Supply</b>	<b>64.3</b>	<b>61.0</b>	<b>57.5</b>	<b>53.4</b>	<b>49.2</b>
<b>Difference as % of Demand</b>	<b>179.7</b>	<b>156.1</b>	<b>135.1</b>	<b>114.6</b>	<b>96.9</b>

[1] MSWD does not have direct access to imported water. Although State Project Water can be exchanged for Colorado River water, which can then be used for recharging the groundwater aquifer (via water transfers arranged through DWA and CVWD), that import water is not supplied directly to the MSWD distribution system and is therefore not counted as "imported" supply or demand.

[2] There are currently no recycled water supplies available; however, plans call for implementation of a recycled water system beginning in approximately 2020 with a minimal production capacity of 2,000 AFY ramping up to 4,500 AF in 2035. Recycled water supply and demand are assumed to be equal. Recycled water supply numbers were calculated assuming that 90% of the wastewater generated can be converted to recycled water (with the 10% balance lost in the treatment process).

[3] The current available supply in the local groundwater aquifer is estimated at 1.7 MAF. This analysis conservatively assumes that less than 3% of this supply (or 40,000 AF) will be available in any given year as groundwater supply. The analysis also assumes the water extracted by pumping will be replaced by (1) DWA's proposed groundwater recharge of imported water at its Mission Creek Spreading Facility) and by (2) a 40% return flow for all water used in MSWD.

[4] Groundwater demands equal total water demand minus recycled water use. Total water demand based on 315 gpcd for current population and 284 gpcd (10% reduction) for population growth equal to 6,500 people every 5 years.

**Table 4.2-3  
Projected Water Supply and Demand  
Single Dry Water Year  
(AFY – All projections rounded to nearest 10 AF)**

<b>Water Sources</b>	<b>2015</b>	<b>2020</b>	<b>2025</b>	<b>2030</b>	<b>2035</b>
<b>Supply</b>	<b>Single Dry Years</b>				
Imported <sup>[1]</sup>	0	0	0	0	0
Recycled <sup>[2]</sup>	0	2,000	3,500	4,000	4,500
Local (Groundwater) <sup>[3]</sup>	40,000	40,000	40,000	40,000	40,000
<b>Total Supply</b>	<b>40,000</b>	<b>42,000</b>	<b>43,500</b>	<b>44,000</b>	<b>44,500</b>
Normal Year Supply <sup>[4]</sup>	40,000	42,000	43,500	44,000	44,500
% of Normal Year	100	100	100	100	100
<b>Demand</b>					
Imported <sup>[1]</sup>	0	0	0	0	0
Recycled <sup>[5]</sup>	0	2,100	3,680	4,200	4,730
Local (Groundwater) <sup>[6]</sup>	14,440	14,540	15,150	16,670	18,280
<b>Total Demand</b>	<b>14,440</b>	<b>16,640</b>	<b>18,830</b>	<b>20,870</b>	<b>23,010</b>
Normal Year Demand <sup>[4]</sup>	14,300	16,400	18,500	20,500	22,600
% of Normal Year demand	101.0	101.5	101.8	101.8	101.8
<b>Supply/ Demand Difference</b>	<b>25,560</b>	<b>25,360</b>	<b>24,670</b>	<b>23,130</b>	<b>21,490</b>
<b>Difference as % of Supply</b>	<b>63.9</b>	<b>60.4</b>	<b>56.7</b>	<b>52.6</b>	<b>48.3</b>
<b>Difference as % of Demand</b>	<b>177.0</b>	<b>152.4</b>	<b>131.0</b>	<b>110.8</b>	<b>93.4</b>

[1] MSWD does not have direct access to imported water. Although State Project Water can be exchanged for Colorado River water, which can then be used for recharging the groundwater aquifer (via water transfers arranged through DWA and CVWD), that import water is not supplied directly to the MSWD distribution system and is therefore not counted as "imported" supply or demand.

[2] There are currently no recycled water supplies available; however, plans call for implementation of a recycled water system beginning in approximately 2020 with a minimal production capacity of 2,000 AFY ramping up to 4,500 AF in 2035. Recycled water supply and demand are assumed to be equal. Recycled water supply numbers were calculated assuming that 90% of the wastewater generated can be converted to recycled water (with the 10% balance lost in the treatment process).

[3] Groundwater supplies during single dry years are assumed to equal supplies during normal years (refer to table 4.2-2).

[4] Normal Year supplies and demands obtained from Table 4.2-2.

[5] Recycled water will be used primarily for turf irrigation and can therefore be expected to reflect similar usage patterns consistent with dry year demands experienced in other areas of Southern California where 5% increases (over normal years) in single dry year demands are typical.

[6] Groundwater demands are estimated to increase approximately 1% over normal year demands during single dry years. This projection is based on actual demand increases typical of many Southern California locales (generally in the 3% to 7% range) adjusted downward to take into account the limited lawn and landscape irrigation in MSWD (a review of aerial photographs in MSWD suggests that approximately 20% of single family homes have lawns as compared to approximately 95% of homes in the metropolitan Los Angeles region).

**Table 4.2-4  
Projected Water Supply and Demand  
Multiple Dry Water Years 2011-2015  
(AFY – All projections rounded to nearest 10 AF)**

<b>Water Sources</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
<b>Supply</b>	<b>Normal Years</b>		<b>Dry Years</b>		
Imported <sup>[1]</sup>	0	0	0	0	0
Recycled <sup>[2]</sup>	0	0	0	0	2,000
Local (Groundwater) <sup>[3]</sup>	40,000	40,000	40,000	40,000	40,000
<b>Total Supply</b>	<b>40,000</b>	<b>40,000</b>	<b>40,000</b>	<b>40,000</b>	<b>42,000</b>
Normal Year Supply <sup>[4]</sup>	40,000	40,000	40,000	40,000	42,000
% of Normal Year	100	100	100	100	100
<b>Demand</b>					
Imported <sup>[1]</sup>	0	0	0	0	0
Recycled <sup>[5]</sup>	0	0	0	0	0
Local (Groundwater) <sup>[6]</sup>	9,790	10,920	12,170	13,310	14,440
<b>Total Demand</b>	<b>9,790</b>	<b>10,920</b>	<b>12,170</b>	<b>13,310</b>	<b>14,440</b>
Normal Year Demand <sup>[4]</sup>	9,790	10,920	12,050	13,180	14,300
% of Normal Year	100	100	101.0	101.0	101.0
<b>Supply/ Demand Difference</b>	<b>30,210</b>	<b>29,080</b>	<b>27,830</b>	<b>26,690</b>	<b>27,560</b>
<b>Difference as % of Supply</b>	<b>75.5</b>	<b>72.7</b>	<b>69.6</b>	<b>66.7</b>	<b>65.6</b>
<b>Difference as % of Demand</b>	<b>308.6</b>	<b>266.3</b>	<b>228.7</b>	<b>200.5</b>	<b>190.9</b>

[1] MSWD does not have direct access to imported water. Although State Project Water can be exchanged for Colorado River water, which can then be used for recharging the groundwater aquifer (via water transfers arranged through DWA and CVWD), that import water is not supplied directly to the MSWD distribution system and is therefore not counted as "imported" supply or demand.

[2] There are currently no recycled water supplies available; however, plans call for implementation of a recycled water system beginning in approximately 2020 with a minimal production capacity of 2,000 AFY ramping up to 4,500 AF in 2035. Recycled water supply and demand are assumed to be equal. Recycled water supply numbers were calculated assuming that 90% of the wastewater generated can be converted to recycled water (with the 10% balance lost in the treatment process).

[3] Groundwater supplies during multiple dry years are assumed to equal supplies during normal years (refer to table 4.2-2).

[4] Normal year supplies and demands are interpolated from data in Table 4.2-2.

[5] Recycled water will be used primarily for turf irrigation and can therefore be expected to reflect similar usage patterns consistent with multiple dry year demands experienced in other areas of Southern California where 5%, 3% and 5% increases (over normal years) in years 1, 2, and 3, respectively, of a multiple dry year period are typical.

[6] Groundwater demands are estimated to increase approximately 1% over normal year demands during all multiple dry years (refer to footnote 5 above).

**Table 4.2-5  
 Projected Water Supply and Demand  
 Multiple Dry Water Years 2016-2020  
 (AFY – All projections rounded to nearest 10 AF)**

<b>Water Sources</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>
<b>Supply</b>	<b>Normal Years</b>		<b>Dry Years</b>		
Imported <sup>[1]</sup>	0	0	0	0	0
Recycled <sup>[2]</sup>	2,670	3,340	4,010	4,680	5,350
Local (Groundwater) <sup>[3]</sup>	40,000	40,000	40,000	40,000	40,000
<b>Total Supply</b>	<b>42,670</b>	<b>43,340</b>	<b>44,010</b>	<b>44,680</b>	<b>45,350</b>
Normal Year Supply <sup>[4]</sup>	42,670	43,340	44,010	44,680	45,350
% of Normal Year	100	100	100	100	100
<b>Demand</b>					
Imported <sup>[1]</sup>	0	0	0	0	0
Recycled <sup>[5]</sup>	400	800	1,260	1,650	2,100
Local (Groundwater) <sup>[6]</sup>	14,320	14,340	14,500	14,520	14,540
<b>Total Demand</b>	<b>14,720</b>	<b>15,140</b>	<b>15,760</b>	<b>16,170</b>	<b>16,640</b>
Normal Year Demand <sup>[4]</sup>	14,720	15,140	15,560	15,980	16,400
% of Normal Year	100	100	101.3	101.2	101.5
<b>Supply/ Demand Difference</b>	<b>27,950</b>	<b>28,200</b>	<b>28,250</b>	<b>28,510</b>	<b>28,710</b>
<b>Difference as % of Supply</b>	<b>65.5</b>	<b>65.1</b>	<b>64.2</b>	<b>63.8</b>	<b>63.3</b>
<b>Difference as % of Demand</b>	<b>189.9</b>	<b>186.3</b>	<b>179.3</b>	<b>176.3</b>	<b>172.5</b>

[1] MSWD does not have direct access to imported water. Although State Project Water can be exchanged for Colorado River water, which can then be used for recharging the groundwater aquifer (via water transfers arranged through DWA and CVWD), that import water is not supplied directly to the MSWD distribution system and is therefore not counted as “imported” supply or demand.

[2] There are currently no recycled water supplies available; however, plans call for implementation of a recycled water system beginning in approximately 2020 with a minimal production capacity of 2,000 AFY ramping up to 4,500 AF in 2035. Recycled water supply and demand are assumed to be equal. Recycled water supply numbers were calculated assuming that 90% of the wastewater generated can be converted to recycled water (with the 10% balance lost in the treatment process).

[3] Groundwater supplies during multiple dry years are assumed to equal supplies during normal years (refer to table 4.2-2).

[4] Normal year supplies and demands are interpolated from data in Table 4.2-2.

[5] Recycled water will be used primarily for turf irrigation and can therefore be expected to reflect similar patterns consistent with multiple dry year demands experienced in other areas of Southern California where 5%, 3% and 5% increases (over normal years) in years 1, 2, and 3, respectively, of a multiple dry year period are typical.

[6] Groundwater demands are estimated to increase approximately 1% over normal year demands during all multiple dry years (refer to footnote 5 above).

**Table 4.2-6  
Projected Water Supply and Demand  
Multiple Dry Water Years 2021-2025  
(AFY – All projections rounded to nearest 10 AF)**

<b>Water Sources</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>
<b>Supply</b>	<b>Normal Years</b>		<b>Dry Years</b>		
Imported <sup>[1]</sup>	0	0	0	0	0
Recycled <sup>[2]</sup>	5,490	5,640	5,780	5,930	6,070
Local (Groundwater) <sup>[3]</sup>	40,000	40,000	40,000	40,000	40,000
<b>Total Supply</b>	<b>45,490</b>	<b>45,640</b>	<b>45,780</b>	<b>45,930</b>	<b>46,070</b>
Normal Year Supply <sup>[4]</sup>	45,490	45,640	45,780	45,930	46,070
% of Normal Year	100	100	100	100	100
<b>Demand</b>					
Imported <sup>[1]</sup>	0	0	0	0	0
Recycled <sup>[5]</sup>	2,300	2,600	3,050	3,300	3,680
Local (Groundwater) <sup>[6]</sup>	14,520	14,640	14,910	15,030	15,150
<b>Total Demand</b>	<b>16,820</b>	<b>17,240</b>	<b>17,960</b>	<b>18,330</b>	<b>18,830</b>
Normal Year Demand <sup>[4]</sup>	16,820	17,240	17,660	18,080	18,500
% of Normal Year	100	100	101.7	101.4	101.8
<b>Supply/ Demand Difference</b>	<b>28,670</b>	<b>28,400</b>	<b>27,820</b>	<b>27,600</b>	<b>27,240</b>
<b>Difference as % of Supply</b>	<b>63.0</b>	<b>62.2</b>	<b>60.8</b>	<b>60.1</b>	<b>59.1</b>
<b>Difference as % of Demand</b>	<b>170.5</b>	<b>164.7</b>	<b>154.9</b>	<b>150.6</b>	<b>144.7</b>

[1] MSWD does not have direct access to imported water. Although State Project Water can be exchanged for Colorado River water, which can then be used for recharging the groundwater aquifer (via water transfers arranged through DWA and CVWD), that import water is not supplied directly to the MSWD distribution system and is therefore not counted as "imported" supply or demand.

[2] There are currently no recycled water supplies available; however, plans call for implementation of a recycled water system beginning in approximately 2020 with a minimal production capacity of 2,000 AFY ramping up to 4,500 AF in 2035. Recycled water supply and demand are assumed to be equal. Recycled water supply numbers were calculated assuming that 90% of the wastewater generated can be converted to recycled water (with the 10% balance lost in the treatment process).

[3] Groundwater supplies during multiple dry years are assumed to equal supplies during normal years (refer to table 4.2-2).

[4] Normal year supplies and demands are interpolated from data in Table 4.2-2.

[5] Recycled water will be used primarily for turf irrigation and can therefore be expected to reflect similar patterns consistent with multiple dry year demands experienced in other areas of Southern California where 5%, 3% and 5% increases (over normal years) in years 1, 2, and 3, respectively, of a multiple dry year period are typical.

[6] Groundwater demands are estimated to increase approximately 1% over normal year demands during all multiple dry years (refer to footnote 5 above).

**Table 4.2-7  
 Projected Water Supply and Demand  
 Multiple Dry Water Years 2026-2030  
 (AFY – All projections rounded to nearest 10 AF)**

<b>Water Sources</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>	<b>2029</b>	<b>2030</b>
<b>Supply</b>	<b>Normal Years</b>		<b>Dry Years</b>		
Imported <sup>[1]</sup>	0	0	0	0	0
Recycled <sup>[2]</sup>	6,200	6,330	6,460	6,590	6,720
Local (Groundwater) <sup>[3]</sup>	40,000	40,000	40,000	40,000	40,000
<b>Total Supply</b>	<b>46,200</b>	<b>46,330</b>	<b>46,460</b>	<b>46,590</b>	<b>46,720</b>
Normal Year Supply <sup>[4]</sup>	46,200	46,330	46,460	46,590	46,720
% of Normal Year	100	100	100	100	100
<b>Demand</b>					
Imported <sup>[1]</sup>	0	0	0	0	0
Recycled <sup>[5]</sup>	3,600	3,700	3,990	4,020	4,200
Local (Groundwater) <sup>[6]</sup>	15,300	15,600	16,060	16,360	16,670
<b>Total Demand</b>	<b>18,900</b>	<b>19,300</b>	<b>20,050</b>	<b>20,380</b>	<b>20,870</b>
Normal Year Demand <sup>[4]</sup>	18,900	19,300	19,700	20,100	20,500
% of Normal Year	100	100	101.8	101.4	101.8
<b>Supply/ Demand Difference</b>	<b>27,300</b>	<b>27,030</b>	<b>26,410</b>	<b>26,210</b>	<b>25,850</b>
<b>Difference as % of Supply</b>	<b>59.1</b>	<b>58.3</b>	<b>56.8</b>	<b>56.3</b>	<b>55.3</b>
<b>Difference as % of Demand</b>	<b>144.4</b>	<b>140.1</b>	<b>131.7</b>	<b>128.6</b>	<b>123.9</b>

[1] MSWD does not have direct access to imported water. Although State Project Water can be exchanged for Colorado River water, which can then be used for recharging the groundwater aquifer (via water transfers arranged through DWA and CVWD), that import water is not supplied directly to the MSWD distribution system and is therefore not counted as “imported” supply or demand.

[2] There are currently no recycled water supplies available; however, plans call for implementation of a recycled water system beginning in approximately 2020 with a minimal production capacity of 2,000 AFY ramping up to 4,500 AF in 2035. Recycled water supply and demand are assumed to be equal. Recycled water supply numbers were calculated assuming that 90% of the wastewater generated can be converted to recycled water (with the 10% balance lost in the treatment process).

[3] Groundwater supplies during multiple dry years are assumed to equal supplies during normal years (refer to table 4.2-2).

[4] Normal year supplies and demands are interpolated from data in Table 4.2-2.

[5] Recycled water will be used primarily for turf irrigation and can therefore be expected to reflect similar patterns consistent with multiple dry year demands experienced in other areas of Southern California where 5%, 3% and 5% increases (over normal years) in years 1, 2, and 3, respectively, of a multiple dry year period are typical.

[6] Groundwater demands are estimated to increase approximately 1% over normal year demands during all multiple dry years (refer to footnote 5 above).

**Table 4.2-8**  
**Projected Water Supply and Demand**  
**Multiple Dry Water Years 2026-2030**  
**(AFY – All projections rounded to nearest 10 AF)**

<b>Water Sources</b>	<b>2031</b>	<b>2032</b>	<b>2033</b>	<b>2034</b>	<b>2035</b>
<b>Supply</b>	<b>Normal Years</b>		<b>Dry Years</b>		
Imported <sup>[1]</sup>	0	0	0	0	0
Recycled <sup>[2]</sup>	6,276	5,832	5,388	4,944	4,500
Local (Groundwater) <sup>[3]</sup>	40,000	40,000	40,000	40,000	40,000
<b>Total Supply</b>	<b>46,276</b>	<b>45,832</b>	<b>45,388</b>	<b>44,944</b>	<b>44,500</b>
Normal Year Supply <sup>[4]</sup>	46,276	45,832	45,388	44,944	44,500
% of Normal Year	100	100	100	100	100
<b>Demand</b>					
Imported <sup>[1]</sup>	0	0	0	0	0
Recycled <sup>[5]</sup>	4,100	4,200	4,520	4,620	4,730
Local (Groundwater) <sup>[6]</sup>	16,820	17,140	17,630	17,960	18,280
<b>Total Demand</b>	<b>20,920</b>	<b>21,340</b>	<b>22,150</b>	<b>22,580</b>	<b>23,010</b>
Normal Year Demand <sup>[4]</sup>	20,920	21,340	21,760	22,180	22,600
% of Normal Year	100	100	101.8	101.8	101.8
<b>Supply/ Demand Difference</b>	<b>25,356</b>	<b>24,492</b>	<b>23,238</b>	<b>22,364</b>	<b>21,490</b>
<b>Difference as % of Supply</b>	<b>54.8</b>	<b>53.4</b>	<b>51.2</b>	<b>49.8</b>	<b>48.3</b>
<b>Difference as % of Demand</b>	<b>121.2</b>	<b>114.8</b>	<b>104.9</b>	<b>99.0</b>	<b>93.4</b>

[1] MSWD does not have direct access to imported water. Although State Project Water can be exchanged for Colorado River water, which can then be used for recharging the groundwater aquifer (via water transfers arranged through DWA and CVWD), that import water is not supplied directly to the MSWD distribution system and is therefore not counted as "imported" supply or demand.

[2] There are currently no recycled water supplies available; however, plans call for implementation of a recycled water system beginning in approximately 2020 with a minimal production capacity of 2,000 AFY ramping up to 4,500 AF in 2035. Recycled water supply and demand are assumed to be equal. Recycled water supply numbers were calculated assuming that 90% of the wastewater generated can be converted to recycled water (with the 10% balance lost in the treatment process).

[3] Groundwater supplies during multiple dry years are assumed to equal supplies during normal years (refer to table 4.2-2).

[4] Normal year supplies and demands are interpolated from data in Table 4.2-2.

[5] Recycled water will be used primarily for turf irrigation and can therefore be expected to reflect similar patterns consistent with multiple dry year demands experienced in other areas of Southern California where 5%, 3% and 5% increases (over normal years) in years 1, 2, and 3, respectively, of a multiple dry year period are typical.

[6] Groundwater demands are estimated to increase approximately 1% over normal year demands during all multiple dry years (refer to footnote 5 above).

### **4.3 VULNERABILITY OF SUPPLY FOR SEASONAL OR CLIMATIC SHORTAGE**

The climate in the valley is typical desert with seasonal temperatures varying from about 115 degrees Fahrenheit in the summer to below freezing in the winter. The high mountains that border the valley to the west and north are an effective barrier against easterly moving coastal storms. The average annual rainfall on the valley floor is less than 6 inches; whereas, the average annual rainfall at the crest of the mountains to the west and north of the valley ranges from 30 to 40 inches (DWR, 1964).

Climatological data in California has been recorded since the year 1858. During the twentieth century, California has experienced three periods of severe drought: 1928-34, 1976-77 and 1987-91. The year 1977 is considered to be the driest year of record in the Four Rivers Basin by DWR. These rivers flow into the San Francisco Bay Delta and are the source of water for the SWP.

### **4.4 PLANNED WATER SUPPLY PROJECTS AND PROGRAMS TO MEET PROJECTED WATER USE**

#### ***4.4.1 Mission Springs Water District Projects***

##### ***Groundwater***

MSWD, DWA, and CVWD jointly manage the Mission Creek subbasin under the terms of the Mission Creek Settlement Agreement (December, 2004). This agreement and the 2003 Mission Creek Groundwater Replenishment Agreement between CVWD and DWA specify that the available SWP water will be allocated between the Mission Creek and Whitewater River subbasins in proportion to the amount of water produced or diverted from each subbasin during the preceding year. Groundwater recharge in the Mission Creek subbasin has taken place since 2002 (DWA, 2010). In 2009, production from the Mission Creek subbasin was about 7 percent of the combined production from these two subbasins. CVWD, MSWD and DWA are jointly developing a water management plan for this subbasin.<sup>24</sup>

MSWD also participates in planning and preparing the IRWMP, which is in collaboration with DWA, CVWD, Indio Water Authority, and the Coachella Water Authority. The IRWMP was created by these water purveyors to address water management issues and is intended to be an ongoing process of regional collaboration for the sustainability of water supplies throughout the Coachella Valley (IRWMP 2010).

MSWD's only direct source of urban potable water is local groundwater. With regional management of the groundwater basin, overdraft of the basin is expected to be managed satisfactorily and water supply reliability is expected to be good. There are reliability concerns, however, with supplies of SWP water used for groundwater replenishment.

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<sup>24</sup> CVWD Draft 2010 UWMP, May 2011.

Projects are under development by regional agencies to ensure the reliability of these supplies.

#### **4.4.2 Regional Agency Projects**

##### **Metropolitan Water District of Southern California**

Concurrently and following the preparation of its 2010 RUWMP, Metropolitan has prepared a 2010 IRP Update, which was adopted by the Metropolitan Board of Directors on October 12, 2010. Based on Metropolitan's 2010 RUWMP and 2010 IRP, Metropolitan will have sufficient supply to meet average year, single dry year, and multiple dry years demands over the 20-year period beginning in 2015 and ending in 2035. The supply projections include current programs and programs under development as well as in-region storage and programs. A complete description of these programs is included in Metropolitan's 2010 RUWMP. Metropolitan excluded more speculative programs from their supply projections, like the Poseidon Huntington Beach desalination plant. Even if the programs under development are removed, there are surpluses in all years. Demands are firm demands on Metropolitan and also include commitments for IID-SDCWA transfers and canal lining.

Metropolitan has had a long and successful track record in implementing resource management actions and measures to allow for consistency in available water supply in dry years. Some of these programs, segregated by category, have included the following:

##### Conservation

- Providing incentives to facilitate the installation of water conserving devices. Metropolitan is also looking at refining their current incentive program to include more options, streamlined administrative processes, and more standardization across programs to increase participation. Total incentive payments for FY 2006/07 were \$15.4 million and for FY 2007/08 were \$18.1 million, which created 8,300 AF and 7,400 AF of new conserved water savings, respectively, bringing the total to 120,000 AF of conserved annual water savings, since 1991.
- Promoting water savings through legislative measures.
- Pursuing specific implementation strategies outlined in Metropolitan's Conservation Strategy Plan, jointly developed with its member agencies.

##### Local Resources Programs (LRP)

- Providing incentives of up to \$250 per acre-foot to expand water recycling and groundwater recovery programs. Eighty-six participating water recycling and groundwater recovery projects are expected to collectively produce about 363,000 AFY once fully implemented. Since inception of the LRP in 1982, Metropolitan has provided more than \$244 million for

the production of about 1.3 MAF of recycled water and recovered groundwater.

- Encouraging development of seawater desalination by promoting improved regional facilitation and funding. Additional information on desalination is included later in this section.
- Updating policies to allow for an open process to accept and view project applications on a continuous basis, with a goal of development of an additional 174,000 acre-feet per year of local water resources.

#### In-Basin Groundwater Storage

- Promoting dry-year conjunctive use programs with member and retail agencies, which provide more than 415,000 AF of additional storage within Metropolitan's service area with a contractual yield of more than 115,000 AF during dry conditions. Metropolitan has allocated \$52.4 million to these programs to date. Metropolitan also has about 63,000 AF in local supplemental storage through agreements with several member agencies.

#### In-Basin Surface Water Storage

- Providing storage in Metropolitan's Diamond Valley, Lake Mathews and Lake Skinner Reservoirs.
- Providing flexible storage in DWR's Castaic Lake and Lake Perris Reservoirs.
- Plan process.

### **4.5 TRANSFER AND EXCHANGE OPPORTUNITIES**

The District has not entered into any agreements for the transfer or exchange of water. However, the District cooperates with DWA and Metropolitan for the two transfer programs discussed above: 1) Desert Water Agency/Coachella Valley Water District (DWCV) SWP Table A Transfer and 2) DWCV Advance Delivery Program.

### **4.6 DESALINATED WATER OPPORTUNITIES**

Desalination is viewed as a way to develop a local, reliable source of water that assists agencies reduce their demand on imported water, reduce groundwater overdraft, and in some cases make unusable groundwater available for municipal uses. Currently, there are no identified projects within the District for desalination of impaired groundwater. However, from a regional perspective, desalination projects within the region indirectly  
*Department of Water Resources Desalination Task Force*

Assembly Bill 2717 (2002) called for DWR to establish a Desalination Task Force to evaluate the following: 1) Potential opportunities for desalination of seawater and brackish water in California, 2) Impediments to using desalination technology, and 3) the role of the State in furthering the use of desalination.<sup>25</sup> In October 2003, the task force, comprised of 27 organizations, provided a list of recommendations related to the following issues: general, energy, environment, planning, and permitting.

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<sup>25</sup> DWR, California Water Plan Update 2005, Volume 2 – Resource Management Strategies

## **5 WATER USE PROVISIONS**

### **5.1 BASELINES AND TARGETS**

According to DWR, a water supplier must define a continuous 10 or 15 year base period (baseline) for water use ending no earlier than December 31, 2004 and no later than December 31, 2010 that will be used to develop their per capita water use target for the year 2020 and an interim target for 2015. A water supplier who met at least 10 percent of its 2008 measured retail water demand through recycled water may use a 15-year baseline period; otherwise a supplier must use a 10-year baseline. MSWD did not meet any of its water demand through recycled water and, as a result, must use a 10-year baseline.

Table 5.1-1 shows the pumped water production within the District water service area as well as the gross water use for purposes of determining the per capita consumption. The table also includes population of the water service area and per capita water use from fiscal years (FY) 1996 through FY 2010. Population data used herein was developed using the California State of Finance (DOF) population estimates for the City of Desert Hot Springs and by multiplying the number of single family connections outside the City of Desert Hot Springs by the estimated persons per dwelling unit and percent occupancy (DOF's City/County/State Population and Housing Estimates). Water use increased steadily due to growth until 2007 and since then has decreased due to water conservation resulting in decreasing per capita consumption in recent years. The most advantageous period for the District to use is the one generating the highest per capita use, making subsequent conservation easier to achieve. Therefore, the 10-year period from FY 1997 thru FY 2006 was determined to be the most advantageous and was used to calculate a baseline per capita water use average of 327.1 GPCD as shown in Table 5.1-1.

**Table 5.1-1**  
**Mission Springs Water District Base Daily Per Capita Use**

Fiscal Year	Pumped Water (AFY)	Gross Water Use (gal/day) <sup>[1]</sup>	Water Service Area Population <sup>[2]</sup>	Annual /Capita Use (GPCD)
1996	7,292	6,509,435	20,897	311.5
1997	7,297	6,513,898	21,331	305.4
1998	7,382	6,589,776	21,540	305.9
1999	7,763	6,929,888	21,821	317.6
2000	8,010	7,150,380	22,074	323.9
2001	7,979	7,122,707	22,324	319.1
2002	8,283	7,394,082	22,502	328.6
2003	8,736	7,798,467	22,971	339.5
2004	10,197	9,102,675	24,906	365.5
2005	10,801	9,642,167	28,239	341.5
2006	11,349	10,131,162	31,271	324.0
2007	10,608	9,469,476	32,593	290.5
2008	9,964	8,894,275	33,598	264.7
2009	9,315	8,315,446	34,389	241.8
2010	8,665	7,735,086	34,766	222.5
<b>Baseline (Average FY 1997-2006)</b>				327.1
<b>Minimum Baseline (Average FY 2004-2008)</b>				317.2

[1] Gross Water Use = Pumped Water (includes unaccounted-for water)

[2] Department of Finance for areas inside City and District Records of Residential Connections outside City.

A water supplier must set a 2020 water use target and a 2015 interim target using one of the following four methods as defined further in Section 10608.20 of Senate Bill No. 7 (SBX7-7):

- Method 1: Eighty percent of the water supplier's baseline per capita water use
- Method 2: Per capita daily water use estimated using the sum of performance standards applied to indoor residential use; landscape area water use; and commercial, industrial, and institutional uses
- Method 3: Ninety-five percent of the applicable state hydrologic region target as stated in the State's April 30, 2009, draft 20x2020 Water Conservation Plan
- Method 4: A BMP Option based on standards that are consistent with the California Urban Water Conservation Council's (CUWCC) best management practices (BMPs).

If the average base daily per capita water use is greater than 100 GPCD for a defined 5-year baseline period, the legislation's minimum water use reduction requirement must also be met as set in Section 10608.22 of Senate Bill No. 7 SBX7-7.

Per SBX7-7, the minimum water use reduction baseline period must end no earlier than December 31, 2007 and no later than December 31, 2010 and the minimum reduction shall be no less than 5 percent of this 5-year base daily per capita water use. A minimum water use reduction baseline period between FY 2004 through 2008 was selected to calculate the most advantageous 5-year minimum water use reduction target. As shown in Table 5.1-1, the minimum baseline water use averages 317.2 GPCD . The minimum per capita water use target for 2020 must therefore be 301.3 GPCD (95% of 317.2).

#### **Calculation of Targets Using Methods 1 – 4**

- Method 1: Using a baseline per capita average of 327.1 GPCD (shown in Table 5.1-1) the MSWD 2020 target would be 261.7 GPCD (80% of 327.1). Since the target water use for Method 1 is less than the one found using the legislation's minimum requirement criteria (301.3), no further adjustments to this water use target would be required, if this method is selected.
- Method 2: MSWD does not currently maintain records of lot size, irrigated landscaped area for each parcel, reference evapotranspiration for each parcel, etc. to split its residential, commercial, industrial, or institutional uses into inside and outside (landscape irrigation) uses. The use of Method 2 to calculate conservation targets is therefore not feasible.
- Method 3: MSWD falls within the Colorado River Hydrologic Region (Hydrologic Region 10). According to the State's April 30, 2009 draft 20x2020 Water Conservation Plan, the 2020 Target for Hydrologic Region 10 is 211 GPCD. Using Method 3, MSWD's 2020 water use target would be 200.5 GPCD (95% of 211). Since the target water use generated by Method 3 is less than the one found using the minimum requirement, no further adjustments to this water use target would be required, if this method is selected.
- Method 4: DWR recently released this method and a calculator for agencies wishing to use this BMP-based method. A default indoor residential water savings of 15 GPCD was assumed and the District's usage reports were referenced to obtain the Commercial, Industrial and Institutional (CII) water use consumption (1,789 AF) for the mid-point of the baseline period (year 2001). Using DWR's "SBX7-7 Provisional Method 4 Target Calculator" resulted in a 2020 water use target of 264.9 GPCD.

The discussion and calculations above are summarized in Table 5.1-2.

**Table 5.1-2**  
**Mission Springs Water District**  
**Water Use Target Summary (GPCD)**

Method	2020
1	261.7
2	Not Applicable
3	200.5
4	264.9

As shown in Table 5.1-2, Method 4 results in the most favorable water use target level for MSWD. The 2015 interim target would then be 296.0 GPCD (mid-point between baseline of 327.1 and 2020 target of 264.9). It should be noted that the District has met this 2020 target the past two years and the 2015 target the last four years. Even though the past two years were well publicized to water customers in Southern California as a drought condition, staff believes much of the current downturn in water use is due to economic conditions as the District has higher vacancy rates and also higher people per capita occupancy, explaining the fact that population has not decreased. Demands for these two years should probably not be considered normal. If gross water use returns to the average of the three years prior to the past two (FY 2006-2008) of 9.5 million gallons per day (10,640 AFY), which could be assumed to be a normal year demand, using the current water service area population of 34,766, the per capita use calculates to 273.2 gallons. Therefore, there would still be some additional conservation needed to reach the 2020 target, using the foregoing assumptions. Using the projected water use and recycled water use from Table 4.2-2, the per capita demand is projected to be 309.2 and 231.6 gpcd for 2015 and 2020, respectively, which is slightly above the target for 2015 but well below the target for 2020.

When the economy recovers and development picks back up, new developments should have a lower per capita consumption than existing dwelling units due to the strict landscape ordinance in place for new tracts and infill homes, helping reduce the per capita consumption. These figures should be monitored closely over the coming years to determine the actual per capita consumption versus the interim and 2020 targets.

## 5.2 LOW-INCOME PROJECTED WATER DEMANDS

The California Water Code, Division 6, Part 2.6, Section 10631.1<sup>26</sup> requires each urban water retailer to include projected water use for single family and multi-family residential

<sup>26</sup> All California Law Codes can be accessed at this website: <http://www.leginfo.ca.gov/calaw.html>; Section 10631.1 of the California Water Code is available at this website: <http://www.leginfo.ca.gov/cgi-bin/displaycode?section=wat&group=10001-11000&file=10630-10634>

housing needed for lower income households as defined in Section 50079.5<sup>27</sup> of the Health and Safety Code, as identified in the housing element of the City or County the water agency serves.

The City of Desert Hot Springs' fair share for affordable housing units under the 2006-2014 Regional Housing Needs Assessment (RHNA) requirements is as shown in Table 5.2-1.<sup>28</sup>

**Table 5.2-1  
 City of Desert Hot Springs Share of Regional Housing Needs  
 2006-2014 RHNA**

Income Group	Number of Units	Percentage
Very Low	2,161	21.8%
Low	1,570	15.8%
Moderate	1,871	18.9%
High	4,322	43.5%
<b>TOTAL</b>	<b>9,923</b>	<b>100.0%</b>

As shown in Table 5.2-1, the very low and low income dwelling units total to 3,731 (2,161+1,570) by 2014, which are the lower income housing units subject to the new Water Code requirements described in the first paragraph of this section. Based on a conversation with Martin Magana, Community Development Director of the City of Desert Hot Springs, 60 units (Hacienda Hills) and 4 miscellaneous units have been constructed since 2006, leaving a total requirement of 3,667 low income units required to be constructed by 2014. Because of the economic downturn, the City does not anticipate that it will be able to meet their RHNA requirements. However, if all 3,667 units were constructed by the 2014 date they would generate a demand of just over 3.00 million gallons per day or 3,368 AF using an average persons per dwelling unit of 2.88 (current City average) and the demand factor of 284 gpcd used for new units in the District. This increase in demand compares to the projected increase from 2010 to 2015 of 5,645 AF, included in this UWMP. Therefore, there is more than enough increase in water demand projected to account for the low income unit requirement if, in fact, the units are constructed.

<sup>27</sup> Section 500.79.5 of the Health and Safety Code is available at this website:

<http://www.leginfo.ca.gov/cgi-bin/displaycode?section=hsc&group=50001-51000&file=50050-50106>

<sup>28</sup> SCAG Regional Housing Need Allocation Plan (January 2006 – June 2014) Six-County SCAG Region.

### 5.3 WATER USE REDUCTION PLAN

As demonstrated from the historical water usage data presented in Section 5.1, the District has realized substantial reductions in per capita water usage in recent years. In fact, the District has achieved its 2020 water conservation target of 264.9 gpcd the past three years and achieved its interim 2015 target of 296 gpcd the past four years. However, projecting forward, we have used a more conservative per capita use of 284 gpcd to reflect an average prior to the recent reductions, which may be somewhat lower due to the economy and drought conditions.

The District plans to meet or exceed its SBX7-7 water conservation targets, through a variety of means including:

- Implementing tertiary treatment at the Horton Wastewater Treatment Facility and constructing a recycled water distribution system by 2020, or sooner if financing becomes available prior.
- Encouraging residents and businesses in the District to conserve water;
- Educating the public through a variety of programs on the need for continued water conservation;
- Continuing to operate and maintain the water distribution system with an eye toward maintaining current levels of water loss within AWWA standards and minimizing future losses by repairing or eliminating any leaks that may develop as soon as practical;
- Looking for landscape areas that could be converted from the potable system to the recycled water system when the system is implemented in the future.

### 5.4 PAST, CURRENT AND PROJECTED WATER USE AMONG SECTORS

Residential is the largest customer class (sector) in the District's service area and is the primary water user. The residential group consists of single-family and multi-family residences. The commercial class includes retail and office uses. Table 5.4-1 quantifies the water use per classification (sector) for the District and also shows unaccounted-for water loss. The water use projections are based on projected population shown in Table 1.3-2 and an average per capita use of 315 gpd for existing customers. It is assumed that the per capita demand resulting from population growth will be 10% less (284 gpcd) due to water conservation through landscape ordinances and low flow fixtures. This is a conservative estimate of future water use considering the high growth scenario used for population projections and that per capita use has been below 315 gpd over the past four years. Total water use presented in Table 5.4-1 reflects the total water demand projections shown in Table 4.2-2.

**Table 5.4-1  
 Past, Current and Projected Water Use by Sector  
 (AF)**

	2005	2010	2015	2020	2025	2030	2035
Single Family Residential	5,102	5,058	8,400	9,700	10,900	12,200	13,400
Multi Family Residential	1,553	1,375	1,500	1,700	1,900	2,100	2,300
Commercial	880	689	1,300	1,600	1,800	2,000	2,200
Other	1,427	990	2,000	2,300	2,600	2,900	3,100
<b>Subtotal</b>	<b>8,962</b>	<b>8,113</b>	<b>13,200</b>	<b>15,200</b>	<b>17,100</b>	<b>19,000</b>	<b>20,900</b>
Unaccounted-for System Losses [1]	1,839	552	1,100	1,200	1,400	1,500	1,700
<b>Total Water Use</b>	<b>10,801</b>	<b>8,665</b>	<b>14,300</b>	<b>16,400</b>	<b>18,500</b>	<b>20,500</b>	<b>22,600</b>

[1] Estimated on average at 8.0%; actual amounts are based on the MSWD Comprehensive Water System Master Plan, 2005.

Unaccounted-for water is the difference between water production and water consumption and represents “lost” water. Unaccounted-for water occurs for a number of reasons:

- Fire department hydrant testing to monitor fire protection levels throughout the City of Desert Hot Springs and other communities. Hydrant flushing to eliminate settled sediment and ensure better water quality. Hydrant testing and flushing are not metered. However, this quantity of water is estimated and taken into consideration when calculating unaccounted-for water.
- Water used by the fire department to fight fires. This water is also not metered.
- Customer meter inaccuracies. Meters have an inherent accuracy for a specified flow range. However, flow above or below this range is usually registered at a lower rate. Meters become less accurate with time due to wear.
- Water potentially lost from system leaks, main breaks, flushing, well starts/stops, i.e. from pipes, valves, pumps, and other water system appurtenances.

Table 5.4-2 shows the past and projected number of water service customers by customer class through 2035. The number of service connections is anticipated to increase by about 100 percent through 2035.

**Table 5.4-2**  
**Number of Water Service Connections by Sector**

	<b>2005</b>	<b>2010</b>	<b>2015</b>	<b>2020</b>	<b>2025</b>	<b>2030</b>	<b>2035</b>
Single Family Residential	10,053	11,463	14,700	17,000	19,900	21,400	23,500
Multi Family Residential	670	705	700	700	800	900	1,000
Commercial	403	325	600	700	800	900	1,000
Other	168	254	300	400	400	500	500
<b>Total Connections</b>	<b>11,294</b>	<b>12,747</b>	<b>16,300</b>	<b>18,800</b>	<b>21,900</b>	<b>23,700</b>	<b>26,000</b>

Source: 2005 and 2010 data based on MSWD billing records. Other years are projections based on projected normal year water demand.

## **6 WATER DEMAND MANAGEMENT MEASURES**

### **6.1 INTRODUCTION**

The District recognizes water use efficiency as an integral component of current and future water strategy for the service area. Through the California Urban Water Conservation Council's (CUWCC) Memorandum of Understanding Regarding Urban Water Conservation in California (MOU),<sup>29</sup> 14 BMPs have been established. These BMPs are equivalent to demand management measures (DMM) as defined in Water Code section 10631(f) and refer to policies, programs, rules, regulation and ordinances, and the use of devices, equipment and facilities that, over the long term; have been generally justified and accepted by the industry as providing a "reliable" reduction in water demand. The BMPs are technically and economically reasonable and not environmentally or socially unacceptable, and are not otherwise unreasonable for most water suppliers to carry out.

Although the District is not a signatory to the MOU, MSWD has made state-mandated BMPs (or DMMs) the cornerstone of its conservation programs and a key element in the overall regional water resource management strategy for the region.

### **6.2 DETERMINATION OF DEMAND MANAGEMENT MEASURES IMPLEMENTATION**

The District has continued to work towards implementing the 14 cost-effective DMMs, which are incorporated in regional water agencies rate surcharges. These 14 DMMs include technologies and methodologies that have been sufficiently documented in multiple demonstration projects that result in more efficient water use and conservation.

The District's 2000 UWMP did not address planned implementation of DMMs, but focused on the existing actions contributing to the implementation of DMMs and water conservation efforts as a whole. Therefore, the following provides a thorough overview of the District's current actions.

### **6.3 DEMAND MANAGEMENT MEASURES**

MSWD has made the State-mandated DMMs a key element in the overall water resource management strategy. The District is dedicated to implementing water conservation measures, as shown by the District's adopted (September 2004) Water Conservation Master Plan. The Water Conservation Master Plan defines a series of sensible water conservation activities that complement the unique water resource characteristics of the District's service area. The Plan represents a qualitative effort at identifying and screening

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<sup>29</sup>The *Memorandum of Understanding Regarding Urban Water Conservation in California* (MOU) was adopted in September 1991 by a large number of water suppliers, public advocacy organizations and other interested groups. It created the *California Urban Water Conservation Council* and established 16 Best Management Practices (BMPs) for urban water conservation, recently refined to 14 BMPs.

potential conservation initiatives appropriate for implementation in the District's service areas. The data will assist the District in determining which initiatives should be continued to meet long-term conservation objectives.

As part of the Water Conservation Master Plan, the District identified factors affecting water conservation within the District. Significant factors are impacting water use within the District and include the following: Limited availability of water as a resource in Coachella Valley; the District's 100 percent dependability on groundwater as a source; lack of other potable water sources and limited emergency interconnections; assessments to DWA for future imported water supply; lack of sufficient reservoir storage for water shortages and emergencies; continued new residential development in the City of Desert Hot Springs; risk of future degradation of groundwater supplies from septic tanks, and commercial and industrial development; and the need to implement costly new sources of water (reclamation/conjunctive use, etc.).

The water conservation principles identified in the District's Water Conservation Master Plan were outlined and include detailed tasks. Overall, the District aims to employ the following principles:

- Clarify and summarize the District's conservation programs, reflecting conservation commitments made through the UWMP, the 900 Zone Project EIR, and other programs.
- Ensure that the conservation measures adopted by the District treat all customers fairly and equitably.
- Identify and establish measurable conservation targets to be accomplished by the District within a reasonable period of time.
- Develop sensible approaches for practical, cost-effective and efficient conservation programs which anticipate and serve the long-term needs of District customers.
- Facilitate the District's ability to provide a dependable, reliable supply of water.

The District also developed a conceptual framework for the proposed conservation planning process throughout the service area. Four phases are envisioned as part of the process, including the formulation of conservation principles, program refinement, program implementation and program evaluation. The Plan's Conservation Action Plan seeks to implement the conceptual framework in a "dual approach," whereby regulatory and management practices are jointly utilized. In the Conservation Action Plan, the process for establishing measurable conservation targets is discussed. Three distinct components for the process are identified as the following: establishment of measurable targets, identifying worthwhile conservation measures, and evaluating the effects of conservation activities and attainment of goals.

The District water conservation measures are discussed as follows:

### **DMM 1- Residential Surveys**

The District's 2004 Water Conservation Master Plan proposes to conduct surveys to determine their effectiveness for residential use in reducing demand. This will be accomplished through analyzing historical use patterns and other data to conclude whether the cost benefit analysis proves economically beneficial. The type of rebates offered by the District will also be determined. The Water Conservation Master Plan includes an initiative to implement water audits to improve irrigation efficiency for high-volume residential and commercial water users such as multifamily residences, homeowner associations and golf courses. Audits will evaluate delivery of effectiveness and environmental factors such as soil type, salinity levels and weather conditions.

The District's website includes two links for customers interested in their home's water use calculations. They are the AWWA WaterWise drip calculator and the CUWCC's home tour at [www.h2ouse.org](http://www.h2ouse.org).

Table 6.3-1 shows the projected implementation of residential surveys based on program initiation in 2012.

**Table 6.3-1  
Projected Residential Surveys**

<b>Timeline</b>	<b>Implementation Action</b>
First Quarter , 2012	Recruit 25 high water use customers for pilot program and provide free audit. Based on audit results, develop self-audit kits w/interior and exterior water use component.
Second Quarter, 2012	Make adjustments indicated by pilot program. Produce self-audit kits for general distribution Publicize availability of kits
Third Quarter, 2012	Distribute kits and follow up. Determine benefit of expanding program.
Total Cost	\$5,500 500 = 100 kits @ \$5 each \$5,000 = Estimated staff time

The total costs of implementing this DMM can be calculated based on the number of self-audit kits and the price of each. The District projects that approximately 100 kits will be distributed throughout the service area at a cost of \$5 each, which will result in \$500 in expenditures for the kits. Also, the cost of estimated staff time to assist in the implementation actions shown in Table 6.3-1 is approximately \$5,000. Therefore, the total cost of the proposed implementation actions is estimated at \$5,500.

**DMM 2 – Residential Plumbing Retrofit**

The City of Desert Hot Springs and the County of Riverside are responsible for ensuring the public's compliance with plumbing fixture efficiency standards, and enforcing ULFT replacements. MSWD staff members have worked with the City of Desert Hot Springs and the County of Riverside to ensure enforcement of the state law requiring installation of ultra-low flow (ULF) plumbing fixtures in new construction. Currently, only ultra-low-flush toilets (ULFT) are sold in California for any type of construction or renovation. To increase the cost effectiveness of rebate programs, the District will explore volume purchasing opportunities with other regional water agencies. The level of rebates offered by the District will also be determined.

A variety of residential plumbing retrofit programs are available and the District has initiated one offered by Resource Action Programs (RAP). The RAP residential plumbing retrofits result in the following savings: Showerheads: 5.2-5.8 gallons per day (gpd); Aerators: 1.5 gpd; Leak Detection Tablets: 8 gpd w/leak (or 0.64 gpd overall).

The District began plumbing retrofits in 2009 with 700 retrofits completed thus far. The district has implemented the Water Wise program with 5<sup>th</sup> Grade classes. This is expected to result in 2,100 additional retrofits through 2015. Table 6.3-2 provides the projected number of residential plumbing retrofits and the associated projected water savings through 2015. Table 6.3-3 details the continued implementation actions that will take place.

**Table 6.3-2  
Projected Residential Plumbing Retrofits**

<b>MSWD</b>	<b>Goals (2010-2015)</b>
# of Retrofits	2,100
Water Savings	10,634,400 gallons
Expenditures	\$5,000

**Table 6.3-3  
Implementation Actions**

<b>Timeline</b>	<b>Implementation Action</b>
First Quarter, 2012	Water Wise retrofit program with RAP
Third Quarter, 2012	Implement Water Wise program with 5 <sup>th</sup> Grade classes: 700 students x 3 fixtures each = 2100 retrofits 10,128 gals saved annually per family x 700 families x 1.5 years = 10,634,400 gallons
<b>Total Cost</b>	<b>\$5,000</b>

The method to evaluate effectiveness will consist of calculating estimated water savings for each DMM and comparing historic water demand with the current water demand and then determining if an acceptable level of savings is achieved.

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

MSWD is currently using a wide range of operational policies and practices to ensure the efficient use of its water supply. MSWD conducts monthly monitoring of all water services. In addition, daily inspection of all facilities such as pump stations, wells, reservoirs, valve vaults, etc, is completed. On an annual basis, visual inspection of all easements and pipeline alignments is accomplished.

MSWD secured a DWR grant to replace aging and leaky waterlines. The \$4.4 million grant for the Dos Palmas Waterline Replacement Project provided for replacement of 56,200 linear feet of waterlines that were responsible for 25 percent of the leaks in the District's service area. MSWD covered \$550,000 of the expense not included in the DWR grant.

The District has an aggressive meter replacement program. Meters are re-built on a multi-year cycle to ensure accuracy and proper functioning. MSWD's water system is fully metered. Therefore, MSWD completes annual checks on the accuracy and operation of production meters by either recalibrating and reinstalling, or by replacing meters that do not fall within the required operating range of AWWA standards.

MSWD accomplishes water audits and leak detection through various District activities focused on finding and correcting water losses. Field crews visually survey the system as they travel the throughout the district service area on a daily basis. The District's telemetry system also enhances the ability to locate and correct large leaks expeditiously. Leak monitoring is accomplished by all operations field personnel. In the event of a leak, prompt response and investigation is communicated to the District by customers and other entities.

MSWD offers dye tablets to all customers. At public outreach events, the District provides the tablets at no charge and offers a pamphlet on how to use them. The District service crew carries the tablets when making service calls, especially when responding to complaints of high water bills. Also, the District encourages landlords to make them available to tenants. Finally, the availability of the free tablets is advertised on the District website, stating that customers may come into the MSWD lobby and pick up tablets at no charge.

MSWD works diligently to confirm that the appropriate parties are billed for water loss resulting from damaged fire hydrants, air-vacuums, blow offs, dig-ins, etc. In addition, monthly monitoring of "unaccounted-for" water losses assists in identifying leaks. Average unaccounted-for water losses are currently at approximately 8 percent for MSWD.

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To evaluate the effectiveness of these conservation measures, the District finance staff will continue to review the data records to confirm that the unaccounted-for water losses remain low and consistent. Because of the District's proactive measures, the unaccounted-for water losses are projected to be approximately 8 percent. The CUWCC has established a standard rate of water savings based on the repair of a distribution line: a 1-inch crack in a distribution main at 100 pounds per square inch (psi) can leak 57 gallons per minute. Cost and savings depend on the age of infrastructure for the water system.

The District implements programs on leak detection and repair, metering, meter replacement, system flushing, reservoir cleaning and maintenance, valve maintenance and mapping. The District proposes to review distribution system operational procedures and maintenance practices with appropriate field and administrative staff, as detailed in the 2004 Water Conservation Master Plan. These measures will ensure system reliability. The hydrant flushing program will be reviewed for its scope and timing, as well as to determine how much water is lost during flushing.

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

The District has been fully metered since its inception in 1953. An inverted, tiered rate structure was adopted by the Board of Directors in 1985 and is still being used with the current rates. The District will continue to install and read meters on all new accounts. Metering allows the District to conserve a total of 20-30 percent of the water demand overall, and up to 40 percent savings during peak demand periods, as estimated by the CUWCC's BMP Costs and Savings Study (December 2003).

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

Large landscape irrigation surveys are offered to cost effectively achieve quantifiable water savings. The audits are performed in conjunction with the District's Efficient Landscaping Guidelines, adopted by the District board on December 20, 2004. The guidelines establish effective water efficient landscape requirements for newly installed and rehabilitated landscapes, as well as promote water conservation through climate appropriate plant material and efficient irrigation practices. The District has already contracted with two large home owners associations within their service area.

Section 0.00.040 of the Landscaping Guidelines outlines provisions for landscape water audits. All landscaped areas covered by the guidelines which exceed 1.0 acre (43,560 square feet), including golf courses, green belts, common areas, multifamily housing, schools, businesses, public works, parks, and cemeteries, may be subject to a landscape irrigation audit at the discretion of the District if the District determines that the annual maximum applied water allowance has been exceeded for a minimum of 2 consecutive years. At a minimum, the audit will be conducted by a certified landscape irrigation

auditor and shall be in accordance with the California Landscape Irrigation Auditor Handbook, the entire document which is hereby incorporated by reference.

The Guidelines also require an irrigation design plan, which includes the installation of separate landscape water meters for all projects except for single-family homes or any project with a landscaped area of less than 2,500 square feet. Automatic control systems shall be required for all irrigation systems and must be able to accommodate all aspects of the design. Mechanical irrigation controllers are prohibited. Plants that require different amounts of water shall be irrigated by separate valves. If one valve is used for a given area, only plants with similar water use shall be used in that area. Anti-drain valves shall be installed in strategic points to prevent low-head drainage. Sprinkler heads shall have application rates appropriate to the plant water use requirements within each control valve circuit. Scheduling aids, including soil moisture sensing devices and ET controllers, are required and recommended, respectively. Emitters shall have applications rates appropriate to the plant water use requirements within each control valve circuit.

MSWD has a water efficient demonstration garden adjacent to its administration building. The garden is approximately 8,000 square feet in size and features a variety of drought-resistant trees, shrubs and groundcover native to the local area and the Coachella Valley. Brochures are distributed to provide explanation of each plant, specific environmental requirements, and to enable interested members of the public to take a self-guided tour of the garden.

Since early 2002, the District has been an active participant along with various Coachella area public agencies and private sector organizations to develop a standardized landscape ordinance appropriate to the arid desert climate. The resulting Coachella Valley-Wide Water Efficient Landscape Ordinance (Ordinance No.1302 adopted by CVWD on March 25, 2003) is designed to ensure consistency of landscape water efficiency standards, and applies to new and rehabilitated landscapes within the Valley. A key feature of the Ordinance is a 25 percent reduction in landscape water use. This savings is achieved by changing the plant water-use coefficient factor in the formula originally established by AB 325 from .8 to .6. With this ordinance, new landscaping for any parcel in the Valley can use no more than 60 percent of the water required for an equivalent sized parcel completely planted in grass.

The City of Desert Hot Springs adopted the District's Efficient Landscaping Guidelines, and incorporated them into its Ordinance No. 2005-02, which establishes a Water Efficient Landscaping Ordinance for the City's boundaries. The Ordinance was updated and revised in 2009 and subsequently readopted again by the City. The City's Ordinance directly follows the District's Ordinance as applicable to the City's jurisdiction. In other jurisdictions served by MSWD, the Riverside County Planning Department and the City of Palm Springs require compliance with the District's landscaping guidelines in order for applicants to receive building permits and/or certificates for occupancy.

The adoption of the District's Guidelines on behalf of the City of Desert Hot Springs, and its consistency with CVWD and Desert Hot Springs' water conservation measures, demonstrates the District's commitment to regional collaboration and support for the implementation of large landscape conservation programs.

The District's Water Conservation Master Plan sets forth an initiative to require water efficient practices in landscape plans and irrigation systems of all new or substantially rehabilitated residential and commercial development projects.

In late 2003, MSWD took on a leadership role in landscape water conservation by partnering with a local builder to develop a series of cost-effective and aesthetically pleasing landscape design options for the builder's new residential tract. The landscape solutions emphasized the use of native desert and other water-conserving plants, in concert with water efficient irrigation systems. A key goal of this joint venture was to satisfy the maximum applied water allowance budget established by the Coachella Valley-Wide Water Efficient Landscape Ordinance. The landscape designs jointly developed between MSWD and the builder also reflect several factors important to homeowners, including the style of landscaping, the maintenance demands and water use of a particular design option, and cost. This collaborative effort has resulted in over 30 percent of the homes in Phase 1 of the project featuring water wise landscaping. The District's leadership and innovation was recognized by the water community when the California Association of Water Agencies (ACWA) presented MSWD with the Theodore Roosevelt Environmental Award in 2004 for the Lifestyle Landscaping Program.

Additionally, the Lifestyle Landscaping Program has drawn the attention of the Department of Geography at California State University, Northridge. A graduate student at CSUN has written a thesis for her Master of Arts degree based on the project. The thesis extends the project by contributing import primary research on homebuyer's attitudes when making the purchase decision of turf versus desert landscaping. The District will use the research in formulating conservation messages to the public.

The District was part of the Riverside County Conservation Task Force to create the Riverside County Water Use Efficiency Ordinance. MSWD was an active member of the Task Force to encourage approval and adoption of the ordinance among stakeholders, including County Supervisors, planning agencies, cities, and water districts. To date, a water budget approach has been recommended to allow customers flexibility and does not dictate design implementation. In addition, the Task Force evaluated the use and inclusion of Weather Based Irrigation Controllers (WBIC), enforcement of the Ordinance, support from stakeholders, and emphasis on education as key components of the implementation. The Task Force developed the Model (draft) Ordinance in 2008/09 with compliance by the cities by January 1, 2010.

MSWD provides resources to assist residents in planning and implementing a desert-friendly landscape. Residents within the MSWD service area are provided with the steps for water conservation measures in their homes and businesses under the following three

categories of land uses: Landscape Makeover- Residential, Landscape Planning (in-fill projects which require a building permit), and Landscape Planning (tract projects). The steps for each category are summarized below.

### ***Landscape Makeover - Residential***

MSWD recommends water-wise and desert-friendly plant materials in homes and businesses. Desert-friendly landscape styles include the following: Arid, Semi-Arid, and Lush & Efficient. Arid landscapes include slower growing, low water use plant materials and often incorporate decorative rock or mulch into the landscape design. A 2000-square foot, Arid landscape design will use about 29,000 gallons of water per year. Semi-Arid landscapes use plant materials similar to Arid, but may also include a limited turf area for pets and children, if needed. The Semi-Arid style may include a mix of low and medium water-use plants. A 2000-square foot, Semi-Arid landscape will use about 38,000 gallons of water per year. Lush & Efficient landscapes may incorporate high water use plants or a larger amount of grass. Careful, ongoing maintenance of the irrigation system is a must, as well as shaping the turf areas to conform to sprinkler patterns and avoid runoff. A 2000-square foot, Lush & Efficient landscape will use about 56,000 gallons of water per year. A Turf lawn requires heavy maintenance and uses about three times more water than the Arid landscape. Turf lawns also look out of place, and do not blend in with the desert's natural beauty. A 2,000-square foot Turf landscape will use about 96,000 gallons of water per year.

MSWD also refers its service area residents to the following links for further information:

- The New Mexico Office of the State Engineer 5-step guide to creating a water-wise landscape, called “Xeriscape 101: A Step-by-Step Guide to Creating a Water-Wise Yard.”  
<http://www.ose.state.nm.us/water-info/conservation/xeriscape-101.html>.
- Gallery of California Heritage Gardens:  
[http://www.bewaterwise.com/Gardensoft/garden\\_gallery.aspx](http://www.bewaterwise.com/Gardensoft/garden_gallery.aspx)
- CVWD’s guide, “Lush & Efficient: Gardening in the Coachella Valley,” contains information on topics such as “The Ingredients of a Desert Garden,” “Grouping Plants by Sun and Water Needs,” and “How Much and When to Water.” It also includes a month-to-month gardening calendar for the Coachella Valley and a vast plant database. “Lush & Efficient” can be ordered from CVWD or you can browse the online version at:  
<http://cvwd.org/lush&eff.htm>.
- The Southern Nevada Water Authority has useful information on general landscape tips at: [http://www.snwa.com/html/ws\\_landscape\\_tips.html](http://www.snwa.com/html/ws_landscape_tips.html)

- The Alliance for Water Awareness and Conservation (AWAC) provides featured plant updates at: <http://www.hdawac.org/>
- The Water Education Water Awareness Committee (WEWAC) provides monthly plant features at: <http://www.usewaterwisely.com/potm.cfm>

On its website, MSWD also provides a water budget calculator to assist residents in figuring out what their water allowance is and how the landscape alternatives fit into the allowance. MSWD provides detailed instruction on how to use the calculator, including determining square footage of landscape and annual maximum water allowance for landscape. Based on the calculations, a type of irrigation will be suggested, for example, drip irrigation (non-turf), and the recommended footage on which to use spray irrigation.

MSWD then provides a step by step process for selecting the types of plants that will meet the recommended irrigation methods and landscape size. The water use calculator will estimate the amount of water that the selected landscape and plant materials will use on an annual basis.

The next step MSWD provides includes design and installation of an efficient irrigation system. MSWD encourages public consultation of MSWD staff as a source of information.

### ***Landscape Planning (in-fill projects which require a building permit)***

The three landscape options mentioned above, Arid, Semi-Arid, and Lush & Efficient, are also available for selection by “in-fill” developers. A plant list plus other information is available from both MSWD and the City of Desert Hot Springs.

MSWD recommends beginning with a map of the project site that shows relevant structures and ground formations to estimate the square footage that needs landscaping. Builders are referred to the same links outlines above on how to create a landscaping map.

This information is crucial for new developers in the MSWD region, since Desert Hot Springs requires a building permit and compliance with water-efficient landscaping practices as outlined in the City’s Landscape Ordinance and MSWD’s Water Efficient Landscaping Guidelines. The Ordinance and Guidelines may also be found in the City’s Building and Development Code. The Guidelines establish a water budget for the area to be landscaped and then compute the expected water use for the landscape plan. The expected water use cannot exceed the water budget.

The Guidelines also outline an inspection and sign-off process to confirm that the landscape that is installed is consistent with the approved landscape design. A landscape architect will need to make arrangements with MSWD to inspect any installed landscaping and irrigation system as part of the Certificate approval process. A building permit will also need to be obtained and MSWD will assist in the process.

**Landscape Planning (tract projects)**

Developers of residential tracts in Desert Hot Springs are required to comply with water-efficient landscaping practices. Water Efficient Landscaping Guidelines have been developed by MSWD and are contained in the City of Desert Hot Springs Building and Development Code. A Landscape Documentation Package is required from all tract developers in order for project plans to be approved. Once the landscaping is installed and passes inspection, a Certificate of Substantial Completion is completed as part of the escrow closing process.

The MSWD Water Efficient Landscaping Guidelines must be consulted to ensure that the expected water use cannot exceed the budget. The Guidelines also outline an inspection and sign off process to confirm that the landscape that is installed is consistent with the approved landscape design. Arrangements with MSWD are required to have the newly installed landscaping and irrigation system inspected by MSWD staff as part of the Certificate approval process with the City of Desert Hot Springs resulting in full implementation of this DMM within the City and through cooperative effort with the County and the City of Palm Springs, the MSWD is effective in achieving these same results in these areas as well.

Table 6.3-4 reflects the fees projected for landscape plan check and inspection. These costs are not borne by the District, but paid by the customers using the plan check and inspection services. Projected costs are based on actual costs over the past five years.

**Table 6.3-4  
 Projected Landscape Program**

<b>Implementation Action</b>	<b>Costs 2010-2015</b>
Tract developments plan check	\$1000 /tract x 5 tracts/yr x 6 years = \$30,000
Infill plan check	\$300/APN x 100/yr x 6 years = \$180,000
New SFR inspections	\$75/ APN x 2200 new units = \$132,000
Staff time to manage program	\$37,000/yr x 6 years = \$222,000
Total	\$597,000

**DMM 6 - High Efficiency Washing Machine Rebate Program**

The District is aware that its customers who wish to purchase a high efficiency clothes washer (HECW) may do so at area retailers. Prices for HECWs fall into a range of \$400 to \$1,000, as compared to standard machines that are in a range of \$300 to \$1,500. Because of the price differential, certain water and electric utilities have developed rebate programs to encourage their customers' buying behavior in favor of the HECWs.

Historically, MSWD has not sponsored rebate programs. As a result, the District would take a cautious approach in initiating such programs, choosing to target customer segments with conservation products that have the highest likelihood for success.

In conjunction with DMM 9 and 14 (discussed below), the District will evaluate adding HECWs in the rebate programs being contemplated. The evaluation will include the considerations outlined by the CUWCC for a cost benefit analysis. It will also include local demographics that impact the buying decision. Such demographics include the following:

- Household income: customer's ability to pay a premium to purchase HECW, even with rebate
- Ownership of primary residence: high incidence of rental properties suggest frequent use of commercial Laundromats
- Location of primary residence: high incidence of second homes/vacation homes (snowbirds)

The implementation projection for DMM 6 will be budgeted each year, which is in congruence with DMM 9 and DMM 14.

### ***DMM 7 – Public Information Programs***

MSWD informs its customers about water use efficiency in a variety of ways. MSWD distributes the District's water quality report, and articles on water conservation. Flyers are also provided to the public on a variety of topics including water conservation. Account usage history is provided to customers on monthly billing statements to help customers stay informed about their current usage, previous usage, cubic feet used per day (and last year), and the percentage of change in usage during that time. In addition, the District has completed the development of a web site to provide conservation and other helpful public information to its customers via the Internet. The District's website [www.ms wd.org](http://www.ms wd.org) was launched in 2004.

Another source of information is local publications such as the Chamber of Commerce Newsletter and locally published newspapers and periodicals. The District provides a monthly column of conservation tips for publication, highlighting business conservation and residential conservation, respectively. The District also utilizes staff members to present conservation and informational programs to community organizations and businesses throughout the service area. The District also participates in special community events which provide opportunity to distribute information and interact with the community regarding water conservation.

Since 2001, the District has hosted a Water Issues Study Group (WISG) and now boasts an alumni class of 75. This program consists of a series of about 4 to 5 informal mini-classes focusing on water conservation, water quality, water rights law and hydrogeology. The program is open to all customers in the service area.

In 2009/10 MSWD participated in the “Save Our Water” campaign with DWR and ACWA with a District commitment of \$4,850 for placing 3 to 4 bus stop posters for up to six months.

From 2008 to 2010 MSWD was involved with the Water Agencies of the Desert Region collaborative which placed two billboard ads, one located in Indio and one on I-10 near Desert Hot Springs, with a District contribution of \$7,400.

In 1994/1995 the MSWD Board of Directors voted to initiate a groundwater education association with The Groundwater Foundation, a private non-profit educational organization, recognized internationally for its Groundwater Guardian Program. The Groundwater Guardian Program was designed to empower local citizens and communities to take voluntary steps toward protecting their groundwater resources through annual Result Oriented Activities (ROAs).

The Desert Hot Springs Groundwater Guardian Community, whose mission is “educating and motivating the Greater Desert Hot Springs community to care for and about their groundwater,” celebrates its 16<sup>th</sup> year anniversary in 2011.

Throughout the last 15 years, the Desert Hot Springs Groundwater Guardians have hosted a number of community groundwater related events including the 2000 and 2001 Desert Hot Springs Groundwater Guardian Designation Celebrations that involved the “designation” of Desert Hot Springs High School as the *nation’s first Groundwater Guardian Campus*.

In 2004 and 2005, the Desert Hot Springs Groundwater Guardians were the presenters for the Desert Hot Springs Chamber of Commerce Leadership Breakfasts with particular emphasis in 2005 on the 10<sup>th</sup> Anniversary Celebration of the Desert Hot Springs Groundwater Guardian Community. Also in 2004, the Desert Hot Springs Groundwater Guardians developed a 3-page education link for MSWD’s Web Site.

The Desert Hot Springs Groundwater Guardians participated in the 2005, 2006 and 2007 California Desert Nature Festival hosted by the Natural Science Collaborative of the Desert Region, and also are included in the recent NSC on-line Resource Guide.

The Groundwater Foundation selected Desert Hot Springs as the location for its 2008 Annual National Conference held in October with the theme “Going Green for Groundwater.” Also in 2008, the Desert Hot Springs Groundwater Guardians were asked to participate in the MSWD WISG program for the local community.

At a Desert Hot Springs Chamber of Commerce Mixer in 2009, the Desert Hot Springs Groundwater Guardians presented Cabot’s Pueblo Museum with a ceramic tile bench created by Desert Hot Springs High School students. Over 15,000 individuals annually visit the Museum which is also part of The Groundwater Foundation’s Groundwater Guardian Green Site Program.

In 2010, as part of the Palm Springs Unified School District's 2<sup>nd</sup> Annual DIGICOM Student and Teacher Film Festival, Bubbling Wells Elementary School in Desert Hot Springs was presented with the Festival's top award for theme "Healthy People, Healthy Planet."

The award, presented by Time Warner Cable, for the "Mission Creek Preserve" (part of the Desert Hot Springs Groundwater Guardians Field Trip Program) video created by 5<sup>th</sup> graders at Bubbling Wells led to a number of community events and social networking opportunities including a dinner for the students and their families; a presentation at the Desert Hot Springs City Council as part of the city's "Treasures of Desert Hot Springs" program; a YouTube video which was featured on The Groundwater Foundation's Web Site along with the Foundation's Facebook and the "Recharge Report"; and on The Pinnacle Fund, The Foundation for Palm Springs Unified School District, Facebook.

In 2010, the Desert Hot Springs Groundwater Guardians participated in the 1<sup>st</sup> Annual Earth Day Festival at Cabot's Pueblo Museum with 1,400 in attendance.

As part of the Palm Springs Unified School District's Annual "Principal for the Day" Program, the Desert Hot Springs Groundwater Guardians participated in this annual event during 2009, 2010 and 2011, and are currently serving on Palm Springs Unified School District's (PSUSD) School Advisory Committee for Desert Hot Springs schools.

As a member of the Board of Directors for The Pinnacle Fund, The Foundation for PSUSD participated in the Fund's 2009 and 2010 Annual Golf Tournament with particular emphasis on sponsoring two Desert Hot Springs High School Golf Team students in 2009 and sponsoring a Pinnacle Fund & Desert Hot Springs Groundwater Guardian Tee Sign for 2010.

The District plans to continue its Public Education Program through 2015 at the same rates of participation and costs for 2010. The method to measure effectiveness of implementing this DMM for the District will include quantifying the number of participants in the public programs, as well the number of public announcements/brochures distributed throughout the service area.

### ***DMM 8 – School Education Programs***

MSWD provides extensive water education opportunities to the schools throughout its service area by providing instruction about water resources to students. The following events involve educational outreach to the students on water conservation issues:

- Groundwater Guardians High School Program
- Groundwater Guardians Middle School Program
- District support for Annual Science Fair Program

When the Desert Hot Springs Groundwater Guardian Program began in 1995, the emphasis was on purchasing science books for the Desert Springs Middle School Library. A Student Drinking Water Festival for 300-400 6<sup>th</sup> Graders was developed and the Festival of Our Waters was initiated in collaboration with the Desert Hot Springs Chamber of Commerce in 1997 when the MSWD became a Groundwater Guardian Affiliate.

In 2000, when the community's first high school opened, the Desert Hot Springs High School was designated "*the nation's first Groundwater Guardian Campus,*" and five years later, Desert Springs Middle School also became a Groundwater Guardian Campus. Discussions have already started regarding designating the new Desert Hot Springs middle school, Painted Hills, a Groundwater Guardian Campus when it opens Fall 2011.

The Desert Hot Springs Groundwater Guardian three-tiered approach to "sense of place groundwater education" has grown from 300-400 student participation on an annual basis to over 2,000-3,000 student participation annually and now includes hundreds of teachers and parents in the community with such programs as the Newspapers in Education "GROUNDWATER & YOU" classroom supplement designed to complement the California Department of Education Science Curriculum implemented in 2004; and the Mission Creek Preserve Field Trip Program ("Desert Watersheds: From Source to Sand" collaboration with The Wildlands Conservancy), a hands-on outdoor water-related education program introduced in 2007. Both of these Desert Hot Springs Groundwater Guardian programs are developed/reviewed with the Palm Springs Unified School District Science Specialist who has been a member of Groundwater Guardian since 2003.

Additional Desert Hot Springs Groundwater Guardian Programs include/or have included the Desert Valley Debate League sponsorship in 2007-2008 and 2008-2009 focusing on water-related issues; the continuation of the Student Drinking Water Festival for 6<sup>th</sup> Graders which now totals over 10,000 student-participation to date; the Art in Public Places program initiated in 2008 and developed by over 200 high school students which has produced a ceramic-tile water-related mural at Desert Hot Springs High School, a ceramic-tile bench created for Cabot's Pueblo Museum which welcomes over 15,000 visitors annually, and a ceramic-tile water fountain to be located at the soon-to-be "new" Desert Hot Springs Boys & Girls Club.

The Palm Springs Unified School District has recognized the Desert Hot Springs Groundwater Guardian Program for its groundwater educational program with 4 "Shiny Apple" Awards presented in 2001, 2005 and 2008. And the Desert Hot Springs Groundwater Guardians initiated a Scholarship Program in 2004 and have presented 4 \$500 scholarships to date – 2004, 2006 and 2007 (2).

In 2008, the Desert Hot Springs Groundwater Guardian Community embraced The Groundwater Foundation's new Groundwater Guardian "Green Sites" Program with seven "designated" Groundwater Guardian Green Sites including MSWD, Desert Hot Springs High School, Mission Springs Park, Desert Hot Springs Spa Hotel, Hot Springs Park, Cabot's Pueblo Museum and Miracle Springs Resort and Spa.

The Desert Hot Springs Groundwater Guardian developed a 3-page link to MSWD's Web Site in 2004 and in 2010 collaborated with 5<sup>th</sup> Graders at Bubbling Wells Elementary School to develop the "Mission Creek Preserve" a 25-minute video for the Palm Springs Unified School District's 2<sup>nd</sup> Annual DIGICOM Student and Teacher Film Festival. The video was awarded the honor of being named "Award Winning Video for Theme – Healthy Planet, Healthy People" by Time Warner Cable. The video, recognized as part of the community's "Treasures of Desert Hot Springs" Program initiated by the Mayor and City Council, was placed on YouTube; featured on The Groundwater Foundation's Facebook and part of the organization's "RECHARGE REPORT;" and part of The Pinnacle Fund, The Foundation for Palm Springs Unified School District, Facebook.

In 2010, the Desert Hot Springs Groundwater Guardians introduced two new programs – the "Watershed Stewards" as part of the Desert Hot Springs High School Mission Creek Preserve Field Trip project, and "Kids Teaching Families," a Saturday outing for Desert Hot Springs students and their families based on the Mission Creek Preserve Field Trip Program.

Currently the Desert Hot Springs Groundwater Guardians will be part of the Annual World Water Monitoring Day Program for the first time in collaboration with Desert Hot Springs High School; are involved with Desert Hot Springs High School in the Sarah Mustard Weed elimination program; are considering a Desert Hot Springs Groundwater Guardian "Cabot's Pueblo Museum" Field Trip Program regarding Desert Hot Springs elementary and middle schools for Fall 2011; in discussion with the City of Desert Hot Springs about a water conservation landscaping program at the Desert Hot Springs U.S. Post Office; have established a collaboration with Desert Hot Springs High School "Career Pathway Program" in conjunction with a Pinnacle Fund facilitated \$15,000 (possible 2012 \$12,500 grant and possible 2013 \$12,500 grant) grant from the Jeff Cook Charitable Trust; and working with Palm Springs Unified School District regarding "Making Connections Through Technology" for Desert Springs Middle School.

In 2005/06 the District, in partnership with the City of Desert Hot Springs and the Anderson Foundation, each contributed \$25,000 for a total \$75,000 to the Natural Science Education Connection Program toward local natural sciences education. In 2008 the District contributed \$418 to the Water Education Foundation.

For each of three years from 2007 through 2010, MSWD, Southern California and the Gas Company have underwritten the "Living Wisely" program which reached almost 600 Desert Hot Springs 6<sup>th</sup> graders, with the District's contribution being just under \$22,000 total.

For each of the past four years the District has contributed approximately \$500 annually toward the "Water Awareness" Poster Contest reaching a total of over 300 4<sup>th</sup> through 6<sup>th</sup> grade students. Table 6.3-5 shows past participation in the Groundwater Guardian Program for the District's service area. The program participation is expected to continue at the same rates through 2015 with an annual cost of \$30,000.

**Table 6.3-5  
 Groundwater Guardian Program**

Classes		Number of Students				
Grade Level	#classes	2006	2007	2008	2009	2010
Grades 4 - 5	93	NA	1,163	1,011	659	458
Grades 6 - 8	26	513	796	1,433	1,073	580
High School	18	770	792	830	914	965
Students Reached (total)		1,283	2,751	3,274	2,646	2,003
Total Cost (\$)		30,000	30,000	30,000	30,000	30,000

As stated in the Water Conservation Master Plan, the District will continue to seek out opportunities to expand the District’s school education program, and support teaching staff when needed.

***DMM 9 – Commercial, Industrial, and Institutional Programs***

Water audits are an effective way to improve irrigation efficiency for high-volume residential and commercial water users such as homeowner associations and golf courses. Audits evaluate delivery effectiveness and environmental factors such as soil type, salinity levels and weather conditions. The District’s 2004 Water Conservation Master Plan identifies how the District may use water audits to establish water conservation audit programs to target the District’s largest water users. As part of implementing water audits, the District will contact the Coachella Resources Conservation District to determine the steps, timeframe and cost to sponsor audits targeting the top 10 to 20 high water users within the District’s service area. This will be implemented during the first quarter of 2012.

The City of Desert Hot Springs, the City of Palm Springs, and the County of Riverside are responsible for ensuring the public’s compliance with plumbing fixture efficiency standards, and enforcing ULFT replacements. The District proposes to evaluate the feasibility of establishing a water efficient fixture rebate program to encourage commercial customers (i.e. hotel and spa resorts) to replace high water consumptive toilets, high flow showerheads and clogged faucet aerators. The District will also analyze available historical use patterns and other appropriate District data to determine if projected water savings justify the establishment of such a program. The level of rebates offered by the District will also be determined.

***DMM 10 – Wholesaler Assistance***

The District’s wholesale water provider is the Desert Water Agency. Because MSWD is not a wholesaler, this DMM does not apply.

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**DMM 11 – Conservation Pricing**

The District's current water rates clearly meet the definition of "conservation pricing" as defined by the CUWCC, which states that conservation pricing includes, "rates designed to recover the cost of providing service." The District rates have been designed to recover the full cost of water service. Conservation pricing has been implemented in the District's service area since 1985.

The District's monthly Water Service Charge is based on meter size and covers costs associated with account maintenance, water lines, meters, and reading meters.

The District uses an inverted incline block, multi-level rate structure for all customer classes. Customers using up to 250 cubic feet (cf) per month (Tier 1) are charged \$0.99 per 100 cubic feet (ccf), from 251 to 1,500 cf per month (Tier 2) they are charged \$1.74 per ccf, and over 1,501 cf (Tier 3) customers are charged \$1.83 per ccf. District offers commercial customers separate irrigation meters to assist in irrigation water management. Sewer service charges for commercial customers are based on water consumption and are not imposed on consumption from irrigation meters.

The District's customers have managed their water use such that most of them fall within the first two tiers. In 2010 24% of water use was within Tier 1, 40% in Tier 2, and 36% in Tier 3.

The District's Water Conservation Master Plan (September 2004) includes targeted conservation initiatives with regard to tiered or conservation pricing. The District states that conservation pricing can serve as a strong incentive for consumers to carefully consider their daily water use. This type of pricing encourages conservation on a continuous basis. Therefore, the District continuously monitors the need for changes to its existing rate structure, with a particular focus on new development and those customers that contribute more to water system operation and maintenance (O&M) expenses. The District's Plan concludes that revenue requirements should be determined to meet water system O&M expenses. In addition, costs should be allocated equitably among different uses and users. Finally, the District evaluates on an ongoing basis whether rates provide adequate incentives for consumers to conserve water.

**DMM 12 – Conservation Coordinator**

The District distributes the responsibilities of a conservation coordinator among three key staff members. These are the Directors of Finance and Operations, and the Administrative Officer/Public Relations. The Administrative Officer/Public Relations focuses on public outreach, grant development, and education programs through coordinating various community events. The Director of Finance monitors the District's unaccounted-for water losses and ensures a steady rate structure and adequate revenue. The Director of Operations is responsible for distribution line repairs, i.e. leaking pipes and line replacements. Each position has a focused responsibility that allows the public to contact a

specific person to mitigate problems as they arise and ensures water conservation measures are implemented from three levels of management. Collectively, they are responsible for analyzing, developing, promoting, monitoring and evaluating all MSWD conservation-related activities, including proactively cultivating customer attitudes on how reasonable and permanent changes in water use habits can be achieved.

The District's 2004 Water Conservation Master Plan identified the establishment of a full-time water efficiency coordinator position, based on the numerous conservation activities envisioned, to ensure effectiveness of conservation efforts. As the District grows, it will monitor the need for a full-time conservation coordinator who would be responsible for evaluating the District's conservation action plan and preparing an evaluation plan for analyzing effectiveness of conservation measures. The evaluation plan would include process evaluation, impact evaluation, and monitoring. Briefly, process evaluation will need to look at the effectiveness of initiative implementation methods and overall benefits. The impact evaluation phase must focus on obtaining accurate measurements of changes in customer water use that are clearly attributable to a particular conservation initiative. Finally, monitoring will need to assess specific progress toward reaching a conservation target.

The Water Conservation Master Plan recommends that the coordinator undertake an interim evaluation of each initiative following its initial implementation. The evaluation will be conducted based on studies conducted by AWWA Research Foundation information, CUWCC, and the EPA. The results of the evaluation will assist in modifying the initiative and allowing feedback to be provided to the general manager and key staff.

Conservation Coordinator functions began in earnest with development of Landscaping Guidelines in 2002 and passage in 2004. Current annual cost estimates based on time devoted to conservation functions by the District's staff members, at midpoint of salary range + 40% benefit load, are shown below in Table 6.3-6.

**Table 6.3-6**  
**Conservation Coordinator Cost**

<b>Position</b>	<b>Percentage</b>	<b>Cost</b>
Director of Finance	5%	\$7,035
Director of Operations	10%	\$12,200
Administrative Officer/PR	20%	\$26,800
Total		\$46,035

### ***DMM 13 – Water Waste Prohibition***

The District's Board of Directors adopted Ordinance 93-3, the Water Regulation and Service Ordinance on October 18, 1993. The Ordinance details specific prohibitions on wasting water and imposes penalties if the measures are not followed by the customers.

The District's Landscape Guidelines includes Section .040 on Water Waste Prevention. The Guidelines state that water waste resulting from inefficient landscape irrigation including run-off, low-head drainage, overspray, or other similar conditions where water flows onto adjacent property, non-irrigated areas, walks, roadways, or structures shall be prohibited. All broken heads and pipes must be repaired within a reasonable time following notification; within 72 hours is expected.

The District regularly visits residential land areas to monitor water waste prohibition. On average, the District will conduct 60 site visits per year at a cost of \$100 per visit. The projected cost to the District for sending out a staff member to conduct site visits will be approximately \$6,000 per year.

#### **DMM 14 – Ultra-Low Flow Toilets**

The District's 2004 Water Conservation Master Plan proposes to evaluate the feasibility of establishing a water efficient fixture rebate program to encourage commercial customers to replace non-ULFT toilets, showerheads, and faucet aerators. The District will pattern its program after similar regional and local rebate programs which take advantage of work already completed in the area. The level of rebates offered by the District will also be determined.

As previously stated, the City of Desert Hot Springs and the County of Riverside are currently responsible for ensuring the public's compliance with plumbing fixture efficiency standards, and enforcing ULFT replacements. The District anticipates implementation of a ULFT replacement program in 2012 for its service area, with a focus on the spa and hotel industry, as shown in Table 6.3-7 below.

**Table 6.3-7  
Projected ULFT Implementation  
First Quarter 2012**

Type of User	# of Fixtures 2012-2015
Fixtures in Service Area	900 hotel rooms = 900 fixtures
Assume 20% existing ULFTs implemented	180 units in place, 720 units need replacing.
Goal	50% penetration in 3 years
Objective	Replace 90 per year in each of 3 years.
Study cost/benefit of providing rebate at various levels	\$25, \$50 and \$75

## 6.4 WATER USE EFFICIENCY AND DEMAND MANAGEMENT MEASURES SUMMARY OF IMPLEMENTATION

Water use efficiency is an integral part of water supply planning and operations. The District works to improve the understanding of costs and benefits of conservation so that investment decisions are effective at meeting program goals.

Many of the DMMs have been implemented in concert with the MOU schedule, others are being implemented, and effective DMMs will continue on an ongoing basis. The District will continue to work to implement cost-effective DMMs into the future.

Table 6.4-1 below summarizes the District's projected implementation of DMMs, as described in Section 6.3.

**Table 6.4-1  
 Summary of DMM Implementation**

<b>Measure #</b>	<b>Activity</b>	<b>Summary of Implementation Activity</b>
DMM 2	Residential Plumbing retrofit	In effect - Began in 2009 with approximately 700 retrofits completed. Ongoing programs estimate 2,100 retrofits by 2015.
DMM 3	System leaks	In effect - Dos Palmas Waterline Replacement Project completed
DMM 4	Metering	In effect - Aggressive meter replacement program.
DMM 5	Large Landscape Conservation	In effect - Two large HOA's contacted thus far.
DMM 7	Public Information Program	In effect
DMM 8	School Programs	In effect - Groundwater Guardian Program
DMM 11	Conservation Pricing	In effect - Added third tier to water rates.
DMM 12	Conservation Coordinator	Quarterly reporting to Board of Directors on relevant DMMs; tracking conservation efforts on employee time sheets.
DMM 13	Water Waste Prohibition	In effect - Estimate 60 site visits per year.
DMM 6	Washing Machine Rebate	Conduct cost benefit analysis and evaluate suitability of rebate based on customer demographics.
DMM 9	Industrial Programs	Water audits targeting top 10-20 users.
DMM 14	ULFT	Focus effort on spa and hotel industry with 50% rebate. Explore volume purchasing arrangements with other water districts.
DMM 1	Residential Surveys	Initiate program for 100 surveys per year using self-audit kits.

Figure 6.1 below summarizes the DMM Implementation Schedule for the District.

## Demand Management Measures Schedule

**2010 Urban Water management Plan  
Mission Springs Water District**

ID	Task Name	2012			2013				2014				2015				
		Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	
1	<b>DMM 1 - Residential Surveys</b>																
2	<b>DMM 2- Residential Plumbing Retrofit</b>																
3	<b>DMM 3 - System Leaks</b>																
4	<b>DMM 4 - Metering</b>																
5	<b>DMM 5 - Large Landscape Conservation</b>																
6	<b>DMM 6 - High Efficiency Clothes Washer</b>																
7	<b>DMM 7 - Public Information Program</b>																
8	<b>DMM 8 - School Programs</b>																
9	<b>DMM 9 - Industrial Programs</b>																
10	<b>DMM 10 - Wholesale Assistance (N/A)</b>																
11	<b>DMM 11 - Conservation Pricing</b>																
12	<b>DMM 12 - Conservation Coordinator</b>																
13	<b>DMM 13 - Water Waste Prohibition</b>																
14	<b>DMM 14 - Ultra Low Flush Toilets</b>																

**DMM Schedule**

Figure 6-1

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## **7 WATER SHORTAGE CONTINGENCY PLAN**

### **7.1 INTRODUCTION**

California's extensive system of water supply infrastructure, its reservoirs, groundwater basins, and inter-regional conveyance facilities, mitigate the effect of short-term dry periods. Defining when a drought begins is a function of drought impacts to water users. Drought is a gradual phenomenon. Although droughts are sometimes characterized as emergencies, they differ from typical emergency events. Droughts occur slowly, over a multi-year period. Drought impacts increase with the length of a drought, as carry-over supplies in reservoirs are depleted and water levels in groundwater basins decline.

During water shortage emergencies, the District will implement water conservation stages, adopted as Section 15 of District Ordinance No. 93-3, which is included in Appendix E. The purpose of the Conservation Stages is to reduce the effect of a water shortage on District customers during water shortages and emergencies. In compliance with the Water Code requirements, this plan imposes a 50 percent reduction in the total water supply. The District will further implement both its Water Conservation Master Plan adopted in September 2004 and its Water Efficient Landscaping Guidelines, which were incorporated by reference into the City of Desert Hot Springs' Water Conservation Ordinance.

### **7.2 STAGES OF ACTION**

#### **Mission Springs Water District Shortage Response**

The District's Water Regulations and Service Ordinance (Ordinance No. 93-3) establishes procedures and policies necessary for the orderly administration of a water conservation program to prohibit waste and restrict water during a water shortage emergency. The Ordinance also contains three stages of action for water supply shortages.

Under the existing Ordinance No. 93-3, the General Manager of the District shall monitor the supply and demand for water on a daily basis to determine the level of conservation required by the implementation or termination of the Water Conservation Stages, and shall notify the Board of Directors of the necessity for the implementation or termination of each stage. Each declaration of the Board of Directors implementing or terminating a water conservation stage will be published at least once in a newspaper of general circulation, and will then be posted at the District offices. Each declaration will remain in effect until the Board of Directors otherwise declares.

***District's Stages of Action***

During water shortages, the District has the ability to meet its demands by applying the Water Conservation Stages. These stages impose phases of mandatory reduction of water use up to 50 percent and consist of three stages that help reduce water use within the District's system in order to meet use-reduction targets.

As detailed in District Ordinance No. 93-3, Section 15 (Adopted October 18, 1993), the following series of water conservation stages will take place in the event of a severe water shortage:

***Stage 1 – Voluntary Conservation - Normal Water Use***

During this stage, customers are encouraged to continue to use water wisely, to prevent the waste or unreasonable use of water, and to reduce water consumption to that necessary for ordinary domestic and commercial purposes.

***Stage 2 – Mandatory Compliance – Threatened Water Supply Shortage***

In the event of a threatened water supply shortage which could affect the District's ability to provide water for ordinary domestic and commercial uses, the Board of Directors shall hold a public hearing at which customers shall have the opportunity to protest and to present their respective needs to the District. The Board may then, by Resolution, declare a water shortage condition to prevail, and the following conservation measures shall be in effect:

- Exterior Landscape Plans – Exterior landscape plans for all new commercial and industrial development shall provide for timed irrigation and shall consider the use of drought resistant varieties of flora. Such plans shall be presented to and approved by the District prior to issuance of a water service letter.
- Excessive Irrigation and Related Waste – No customer shall cause or permit the use of water for irrigation of landscaping or other outdoor vegetation, plantings, lawns or other growth, to exceed the amount required to provide reasonable irrigation and shall not cause or permit any unreasonable or excessive waste of water.
- Agricultural Irrigation – Persons receiving water from the District who are engaged in commercial agricultural practices, whether for the purpose of a crop production or growing of ornamental plants shall provide, maintain and use irrigation equipment and practices which are the most efficient possible, Upon the request of the General Manager, these persons may be required to prepare a plan describing their irrigation practices and equipment, including but not limited to the estimate of the efficiency of the use of water on their properties.

- Commercial Facilities – Commercial and industrial facilities shall, upon request of the General Manager, provide the District with a plan to conserve water at their facilities. The District will provide these facilities with information regarding the average monthly water use by the facility for the last two-year period. The facility will be expected to provide the District with a plan to conserve or reduce water used by the percentage deemed by the Board of Directors to be necessary under the circumstances. After review and approval by the General Manager, the water conservation plan shall be considered subject to inspection and enforcement by the District.
- Parks, Golf Courses, Swimming Pools, and School Grounds – Public and private parks, golf courses, swimming pools, and school grounds shall use water for irrigation or pool filling only between the hours of 6 P.M. and 6 A.M..
- Domestic Irrigation – Upon notice and public hearing, the District may determine that the irrigation of exterior vegetation shall be conducted only during specified hours and/or days, and may impose other restrictions on the use of water for such irrigation. The irrigation of exterior vegetation at other than these times shall be considered to be a waste of water.
- Swimming Pools – All residential, public and recreational swimming pools shall use evaporation resistant covers and shall recirculate water. Any swimming pool which does not have a cover installed during periods of nonuse shall be considered a waste of water.
- Run-off and Wash-down – No water shall be used for the purposes of wash-down of impervious areas, without specific written authorization of the General Manager. Any water used on premises that is allowed to escape off the premises and runoff into gutters or storm drains shall be considered a waste of water.
- Vehicle Washing – The washing of cars, truck or other vehicles is not permitted, except with a hose equipped with an automatic shut-off device, or at a commercial facility designed and so designated on the District's billing records.
- Drinking Water Provided by Restaurants – Restaurants are requested not to provide drinking water to patrons except by request.

### **Stage 3 – Mandatory Conservation Measures – Water Shortage Emergency**

In the event of a water shortage emergency in which the District may be prevented from meeting the water demands of its customers, the Board of Directors shall, if possible given the time and circumstances, immediately hold a public hearing at which customers of the District shall have the opportunity to protect and to present their respective needs to the Board. No public hearing shall be required in the event of a breakage or failure of a pump, pipeline, and conduit causing an immediate emergency. The General Manager is

empowered to declare a water shortage emergency, subject to the ratification of the Board of Directors within 72 hours of such a declaration, and the following rules and regulations shall be in effect immediately following such declaration:

- Prohibition – Watering of parks, school grounds, golf courses, lawn watering, landscape irrigation, washing down of driveways, parking lots or other impervious surfaces, washing of vehicles, except when done by commercial car wash establishments, using only recycled or reclaimed water, filling or adding water to swimming pools, wading pools, spas, ornamental ponds, fountains and artificial lakes are prohibited.
- Restaurants – Restaurants shall not serve drinking water to patrons except by request.
- Construction meters – No new construction meter permits shall be issued by the District. All existing construction meters shall be removed and/or locked.
- Commercial Nurseries and Livestock – Commercial nurseries shall discontinue all watering and irrigation. Watering of livestock is permitted as necessary.

The District shall determine the extent of the conservation required through implementation and/or termination of particular water conservation plans in order to plan for and supply water to its customers, including consumption reduction up to 50 percent. Table 7.2-1 shows the use reduction stages as a guideline for recommending the appropriate conservation stage and water conservation target.

**Table 7.2-1  
Water Use Reduction Stages**

% Shortage Condition	Water Conservation Stage	Type of Use Reduction Program
Up to 10%	1	Voluntary
10% to 15%	2	Mandatory
15% to 50%	3	Mandatory

### **7.3 ESTIMATE OF MINIMUM SUPPLY FOR NEXT THREE YEARS**

As noted in Section 4.2, it has been conservatively assumed that two percent of the capacity of the Mission Creek subbasin will be available to MSWD in any given year, including multiple dry years. Given that assumption, coupled with the fact that nearly 100 percent of the District's supply comes from the basin, MSWD it is anticipated that MSWD will have a reliable source of supply during all multiple dry year periods including the 2011-2013 three year period, as shown in Table 7.3-1.

**Table 7.3-1  
 Three Year Estimated Minimum Water Supply  
 (Based on Driest 3-Year Historic Sequence)  
 (AF)**

<b>Source</b>	<b>2011 Base Year</b>	<b>2011 Dry Year</b>	<b>2012 Dry Year</b>	<b>2013 Dry Year</b>
Local (Groundwater)	40,000	40,000	40,000	40,000
Recycled	0	0	0	0
Import	0	0	0	0
<b>Total</b>	<b>40,000</b>	<b>40,000</b>	<b>40,000</b>	<b>40,000</b>

**7.4 CATASTROPHIC SUPPLY INTERRUPTION PLAN**

**7.4.1 Water Shortage Emergency Response**

A water shortage emergency could be the result of a catastrophic event such as result of drought, failures of transmission facilities, a regional power outage, earthquake, flooding, supply contamination from chemical spills, or other adverse conditions.

The District currently has a disaster preparedness plan in place that will be implemented during a catastrophic interruption of water supplies. The District’s Emergency Handbook sets forth specific actions to implement the appropriate plan, depending on the type of disaster and describes the organizational and operational policies and procedures required to provide sufficient water supply and safe drinking water and provides a system for organizing and prioritizing water repairs. It also cites authorities and specifies the public and private organizations responsible for providing water service. In general, the General Manager of the District will be known as the Plan Director and will authorize implementation of the Plan, as necessary. In the Plan Director’s absence, the Director of Operations will assume these responsibilities. The Plan Director will assign personnel to notification teams. Each special team will have specific positions and duties to carry out. Each employee has a copy of the Disaster Preparedness Emergency Handbook and is aware of his/her responsibilities depending on the type of disaster.

For all disasters, the District has established an emergency operations command, consisting of the General Manager, assisted by the Director of Operations and Maintenance, who will be responsible for determining the best overall priorities and strategies to control the situation. The Public Information Officer is the individual who provides a communication link via radio between the Emergency Operations Centers (EOC), such as the City, County, or State OES. The Disaster Advisory Council includes the District’s Board of Directors who will assist the District’s EOC, if the situation warrants.

In the case of a water shortage emergency, there are two inter-connections with CVWD that allow water to be conveyed between the MSWD and CVWD systems. The two connections both feed the Two Bunch Pressure Zone and are situated at the following locations:

- A 6-inch connection located at Little Morongo Road and Dillon Road
- An 8-inch connection located at Bubbling Wells Road and Camino Aventura.

The capacity of the emergency interties was estimated assuming a design flow of 5 feet per second. Estimated capacity of the 6-inch and 8-inch connections is 450 gpm and 775 gpm, respectively. In the case of an emergency water shortage, these emergency interties will be utilized to maintain water supply.

## **7.5 PROHIBITIONS, PENALTIES, AND CONSUMPTION REDUCTION METHODS**

As detailed in District Ordinance No. 93-3, Section 15, the District is committed to implementation of the Water Conservation Stages and the resulting penalties for non-compliance. Under Water Conservation Stage 3, several activities are prohibited. The following activities are specifically prohibited, as included in further detail in the copy of Ordinance No. 93-3 in Appendix E:

- Watering of parks, school grounds, golf courses, lawn watering, landscape irrigation, washing down of driveways, parking lots or other impervious surfaces
- Washing of vehicles, except when done by commercial car wash establishments, using only recycled or reclaimed water,
- Filling or adding water to swimming pools, wading pools, spas, ornamental ponds, fountains and artificial lakes.

Any violation of the District's Water Conservation Stages including waste of water and excessive use is a misdemeanor and upon conviction thereof, the violator shall be punished by imprisonment, fine or by both such fine and imprisonment as allowed by law. In addition to criminal penalties, violators of the mandatory provision of the Ordinance shall be subject to civil action, as follows:

- (1) First Violation. A written notice containing the description of the violation will be given to the person who is suspected of the violation.
- (2) Second Violation. \$100.00 surcharge applied to the customer's bill if the customer commits a second violation of the Ordinance within a 12-month period, or for failure to comply with the notice of violation within the period stated.

- (3) Third Violation. \$200.00 surcharge applied to the customer's bill and a flow restricting device to be installed in the customer's water service line for continued failure to comply within 30 days after notice and imposition of second violation sanction. The charge to the customer for installing a flow-restricting device shall be based upon the size of the meter and the actual cost of installation.
- (4) Subsequent Violations. For any subsequent violation of the Ordinance within the 24 calendar months after a first violation, a discontinuance of service and the penalty surcharge applied for the third violation shall be imposed and the District may discontinue water service to that customer at the premises or to the meter where the violation occurred. The charge for reconnection and restoration of normal service shall be as provided in the Rules and Regulations of the District. Such restoration of service shall not be made until the General Manager of the District has determined that the water user has provided reasonable assurances that future violations of the Ordinance by the user will not occur.

## **7.6 REVENUE AND EXPENDITURE IMPACTS AND MEASURES TO OVERCOME THOSE IMPACTS**

The District has prepared stringent measures, as outlined in the plan, to effectively mitigate water supply impacts in the event of a catastrophic water shortage or drought. Such a reduction in water consumption could bring with it a loss of revenues needed to maintain and operate the water system. The District's expenditures will be greatly impacted due to the implementation of a water shortage program. The District adjusts its water rates on an annual basis. Therefore, if needed, the District will implement rate adjustments to increase revenue when demand is significantly reduced due to implementation of water conservation measures.

The District is developing a plan to implement water replenishment fees that will be levied on parcels before sub-dividing takes place. The establishment of fees is in response to the District's growth projected at approximately 10 percent annually. The goal of the District is to allow growth with water consumption equal to or less than current consumption, while requiring new development to pay for any supplemental water needed to serve its project.

## **7.7 WATER SHORTAGE CONTINGENCY ORDINANCE**

The District's Water Regulations and Service Ordinance No. 93-3 implements several measures in order to curtail water use and is provided in Appendix E.

## **7.8 MECHANISMS TO DETERMINE ACTUAL REDUCTIONS IN WATER USE**

Under normal conditions, potable water production figures are recorded daily. Weekly and monthly reports are prepared and monitored. This data will be used to measure the effectiveness of any water shortage contingency stage that may be implemented.

The General Manager of the District shall monitor the supply and demand for water on a daily basis to determine the level of conservation required by the implementation or termination of the Water Conservation Stages, and shall notify the Board of Directors of the necessity for the implementation or termination of each stage. As stages of water shortage are declared by the General Manager, the District will follow implementation of those stages and continue to monitor water demand levels. Subsequently, the General Manager may implement or terminate the appropriate stages of water conservation in accordance with the Ordinance. If there is further concern after Stage I of the Water Conservation, a public announcement and notification in a local newspaper will be circulated.

## **8 WATER RECYCLING**

### **8.1 RECYCLED WATER**

The Southern California region, from Ventura to San Diego, discharges over 1 billion gallons of treated wastewater to the ocean each day. This is considered a reliable and drought-proof water source and could greatly reduce the region's and the District's reliance on imported water. As technological improvements continue to reduce treatment costs, and as public perception and acceptance continue to improve, numerous reuse opportunities should develop. Recycled water is a critical part of the California water picture because of the region's high likelihood of drought. As treatment technology continues to improve, demand for recycled water will also increase.

### **8.2 RECYCLED WATER USE IN MISSION SPRINGS WATER DISTRICT**

#### ***8.2.1 Current Recycled Water Use***

Currently, treated wastewater is not being used to offset potable water demands. However, the demand for recycled water is already present and is expected to increase over time. MSWD has commissioned several studies to determine the infrastructure and economic requirements for proceeding with a recycled water program.

#### ***8.2.2 Potential for Recycled Water Use***

There is considerable potential for the use of recycled water in the MSWD service area. MSWD has plans to use recycled water for the irrigation of golf courses, parks, medians and greenbelts. A summary of the wastewater effluent quantity currently being discharged is presented in Section 8.3. In order to provide recycled water for irrigation, the District's wastewater treatment plant would have to be upgraded to meet Title 22 tertiary standards. The upgrade would allow the use of activated sludge, microfiltration, and disinfection treatment processes.

MSWD's 2004 Water Conservation Master Plan outlines various planned and implemented activities to ensure water use efficiency throughout the District's service area. Under System Reliability Initiatives, Initiative #2 calls for total management of water resources to ultimately include developing recycled water for the appropriate beneficial uses, such as golf courses, parks, school playing fields, and other public grounds. To implement the use of recycled water, potential recycled water users will need to be identified to quantify the market for a cost-effective water recycling program. In addition, the feasibility and schedule for expanding the Horton Wastewater Treatment Plant to tertiary treatment will also be explored.

The District's Water Efficient Landscaping Guidelines identifies the installation of recycled water irrigation systems (dual distribution systems) as required to allow for the future use of recycled water, unless a written exemption has been granted.

### 8.2.3 Projected Use of Recycled Water

Recycled water can be used to meet future irrigation demand and, subsequently, offset a portion of potable water demand. Table 8.2-1 shows projected recycled water production and demand through the year 2035. Because MSWD's wastewater treatment plant overlies the Mission Creek subbasin, recycled water can be used for replenishment and favorably impacts water balance calculations. By 2035, MSWD is estimated to have approximately 4,500 acre-ft/yr of available recycled water.

**Table 8.2-1**  
**Current and Projected Recycled Water Use**  
**(AFY)**

	2010	2015	2020	2025	2030	2035
All Users	0	0	2,000	3,500	4,000	4,500

### 8.3 WASTEWATER COLLECTION AND TREATMENT IN MISSION SPRINGS WATER DISTRICT

The MSWD operates two wastewater treatment plants serving 7,300 parcels and a population of approximately 20,400. The Horton Wastewater Treatment Plant (Horton WWTP), located on Verbena Drive about a half mile south of Two Bunch Palms Trail, has a capacity of 2.3 million gallons per day (mgd). The Horton WWTP facility uses an extended aeration process for treatment and disposes of the un-disinfected secondary wastewater in adjacent percolation/evaporation ponds. The sludge generated from the treatment process is run through a dewatering sludge filter press and then trucked offsite to proper disposal areas.

The Desert Crest Wastewater Treatment Plant, located about a half mile southeast of the intersection of Dillion Road and Long Canyon Road, has a capacity of 0.18 mgd and serves a country club development and mobile home park. This treatment facility is operating with an average daily flow of 0.05 mgd. The facility operates similar to the Horton WWTP using an aeration basin for treatment and disposes of the un-disinfected secondary wastewater by way of percolation/evaporation ponds. The sludge generated from the treatment process is dried in on-site beds and then trucked offsite to proper disposal areas. Table 8.3-1 shows the total population within the District that receives sewer service and also the projected wastewater treated. It should be noted that the wastewater flow is 10% higher than the recycled water use projected in years 2020 through 2035 due to the loss of some of the flow in the treatment process.

**Table 8.3-1  
Population and Wastewater Treatment**

	<b>2010</b>	<b>2015</b>	<b>2020</b>	<b>2025</b>	<b>2030</b>	<b>2035</b>
Population with Sewer Service	20,400	36,100	42,600	49,100	55,600	62,100
Wastewater Flow (AFY)	1,700	2,900	3,400	3,900	4,400	5,000

### **Sewer Systems**

The existing wastewater conveyance system consists of a network of nearly 45 miles of sewer pipeline concentrated in the central portion of the study area where the majority of the populace and businesses reside. The Desert Crest Country Club community first received sewer service in the early 1960s with the outlying tracts established later in the early 1970s. Most of the MSWD sewer pipelines were constructed in the early 1970s and include lines along Ocotillo Road, Palm Drive, and Mission Lakes Boulevard. In the early 1980s, improvements to the pipeline system were added to tracts west of West Drive.

There is an ongoing program of assessment district formation to connect existing residences currently on septic systems to sewer collectors which have been constructed or are in the process of being constructed. Assessment District No. 11 resulted in the addition of over 1,200 parcels to the sewer collection system. Since 2005, 1,300 more parcels in Assessment District 12 have been converted from septic to sewer service. 5,600 additional parcels are projected to be converted by 2015.

### **8.4 Encouraging Recycled Water Use**

Recent studies of water recycling opportunities within Southern California provide a context for promoting the development of water recycling plans. It is recognized that broad public acceptance of recycled water requires education and public involvement. As the availability of recycled water grows, the District will put focused communications efforts on public education.

### **8.5 Optimizing Recycled Water Use**

The majority of recycled water is used for irrigating golf courses, parks, schools, business and communal landscaping. However, future recycled water use can increase by requiring dual piping in new developments, retrofitting existing landscaped areas and constructing recycled water pumping stations and transmission mains to reach areas far from the treatment plants. Gains in implementing some of these projects have been made throughout the county; however, the additional costs, large energy requirements, and facilities make such projects very expensive to pursue.

To optimize the use of recycled water, cost/benefit analysis must be conducted for each potential project. Once again, this brings about the discussion on technical and economic feasibility of a recycled water project requiring a relative comparison to alternative water supply options.

# **APPENDICES**

## **Appendix A**

### **Urban Water Management Plan Act as Amended**

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# CALIFORNIA WATER CODE DIVISION 6

## PART 2.6. URBAN WATER MANAGEMENT PLANNING

All California Codes have been updated to include the 2010 Statutes.

CHAPTER 1.	GENERAL DECLARATION AND POLICY	<a href="#">10610-10610.4</a>
CHAPTER 2.	DEFINITIONS	<a href="#">10611-10617</a>
CHAPTER 3.	URBAN WATER MANAGEMENT PLANS	
Article 1.	General Provisions	<a href="#">10620-10621</a>
Article 2.	Contents of Plans	<a href="#">10630-10634</a>
Article 2.5.	Water Service Reliability	<a href="#">10635</a>
Article 3.	Adoption and Implementation of Plans	<a href="#">10640-10645</a>
CHAPTER 4.	MISCELLANEOUS PROVISIONS	<a href="#">10650-10656</a>

### WATER CODE

#### SECTION 10610-10610.4

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

**10610.2.** (a) The Legislature finds and declares all of the following:

- (1) The waters of the state are a limited and renewable resource subject to ever-increasing demands.
- (2) The conservation and efficient use of urban water supplies are of statewide concern; however, the planning for that use and the implementation of those plans can best be accomplished at the local level.
- (3) A long-term, reliable supply of water is essential to protect the productivity of California's businesses and economic climate.
- (4) As part of its long-range planning activities, every urban water supplier should make every effort to ensure the appropriate level of reliability in its water service sufficient to meet the needs of its various categories of customers during normal, dry, and multiple dry water years.
- (5) Public health issues have been raised over a number of contaminants that have been identified in certain local and imported water supplies.
- (6) Implementing effective water management strategies, including groundwater storage projects and recycled water projects, may require specific water quality and salinity targets for meeting groundwater basins water quality objectives and promoting beneficial use of recycled water.
- (7) Water quality regulations are becoming an increasingly important factor in water agencies' selection of raw water sources, treatment alternatives, and modifications to existing treatment facilities.
- (8) Changes in drinking water quality standards may also impact the usefulness of water supplies and may ultimately impact supply reliability.
- (9) The quality of source supplies can have a significant impact

on water management strategies and supply reliability.

(b) This part is intended to provide assistance to water agencies in carrying out their long-term resource planning responsibilities to ensure adequate water supplies to meet existing and future demands for water.

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

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

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

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

## **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.

## **WATER CODE**

### **SECTION 10620-10621**

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

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

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

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

(2) Each urban water supplier shall coordinate the preparation of its plan with other appropriate agencies in the area, including other water suppliers that share a common source, water management agencies, and relevant public agencies, to the extent practicable.

(e) The urban water supplier may prepare the plan with its own staff, by contract, or in cooperation with other governmental agencies.

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

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

(b) Every urban water supplier required to prepare a plan pursuant to this part shall, at least 60 days prior to the public hearing on the plan required by Section 10642, notify any city or county within which the supplier provides water supplies that the urban water

supplier will be reviewing the plan and considering amendments or changes to the plan. The urban water supplier may consult with, and obtain comments from, any city or county that receives notice pursuant to this subdivision.

(c) The amendments to, or changes in, the plan shall be adopted and filed in the manner set forth in Article 3 (commencing with Section 10640).

## **WATER CODE**

### **SECTION 10630-10634**

**10630.** It is the intention of the Legislature, in enacting this part, to permit levels of water management planning commensurate with the numbers of customers served and the volume of water supplied.

**10631.** A plan shall be adopted in accordance with this chapter that shall do all of the following:

(a) Describe the service area of the supplier, including current and projected population, climate, and other demographic factors affecting the supplier's water management planning. The projected population estimates shall be based upon data from the state, regional, or local service agency population projections within the service area of the urban water supplier and shall be in five-year increments to 20 years or as far as data is available.

(b) Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five-year increments described in subdivision (a). If groundwater is identified as an existing or planned source of water available to the supplier, all of the following information shall be included in the plan:

(1) A copy of any groundwater management plan adopted by the urban water supplier, including plans adopted pursuant to Part 2.75 (commencing with Section 10750), or any other specific authorization for groundwater management.

(2) A description of any groundwater basin or basins from which the urban water supplier pumps groundwater. For 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) (1) Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage, to the extent practicable, and provide data for each of the following:

- (A) An average water year.
- (B) A single dry water year.
- (C) Multiple dry water years.

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

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

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

- (A) Single-family residential.
- (B) Multifamily.
- (C) Commercial.
- (D) Industrial.
- (E) Institutional and governmental.
- (F) Landscape.
- (G) Sales to other agencies.
- (H) Saline water intrusion barriers, groundwater recharge, or conjunctive use, or any combination thereof.

(I) Agricultural.

(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) For purposes of this part, urban water suppliers that are members of the California Urban Water Conservation Council shall be deemed in compliance with the requirements of subdivisions (f) and (g) by complying with all the provisions of the "Memorandum of Understanding Regarding Urban Water Conservation in California,"

dated December 10, 2008, as it may be amended, and by submitting the annual reports required by Section 6.2 of that memorandum.

(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).

**10631.1.** (a) The water use projections required by Section 10631 shall include projected water use for single-family and multifamily residential housing needed for lower income households, as defined in Section 50079.5 of the Health and Safety Code, as identified in the housing element of any city, county, or city and county in the service area of the supplier.

(b) It is the intent of the Legislature that the identification of projected water use for single-family and multifamily residential housing for lower income households will assist a supplier in complying with the requirement under Section 65589.7 of the Government Code to grant a priority for the provision of service to housing units affordable to lower income households.

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

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

(3) Notwithstanding paragraph (1), the department shall determine that an urban water supplier is eligible for a water management grant or loan even though the supplier is not implementing all of the water demand management measures described in Section 10631, if the urban water supplier has submitted to the department for approval a schedule, financing plan, and budget, to be included in the grant or loan agreement, for implementation of the water demand management measures. The supplier may request grant or loan funds to implement the water demand management measures to the extent the request is consistent with the eligibility requirements applicable to the water management funds.

(4) (A) Notwithstanding paragraph (1), the department shall

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

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

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

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

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

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

(i) Compliance on an individual basis.

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

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

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

the agencies participating in the project or plan is not implementing all of the water demand management measures described in Section 10631.

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

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

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

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

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

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

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

(2) An estimate of the minimum water supply available during each of the next three water years based on the driest three-year historic

sequence for the agency's water supply.

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

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

(5) Consumption reduction methods in the most restrictive stages. Each urban water supplier may use any type of consumption reduction methods in its water shortage contingency analysis that would reduce water use, are appropriate for its area, and have the ability to achieve a water use reduction consistent with up to a 50 percent reduction in water supply.

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

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

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

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

(b) Commencing with the urban water management plan update due December 31, 2015, for purposes of developing the water shortage contingency analysis pursuant to subdivision (a), the urban water supplier shall analyze and define water features that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, separately from swimming pools and spas, as defined in subdivision (a) of Section 115921 of the Health and Safety Code.

**10633.** The plan shall provide, to the extent available, information on recycled water and its potential for use as a water source in the service area of the urban water supplier. The preparation of the plan shall be coordinated with local water, wastewater, groundwater, and planning agencies that operate within the supplier's service area, and shall include all of the following:

(a) A description of the wastewater collection and treatment systems in the supplier's service area, including a quantification of the amount of wastewater collected and treated and the methods of wastewater disposal.

(b) A description of the quantity of treated wastewater that meets recycled water standards, is being discharged, and is otherwise available for use in a recycled water project.

(c) A description of the recycled water currently being used in the supplier's service area, including, but not limited to, the type, place, and quantity of use.

(d) A description and quantification of the potential uses of recycled water, including, but not limited to, agricultural irrigation, landscape irrigation, wildlife habitat enhancement, wetlands, industrial reuse, groundwater recharge, indirect potable reuse, and other appropriate uses, and a determination with regard to the technical and economic feasibility of serving those uses.

(e) The projected use of recycled water within the supplier's

service area at the end of 5, 10, 15, and 20 years, and a description of the actual use of recycled water in comparison to uses previously projected pursuant to this subdivision.

(f) A description of actions, including financial incentives, which may be taken to encourage the use of recycled water, and the projected results of these actions in terms of acre-feet of recycled water used per year.

(g) A plan for optimizing the use of recycled water in the supplier's service area, including actions to facilitate the installation of dual distribution systems, to promote recirculating uses, to facilitate the increased use of treated wastewater that meets recycled water standards, and to overcome any obstacles to achieving that increased use.

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

## **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.

## **WATER CODE**

### **SECTION 10640-10645**

**10640.** Every urban water supplier required to prepare a plan pursuant to this part shall prepare its plan pursuant to Article 2 (commencing with Section 10630).

The supplier shall likewise periodically review the plan as required by Section 10621, and any amendments or changes required as a result of that review shall be adopted pursuant to this article.

**10641.** An urban water supplier required to prepare a plan may consult with, and obtain comments from, any public agency or state agency or any person who has special expertise with respect to water demand management methods and techniques.

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

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

**10644.** (a) 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 exemplary elements of the individual plans. The department shall provide a copy of the report to each urban water supplier that has submitted its plan to the department. The department shall also prepare reports and provide data for any legislative hearings designed to consider the effectiveness of plans submitted pursuant to this part.

(c) (1) For the purpose of identifying the exemplary elements of the individual plans, the department shall identify in the report those water demand management measures adopted and implemented by specific urban water suppliers, and identified pursuant to Section

10631, that achieve water savings significantly above the levels established by the department to meet the requirements of Section 10631.5.

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

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

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

## **WATER CODE**

### **SECTION 10650-10656**

**10650.** Any actions or proceedings to attack, review, set aside, void, or annul the acts or decisions of an urban water supplier on the grounds of noncompliance with this part shall be commenced as follows:

(a) An action or proceeding alleging failure to adopt a plan shall be commenced within 18 months after that adoption is required by this part.

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

**10651.** In any action or proceeding to attack, review, set aside, void, or annul a plan, or an action taken pursuant to the plan by an urban water supplier on the grounds of noncompliance with this part, the inquiry shall extend only to whether there was a prejudicial abuse of discretion. Abuse of discretion is established if the supplier has not proceeded in a manner required by law or if the action by the water supplier is not supported by substantial evidence.

**10652.** The California Environmental Quality Act (Division 13 (commencing with Section 21000) of the Public Resources Code) does not apply to the preparation and adoption of plans pursuant to this part or to the implementation of actions taken pursuant to Section 10632. Nothing in this part shall be interpreted as exempting from the California Environmental Quality Act any project that would significantly affect water supplies for fish and wildlife, or any project for implementation of the plan, other than projects implementing Section 10632, or any project for expanded or additional water supplies.

**10653.** The adoption of a plan shall satisfy any requirements of state law, regulation, or order, including those of the State Water Resources Control Board and the Public Utilities Commission, for the preparation of water management plans or conservation plans; provided, that if the State Water Resources Control Board or the Public Utilities Commission requires additional information concerning water conservation to implement its existing authority, nothing in this part shall be deemed to limit the board or the commission in obtaining that information. The requirements of this part shall be satisfied by any urban water demand management plan prepared to meet federal laws or regulations after the effective date of this part, and which substantially meets the requirements of this part, or by any existing urban water management plan which includes the contents of a plan required under this part.

**10654.** An urban water supplier may recover in its rates the costs incurred in preparing its plan and implementing the reasonable water conservation measures included in the plan. Any best water management practice that is included in the plan that is identified in the

"Memorandum of Understanding Regarding Urban Water Conservation in California" is deemed to be reasonable for the purposes of this section.

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

**10656.** An urban water supplier that does not prepare, adopt, and submit its urban water management plan to the department in accordance with this part, is ineligible to receive funding pursuant to Division 24 (commencing with Section 78500) or Division 26 (commencing with Section 79000), or receive drought assistance from the state until the urban water management plan is submitted pursuant to this article.

## Senate Bill No. 7

### CHAPTER 4

An act to amend and repeal Section 10631.5 of, to add Part 2.55 (commencing with Section 10608) to Division 6 of, and to repeal and add Part 2.8 (commencing with Section 10800) of Division 6 of, the Water Code, relating to water.

[Approved by Governor November 10, 2009. Filed with  
Secretary of State November 10, 2009.]

#### LEGISLATIVE COUNSEL'S DIGEST

SB 7, Steinberg. Water conservation.

(1) Existing law requires the Department of Water Resources to convene an independent technical panel to provide information to the department and the Legislature on new demand management measures, technologies, and approaches. "Demand management measures" 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.

This bill would require the state to achieve a 20% reduction in urban per capita water use in California by December 31, 2020. The state would be required to make incremental progress towards this goal by reducing per capita water use by at least 10% on or before December 31, 2015. The bill would require each urban retail water supplier to develop urban water use targets and an interim urban water use target, in accordance with specified requirements. The bill would require agricultural water suppliers to implement efficient water management practices. The bill would require the department, in consultation with other state agencies, to develop a single standardized water use reporting form. The bill, with certain exceptions, would provide that urban retail water suppliers, on and after July 1, 2016, and agricultural water suppliers, on and after July 1, 2013, are not eligible for state water grants or loans unless they comply with the water conservation requirements established by the bill. The bill would repeal, on July 1, 2016, an existing requirement that conditions eligibility for certain water management grants or loans to an urban water supplier on the implementation of certain water demand management measures.

(2) Existing law, until January 1, 1993, and thereafter only as specified, requires certain agricultural water suppliers to prepare and adopt water management plans.

This bill would revise existing law relating to agricultural water management planning to require agricultural water suppliers to prepare and adopt agricultural water management plans with specified components on or before December 31, 2012, and update those plans on or before December

31, 2015, and on or before December 31 every 5 years thereafter. An agricultural water supplier that becomes an agricultural water supplier after December 31, 2012, would be required to prepare and adopt an agricultural water management plan within one year after becoming an agricultural water supplier. The agricultural water supplier would be required to notify each city or county within which the supplier provides water supplies with regard to the preparation or review of the plan. The bill would require the agricultural water supplier to submit copies of the plan to the department and other specified entities. The bill would provide that an agricultural water supplier is not eligible for state water grants or loans unless the supplier complies with the water management planning requirements established by the bill.

(3) The bill would take effect only if SB 1 and SB 6 of the 2009–10 7th Extraordinary Session of the Legislature are enacted and become effective.

*The people of the State of California do enact as follows:*

SECTION 1. Part 2.55 (commencing with Section 10608) is added to Division 6 of the Water Code, to read:

#### PART 2.55. SUSTAINABLE WATER USE AND DEMAND REDUCTION

##### CHAPTER 1. GENERAL DECLARATIONS AND POLICY

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

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

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

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

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

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

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

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

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

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

10608.4. It is the intent of the Legislature, by the enactment of this part, to do all of the following:

(a) Require all water suppliers to increase the efficiency of use of this essential resource.

(b) Establish a framework to meet the state targets for urban water conservation identified in this part and called for by the Governor.

(c) Measure increased efficiency of urban water use on a per capita basis.

(d) Establish a method or methods for urban retail water suppliers to determine targets for achieving increased water use efficiency by the year 2020, in accordance with the Governor's goal of a 20-percent reduction.

(e) Establish consistent water use efficiency planning and implementation standards for urban water suppliers and agricultural water suppliers.

(f) Promote urban water conservation standards that are consistent with the California Urban Water Conservation Council's adopted best management practices and the requirements for demand management in Section 10631.

(g) Establish standards that recognize and provide credit to water suppliers that made substantial capital investments in urban water conservation since the drought of the early 1990s.

(h) Recognize and account for the investment of urban retail water suppliers in providing recycled water for beneficial uses.

(i) Require implementation of specified efficient water management practices for agricultural water suppliers.

(j) Support the economic productivity of California's agricultural, commercial, and industrial sectors.

(k) Advance regional water resources management.

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

(2) Because an urban agency is not required to meet its urban water use target until 2020 pursuant to subdivision (b) of Section 10608.24, an urban retail water supplier's failure to meet those targets shall not establish a violation of law for purposes of any state administrative or judicial proceeding prior to January 1, 2021. Nothing in this paragraph limits the use of data reported to the department or the board in litigation or an

administrative proceeding. This paragraph shall become inoperative on January 1, 2021.

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

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

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

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

## CHAPTER 2. DEFINITIONS

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

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

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

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

(2) For an urban retail water supplier that meets at least 10 percent of its 2008 measured retail water demand through recycled water that is delivered within the service area of an urban retail water supplier or its urban wholesale water supplier, the urban retail water supplier may extend the calculation described in paragraph (1) up to an additional five years to a maximum of

a continuous 15-year period ending no earlier than December 31, 2004, and no later than December 31, 2010.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(l) "Process water" means water used for producing a product or product content or water used for research and development, including, but not limited to, continuous manufacturing processes, water used for testing and maintaining equipment used in producing a product or product content, and

water used in combined heat and power facilities used in producing a product or product content. Process water does not mean incidental water uses not related to the production of a product or product content, including, but not limited to, water used for restrooms, landscaping, air conditioning, heating, kitchens, and laundry.

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

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

(A) Metered.

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

(C) Treated to a minimum tertiary level.

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

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

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

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

(2) The use of recycled water.

(3) The desalination of brackish groundwater.

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

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

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

(q) “Urban water use target” means the urban retail water supplier’s targeted future daily per capita water use.

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

### CHAPTER 3. URBAN RETAIL WATER SUPPLIERS

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

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

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

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

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

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

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

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

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

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

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

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

(A) Consider climatic differences within the state.

- (B) Consider population density differences within the state.
  - (C) Provide flexibility to communities and regions in meeting the targets.
  - (D) Consider different levels of per capita water use according to plant water needs in different regions.
  - (E) Consider different levels of commercial, industrial, and institutional water use in different regions of the state.
  - (F) Avoid placing an undue hardship on communities that have implemented conservation measures or taken actions to keep per capita water use low.
- (c) If the department adopts a regulation pursuant to paragraph (4) of subdivision (b) that results in a requirement that an urban retail water supplier achieve a reduction in daily per capita water use that is greater than 20 percent by December 31, 2020, an urban retail water supplier that adopted the method described in paragraph (4) of subdivision (b) may limit its urban water use target to a reduction of not more than 20 percent by December 31, 2020, by adopting the method described in paragraph (1) of subdivision (b).
- (d) The department shall update the method described in paragraph (4) of subdivision (b) and report to the Legislature by December 31, 2014. An urban retail water supplier that adopted the method described in paragraph (4) of subdivision (b) may adopt a new urban daily per capita water use target pursuant to this updated method.
- (e) An urban retail water supplier shall include in its urban water management plan required pursuant to Part 2.6 (commencing with Section 10610) due in 2010 the baseline daily per capita water use, urban water use target, interim urban water use target, and compliance daily per capita water use, along with the bases for determining those estimates, including references to supporting data.
- (f) When calculating per capita values for the purposes of this chapter, an urban retail water supplier shall determine population using federal, state, and local population reports and projections.
- (g) An urban retail water supplier may update its 2020 urban water use target in its 2015 urban water management plan required pursuant to Part 2.6 (commencing with Section 10610).
- (h) (1) The department, through a public process and in consultation with the California Urban Water Conservation Council, shall develop technical methodologies and criteria for the consistent implementation of this part, including, but not limited to, both of the following:
- (A) Methodologies for calculating base daily per capita water use, baseline commercial, industrial, and institutional water use, compliance daily per capita water use, gross water use, service area population, indoor residential water use, and landscaped area water use.
  - (B) Criteria for adjustments pursuant to subdivisions (d) and (e) of Section 10608.24.
- (2) The department shall post the methodologies and criteria developed pursuant to this subdivision on its Internet Web site, and make written copies

available, by October 1, 2010. An urban retail water supplier shall use the methods developed by the department in compliance with this part.

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

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

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

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

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

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

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

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

(A) Differences in evapotranspiration and rainfall in the baseline period compared to the compliance reporting period.

(B) Substantial changes to commercial or industrial water use resulting from increased business output and economic development that have occurred during the reporting period.

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

(2) If the urban retail water supplier elects to adjust its estimate of compliance daily per capita water use due to one or more of the factors described in paragraph (1), it shall provide the basis for, and data supporting, the adjustment in the report required by Section 10608.40.

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

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

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

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

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

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

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

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

(c) For an urban retail water supplier that supplies water to a United States Department of Defense military installation, the urban retail water supplier's implementation plan for complying with this part shall consider the United States Department of Defense military installation's requirements under federal Executive Order 13423.

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

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

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

(1) Through an urban wholesale water supplier.

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

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

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

(5) By hydrologic region.

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

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

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

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

10608.40. Urban water retail suppliers shall report to the department on their progress in meeting their urban water use targets as part of their urban water management plans submitted pursuant to Section 10631. The data shall be reported using a standardized form developed pursuant to Section 10608.52.

10608.42. The department shall review the 2015 urban water management plans and report to the Legislature by December 31, 2016, on progress towards achieving a 20-percent reduction in urban water use by December 31, 2020. The report shall include recommendations on changes to water efficiency standards or urban water use targets in order to achieve

the 20-percent reduction and to reflect updated efficiency information and technology changes.

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

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

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

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

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

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

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

#### CHAPTER 4. AGRICULTURAL WATER SUPPLIERS

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

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

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

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

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

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

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

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

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

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

(B) Conjunctive use of groundwater.

(C) Appropriate increase of groundwater recharge.

(D) Reduction in problem drainage.

(E) Improved management of environmental resources.

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

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

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

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

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

(9) Automate canal control structures.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

CHAPTER 5. SUSTAINABLE WATER MANAGEMENT

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

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

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

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

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

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

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

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

CHAPTER 6. STANDARDIZED DATA COLLECTION

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

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

## CHAPTER 7. FUNDING PROVISIONS

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

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

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

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

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

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

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

Legislature that the department give consideration to disadvantaged communities to assist in implementing the requirements of this part.

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

CHAPTER 8. QUANTIFYING AGRICULTURAL WATER USE EFFICIENCY

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

SEC. 2. Section 10631.5 of the Water Code is amended to read:

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

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

(3) Notwithstanding paragraph (1), the department shall determine that an urban water supplier is eligible for a water management grant or loan even though the supplier is not implementing all of the water demand management measures described in Section 10631, if the urban water supplier has submitted to the department for approval a schedule, financing plan, and budget, to be included in the grant or loan agreement, for implementation of the water demand management measures. The supplier may request grant or loan funds to implement the water demand management measures to the extent the request is consistent with the eligibility requirements applicable to the water management funds.

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

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

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

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

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

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

(i) Compliance on an individual basis.

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

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

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

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

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

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

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

SEC. 3. Part 2.8 (commencing with Section 10800) of Division 6 of the Water Code is repealed.

SEC. 4. Part 2.8 (commencing with Section 10800) is added to Division 6 of the Water Code, to read:

PART 2.8. AGRICULTURAL WATER MANAGEMENT PLANNING

CHAPTER 1. GENERAL DECLARATIONS AND POLICY

10800. This part shall be known and may be cited as the Agricultural Water Management Planning Act.

10801. The Legislature finds and declares all of the following:

- (a) The waters of the state are a limited and renewable resource.
- (b) The California Constitution requires that water in the state be used in a reasonable and beneficial manner.
- (c) Urban water districts are required to adopt water management plans.

(d) The conservation of agricultural water supplies is of great statewide concern.

(e) There is a great amount of reuse of delivered water, both inside and outside the water service areas.

(f) Significant noncrop beneficial uses are associated with agricultural water use, including streamflows and wildlife habitat.

(g) Significant opportunities exist in some areas, through improved irrigation water management, to conserve water or to reduce the quantity of highly saline or toxic drainage water.

(h) Changes in water management practices should be carefully planned and implemented to minimize adverse effects on other beneficial uses currently being served.

(i) Agricultural water suppliers that receive water from the federal Central Valley Project are required by federal law to prepare and implement water conservation plans.

(j) Agricultural water users applying for a permit to appropriate water from the board are required to prepare and implement water conservation plans.

10802. The Legislature finds and declares that all of the following are the policies of the state:

(a) The conservation of water shall be pursued actively to protect both the people of the state and the state's water resources.

(b) The conservation of agricultural water supplies shall be an important criterion in public decisions with regard to water.

(c) Agricultural water suppliers shall be required to prepare water management plans to achieve conservation of water.

#### CHAPTER 2. DEFINITIONS

10810. Unless the context otherwise requires, the definitions set forth in this chapter govern the construction of this part.

10811. "Agricultural water management plan" or "plan" means an agricultural water management plan prepared pursuant to this part.

10812. "Agricultural water supplier" has the same meaning as defined in Section 10608.12.

10813. "Customer" means a purchaser of water from a water supplier who uses water for agricultural purposes.

10814. "Person" means any individual, firm, association, organization, partnership, business, trust, corporation, company, public agency, or any agency of that entity.

10815. "Public agency" means any city, county, city and county, special district, or other public entity.

10816. "Urban water supplier" has the same meaning as set forth in Section 10617.

10817. “Water conservation” means the efficient management of water resources for beneficial uses, preventing waste, or accomplishing additional benefits with the same amount of water.

CHAPTER 3. AGRICULTURAL WATER MANAGEMENT PLANS

Article 1. General Provisions

10820. (a) An agricultural water supplier shall prepare and adopt an agricultural water management plan in the manner set forth in this chapter on or before December 31, 2012, and shall update that plan on December 31, 2015, and on or before December 31 every five years thereafter.

(b) Every supplier that becomes an agricultural water supplier after December 31, 2012, shall prepare and adopt an agricultural water management plan within one year after the date it has become an agricultural water supplier.

(c) A water supplier that indirectly provides water to customers for agricultural purposes shall not prepare a plan pursuant to this part without the consent of each agricultural water supplier that directly provides that water to its customers.

10821. (a) An agricultural water supplier required to prepare a plan pursuant to this part shall notify each city or county within which the supplier provides water supplies that the agricultural water supplier will be preparing the plan or reviewing the plan and considering amendments or changes to the plan. The agricultural water supplier may consult with, and obtain comments from, each city or county that receives notice pursuant to this subdivision.

(b) The amendments to, or changes in, the plan shall be adopted and submitted in the manner set forth in Article 3 (commencing with Section 10840).

Article 2. Contents of Plans

10825. (a) It is the intent of the Legislature in enacting this part to allow levels of water management planning commensurate with the numbers of customers served and the volume of water supplied.

(b) This part does not require the implementation of water conservation programs or practices that are not locally cost effective.

10826. An agricultural water management plan shall be adopted in accordance with this chapter. The plan shall do all of the following:

(a) Describe the agricultural water supplier and the service area, including all of the following:

- (1) Size of the service area.
- (2) Location of the service area and its water management facilities.
- (3) Terrain and soils.
- (4) Climate.

- (5) Operating rules and regulations.
- (6) Water delivery measurements or calculations.
- (7) Water rate schedules and billing.
- (8) Water shortage allocation policies.
- (b) Describe the quantity and quality of water resources of the agricultural water supplier, including all of the following:
  - (1) Surface water supply.
  - (2) Groundwater supply.
  - (3) Other water supplies.
  - (4) Source water quality monitoring practices.
  - (5) Water uses within the agricultural water supplier's service area, including all of the following:
    - (A) Agricultural.
    - (B) Environmental.
    - (C) Recreational.
    - (D) Municipal and industrial.
    - (E) Groundwater recharge.
    - (F) Transfers and exchanges.
    - (G) Other water uses.
  - (6) Drainage from the water supplier's service area.
  - (7) Water accounting, including all of the following:
    - (A) Quantifying the water supplier's water supplies.
    - (B) Tabulating water uses.
    - (C) Overall water budget.
    - (8) Water supply reliability.
- (c) Include an analysis, based on available information, of the effect of climate change on future water supplies.
- (d) Describe previous water management activities.
- (e) Include in the plan the water use efficiency information required pursuant to Section 10608.48.

10827. Agricultural water suppliers that are members of the Agricultural Water Management Council, and that submit water management plans to that council in accordance with the "Memorandum of Understanding Regarding Efficient Water Management Practices By Agricultural Water Suppliers In California," dated January 1, 1999, may submit the water management plans identifying water demand management measures currently being implemented, or scheduled for implementation, to satisfy the requirements of Section 10826.

10828. (a) Agricultural water suppliers that are required to submit water conservation plans to the United States Bureau of Reclamation pursuant to either the Central Valley Project Improvement Act (Public Law 102-575) or the Reclamation Reform Act of 1982, or both, may submit those water conservation plans to satisfy the requirements of Section 10826, if both of the following apply:

- (1) The agricultural water supplier has adopted and submitted the water conservation plan to the United States Bureau of Reclamation within the previous four years.

(2) The United States Bureau of Reclamation has accepted the water conservation plan as adequate.

(b) This part does not require agricultural water suppliers that are required to submit water conservation plans to the United States Bureau of Reclamation pursuant to either the Central Valley Project Improvement Act (Public Law 102-575) or the Reclamation Reform Act of 1982, or both, to prepare and adopt water conservation plans according to a schedule that is different from that required by the United States Bureau of Reclamation.

10829. An agricultural water supplier may satisfy the requirements of this part by adopting an urban water management plan pursuant to Part 2.6 (commencing with Section 10610) or by participation in areawide, regional, watershed, or basinwide water management planning if those plans meet or exceed the requirements of this part.

### Article 3. Adoption and Implementation of Plans

10840. Every agricultural water supplier shall prepare its plan pursuant to Article 2 (commencing with Section 10825).

10841. Prior to adopting a plan, the agricultural water supplier shall make the proposed plan available for public inspection, and shall hold a public hearing on the plan. Prior to the hearing, notice of the time and place of hearing shall be published within the jurisdiction of the publicly owned agricultural water supplier pursuant to Section 6066 of the Government Code. A privately owned agricultural water supplier shall provide an equivalent notice within its service area and shall provide a reasonably equivalent opportunity that would otherwise be afforded through a public hearing process for interested parties to provide input on the plan. After the hearing, the plan shall be adopted as prepared or as modified during or after the hearing.

10842. An agricultural water supplier shall implement the plan adopted pursuant to this chapter in accordance with the schedule set forth in its plan, as determined by the governing body of the agricultural water supplier.

10843. (a) An agricultural water supplier shall submit to the entities identified in subdivision (b) a copy of its plan no later than 30 days after the adoption of the plan. Copies of amendments or changes to the plans shall be submitted to the entities identified in subdivision (b) within 30 days after the adoption of the amendments or changes.

(b) An agricultural water supplier shall submit a copy of its plan and amendments or changes to the plan to each of the following entities:

- (1) The department.
- (2) Any city, county, or city and county within which the agricultural water supplier provides water supplies.
- (3) Any groundwater management entity within which jurisdiction the agricultural water supplier extracts or provides water supplies.
- (4) Any urban water supplier within which jurisdiction the agricultural water supplier provides water supplies.

(5) Any city or county library within which jurisdiction the agricultural water supplier provides water supplies.

(6) The California State Library.

(7) Any local agency formation commission serving a county within which the agricultural water supplier provides water supplies.

10844. (a) Not later than 30 days after the date of adopting its plan, the agricultural water supplier shall make the plan available for public review on the agricultural water supplier's Internet Web site.

(b) An agricultural water supplier that does not have an Internet Web site shall submit to the department, not later than 30 days after the date of adopting its plan, a copy of the adopted plan in an electronic format. The department shall make the plan available for public review on the department's Internet Web site.

10845. (a) The department shall prepare and submit to the Legislature, on or before December 31, 2013, and thereafter in the years ending in six and years ending in one, a report summarizing the status of the plans adopted pursuant to this part.

(b) The report prepared by the department shall identify the outstanding elements of any plan adopted pursuant to this part. The report shall include an evaluation of the effectiveness of this part in promoting efficient agricultural water management practices and recommendations relating to proposed changes to this part, as appropriate.

(c) The department shall provide a copy of the report to each agricultural water supplier that has submitted its plan to the department. The department shall also prepare reports and provide data for any legislative hearing designed to consider the effectiveness of plans submitted pursuant to this part.

(d) This section does not authorize the department, in preparing the report, to approve, disapprove, or critique individual plans submitted pursuant to this part.

#### CHAPTER 4. MISCELLANEOUS PROVISIONS

10850. (a) Any action or proceeding to attack, review, set aside, void, or annul the acts or decisions of an agricultural water supplier on the grounds of noncompliance with this part shall be commenced as follows:

(1) An action or proceeding alleging failure to adopt a plan shall be commenced within 18 months after that adoption is required by this part.

(2) 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 120 days after submitting the plan or amendments to the plan to entities in accordance with Section 10844 or the taking of that action.

(b) In an action or proceeding to attack, review, set aside, void, or annul a plan, or an action taken pursuant to the plan by an agricultural 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 agricultural water supplier has not proceeded in a manner required by law, or if the action by the agricultural water supplier is not supported by substantial evidence.

10851. 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. This part does not exempt projects for implementation of the plan or for expanded or additional water supplies from the California Environmental Quality Act.

10852. An agricultural water supplier is not eligible for a water grant or loan awarded or administered by the state unless the supplier complies with this part.

10853. No agricultural water supplier that provides water to less than 25,000 irrigated acres, excluding recycled water, shall be required to implement the requirements of this part or Part 2.55 (commencing with Section 10608) unless sufficient funding has specifically been provided to that water supplier for these purposes.

SEC. 5. This act shall take effect only if Senate Bill 1 and Senate Bill 6 of the 2009–10 Seventh Extraordinary Session of the Legislature are enacted and become effective.

## **Appendix B**

### **DWR UWMP Checklist Organized by Subject**

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**Table I-2 Urban Water Management Plan checklist, organized by subject**

No.	UWMP requirement <sup>a</sup>	Calif. Water Code reference	Additional clarification	UWMP location
<b>PLAN PREPARATION</b>				
4	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.	10620(d)(2)		Section 1, Pg. 4-6
6	Notify, at least 60 days prior to the public hearing on the plan required by Section 10642, any city or county within which the supplier provides water that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan. Any city or county receiving the notice may be consulted and provide comments.	10621(b)		Section 1, Pg. 5 and Appendix C
7	Provide supporting documentation that the UWMP or any amendments to, or changes in, have been adopted as described in Section 10640 et seq.	10621(c)		Section 1, Pg. 4 and Appendix C
54	Provide supporting documentation that the urban water management plan has been or will be provided to any city or county within which it provides water, no later than 60 days after the submission of this urban water management plan.	10635(b)		Section 1, Pg. 4 If item no. 59 is met, then item 54 is met as well
55	Provide supporting documentation that the water supplier has encouraged active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of the plan.	10642		Section 1, Pg. 4
56	Provide supporting documentation that the urban water supplier made the plan available for public inspection and held a public hearing about the plan. For public agencies, the hearing notice is to be provided pursuant to Section 6066 of the Government Code. The water supplier is to provide the time and place of the hearing to any city or county within which the supplier provides water. Privately-owned water suppliers shall provide an equivalent notice within its service area.	10642		Section 1, Pg. 4-5 and Appendix C
57	Provide supporting documentation that the plan has been adopted as prepared or modified.	10642	What is the difference between item 7 and 58	Section 1, Pg. 4
58	Provide supporting documentation as to how the water supplier plans to implement its plan.	10643		Section 1, Pg. 6

No.	UWMP requirement <sup>a</sup>	Calif. Water Code reference	Additional clarification	UWMP location
59	Provide supporting documentation that, in addition to submittal to DWR, the urban water supplier has submitted this UWMP to 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. This also includes amendments or changes.	10644(a)		Section 1, Pg. 4
60	Provide supporting documentation that, not later than 30 days after filing a copy of its plan with the department, the urban water supplier has or will make the plan available for public review during normal business hours	10645		Section 1, Pg. 4
<b>SYSTEM DESCRIPTION</b>				
8	Describe the water supplier service area.	10631(a)		Section 1, Pg. 6-13
9	Describe the climate and other demographic factors of the service area of the supplier	10631(a)		Section 1, Pg. 6
10	Indicate the current population of the service area	10631(a)	Provide the most recent population data possible. Use the method described in "Baseline Daily Per Capita Water Use." See Section M.	Section 1, Pg. 12-13
11	Provide population projections for 2015, 2020, 2025, and 2030, based on data from State, regional, or local service area population projections.	10631(a)	2035 and 2040 can also be provided to support consistency with Water Supply Assessments and Written Verification of Water Supply documents.	Section 1, Pg. 13
12	Describe other demographic factors affecting the supplier's water management planning.	10631(a)		Section 1, Pg. 11-12
<b>SYSTEM DEMANDS</b>				
1	Provide baseline daily per capita water use, urban water use target, interim urban water use target, and compliance daily per capita water use, along with the bases for determining those estimates, including references to supporting data.	10608.20(e)		Section 5, Pg. 1-4
2	<i>Wholesalers:</i> Include an assessment of present and proposed future measures, programs, and policies to help achieve the water use reductions. <i>Retailers:</i> Conduct at least one public hearing that includes general discussion of the urban retail water supplier's implementation plan for complying with the Water Conservation Bill of 2009.	10608.36 10608.26(a)	Retailers and wholesalers have slightly different requirements	Section 1, Pg. 4-5 Public Hearing held on June 28, 2011

No.	UWMP requirement <sup>a</sup>	Calif. Water Code reference	Additional clarification	UWMP location
3	Report progress in meeting urban water use targets using the standardized form.	10608.40		Section 5, Pg. 4
25	Quantify past, current, and projected water use, identifying the uses among water use sectors, for the following: (A) single-family residential, (B) multifamily, (C) commercial, (D) industrial, (E) institutional and governmental, (F) landscape, (G) sales to other agencies, (H) saline water intrusion barriers, groundwater recharge, conjunctive use, and (I) agriculture.	10631(e)(1)	Consider 'past' to be 2005, present to be 2010, and projected to be 2015, 2020, 2025, and 2030. Provide numbers for each category for each of these years.	Section 5, Pg. 6-8
33	Provide documentation that either the retail agency provided the wholesale agency with water use projections for at least 20 years, if the UWMP agency is a retail agency, OR, if a wholesale agency, it provided its urban retail customers with future planned and existing water source available to it from the wholesale agency during the required water-year types	10631(k)	Average year, single dry year, multiple dry years for 2015, 2020, 2025, and 2030.	Section 4, Pg. 18-24
34	Include projected water use for single-family and multifamily residential housing needed for lower income households, as identified in the housing element of any city, county, or city and county in the service area of the supplier.	10631.1(a)		Section 5, Pg. 4-5
<b>SYSTEM SUPPLIES</b>				
13	Identify and quantify the existing and planned sources of water available for 2015, 2020, 2025, and 2030.	10631(b)	The 'existing' water sources should be for the same year as the "current population" in line 10. 2035 and 2040 can also be provided.	Section 4, Pg. 18-24
14	Indicate whether groundwater is an existing or planned source of water available to the supplier. If yes, then complete 15 through 21 of the UWMP Checklist. If no, then indicate "not applicable" in lines 15 through 21 under the UWMP location column.	10631(b)	Source classifications are: surface water, groundwater, recycled water, storm water, desalinated sea water, desalinated brackish groundwater, and other.	Section 2, Pg. 1-2
15	Indicate whether a groundwater management plan been adopted by the water supplier or if there is any other specific authorization for groundwater management. Include a copy of the plan or authorization.	10631(b)(1)		Section 2, Pg. 2
16	Describe the groundwater basin.	10631(b)(2)		Section 2, Pg. 1-10

No.	UWMP requirement <sup>a</sup>	Calif. Water Code reference	Additional clarification	UWMP location
17	Indicate whether the groundwater basin is adjudicated? Include a copy of the court order or decree.	10631(b)(2)		Section 2, Pg. 2
18	Describe the amount of groundwater the urban water supplier has the legal right to pump under the order or decree. If the basin is not adjudicated, indicate "not applicable" in the UWMP location column.	10631(b)(2)		Not Applicable
19	For groundwater basins that are not adjudicated, provide information as to whether DWR 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. If the basin is adjudicated, indicate "not applicable" in the UWMP location column.	10631(b)(2)		Section 2, Pg. 2
20	Provide a detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years	10631(b)(3)		Section 2, Pg. 5 and 18
21	Provide a detailed description and analysis of the amount and location of groundwater that is projected to be pumped.	10631(b)(4)	Provide projections for 2015, 2020, 2025, and 2030.	Section 2, Pg. 18
24	Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.	10631(d)		Section 4, Pg. 9-13 and 27
30	Include a detailed description of all water supply projects and programs that may be undertaken by the water supplier to address water supply reliability in average, single-dry, and multiple-dry years, excluding demand management programs addressed in (f)(1). Include specific projects, describe water supply impacts, and provide a timeline for each project.	10631(h)		Section 4, Pg. 25-27
31	Describe desalinated water project opportunities for long-term supply, including, but not limited to, ocean water, brackish water, and groundwater.	10631(i)		Section 4, Pg. 27-28
44	Provide information on recycled water and its potential for use as a water source in the service area of the urban water supplier. Coordinate with local water, wastewater, groundwater, and planning agencies that operate within the supplier's service area.	10633		Section 2, Pg. 19 and Section 8, Pg. 1-4
45	Describe 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.	10633(a)		Section 8, Pg. 2-3

No.	UWMP requirement <sup>a</sup>	Calif. Water Code reference	Additional clarification	UWMP location
46	Describe the quantity of treated wastewater that meets recycled water standards, is being discharged, and is otherwise available for use in a recycled water project.	10633(b)		Section 2, Pg. 19 and Section 8, Pg. 2
47	Describe the recycled water currently being used in the supplier's service area, including, but not limited to, the type, place, and quantity of use.	10633(c)		Section 8, Pg. 1
48	Describe and quantify the potential uses of recycled water, including, but not limited to, agricultural irrigation, landscape irrigation, wildlife habitat enhancement, wetlands, industrial reuse, groundwater recharge, indirect potable reuse, and other appropriate uses, and a determination with regard to the technical and economic feasibility of serving those uses.	10633(d)		Section 8, Pg. 1
49	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.	10633(e)		Section 8, Pg. 2
50	Describe the 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.	10633(f)		Section 8, Pg. 3
51	Provide 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.	10633(g)		Section 8, Pg. 3-4
<b>WATER SHORTAGE RELIABILITY AND WATER SHORTAGE CONTINGENCY PLANNING <sup>b</sup></b>				
5	Describe water management tools and options to maximize resources and minimize the need to import water from other regions.	10620(f)		Section 6, Pg 1-23
22	Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage and provide data for (A) an average water year, (B) a single dry water year, and (C) multiple dry water years.	10631(c)(1)		Section 4, Pg. 18-25
23	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.	10631(c)(2)		Section 4, Pg. 25-27 and Section 6, Pg. 1 -23
35	Provide an urban water shortage contingency analysis that specifies stages of action, including up to a 50-percent water supply reduction, and an outline of specific water supply conditions at each stage	10632(a)		Section 7, Pg. 1-4 and Appendix E

No.	UWMP requirement <sup>a</sup>	Calif. Water Code reference	Additional clarification	UWMP location
36	Provide an estimate of the minimum water supply available during each of the next three water years based on the driest three-year historic sequence for the agency's water supply.	10632(b)		Section 7, Pg. 4-5
37	Identify 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.	10632(c)		Section 7, Pg. 5-6 and Appendix E
38	Identify 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.	10632(d)		Section 7, Pg. 6-7 and Appendix E
39	Specify 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.	10632(e)		Section 7, Pg. 1, Appendix E, and Section 7, Pg. 3-4
40	Indicated penalties or charges for excessive use, where applicable.	10632(f)		Section 7, Pg. 6-7
41	Provide 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.	10632(g)		Section 7, Pg. 7
42	Provide a draft water shortage contingency resolution or ordinance.	10632(h)		Section 7, Pg. 7 and Appendix E
43	Indicate a mechanism for determining actual reductions in water use pursuant to the urban water shortage contingency analysis.	10632(i)		Section 7, Pg. 8
52	Provide information, to the extent practicable, relating to the quality of existing sources of water available to the supplier over the same five-year increments, and the manner in which water quality affects water management strategies and supply reliability	10634	For years 2010, 2015, 2020, 2025, and 2030	Section 3, Pg. 1-6

No.	UWMP requirement <sup>a</sup>	Calif. Water Code reference	Additional clarification	UWMP location
53	Assess the water supply reliability during normal, dry, and multiple dry water years by comparing the total water supply sources available to the water supplier with the total projected water use over the next 20 years, in five-year increments, for a normal water year, a single dry water year, and multiple dry water years. Base the assessment on the information compiled under Section 10631, including available data from state, regional, or local agency population projections within the service area of the urban water supplier.	10635(a)		Section 4, Pg. 18-24
<b>DEMAND MANAGEMENT MEASURES</b>				
26	Describe how each water demand management measures is being implemented or scheduled for implementation. Use the list provided.	10631(f)(1)	Discuss each DMM, even if it is not currently or planned for implementation. Provide any appropriate schedules.	Section 6, Pg. 21-23
27	Describe the methods the supplier uses to evaluate the effectiveness of DMMs implemented or described in the UWMP.	10631(f)(3)		Section 6, Pg. 1-20
28	Provide 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 ability to further reduce demand.	10631(f)(4)		Section 6, Pg. 1-20
29	Evaluate each water demand management measure that is not currently being implemented or scheduled for implementation. The evaluation should include economic and non-economic factors, cost-benefit analysis, available funding, and the water suppliers' legal authority to implement the work.	10631(g)	See 10631(g) for additional wording.	Section 6, Pg. 1-23
32	Include the annual reports submitted to meet the Section 6.2 requirements, if a member of the CUWCC and signer of the December 10, 2008 MOU.	10631(j)	Signers of the MOU that submit the annual reports are deemed compliant with Items 28 and 29.	Not Applicable

a The UWMP Requirement descriptions are general summaries of what is provided in the legislation. Urban water suppliers should review the exact legislative wording prior to submitting its UWMP.

b The Subject classification is provided for clarification only. It is aligned with the organization presented in Part I of this guidebook. A water supplier is free to address the UWMP Requirement anywhere with its UWMP, but is urged to provide clarification to DWR to facilitate review.

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## **Appendix C**

### **Notice of Public Hearing and Resolution of Adoption**

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The Desert Sun  
750 N Gene Autry Trail  
Palm Springs, CA 92262  
760-778-4578 / Fax 760-778-4731

**Certificate of Publication**

**State Of California ss:**  
**County of Riverside**

**Advertiser:**

MISSION SPRINGS WATER DIST.  
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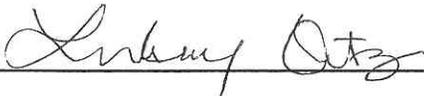
I am over the age of 18 years old, a citizen of the United States and not a party to, or have interest in this matter. I hereby certify that the attached advertisement appeared in said newspaper (set in type not smaller than non pariel) in each and entire issue of said newspaper and not in any supplement thereof on the following dates, to wit:

**Newspaper:** .The Desert Sun

6/12/2011 6/19/2011

I acknowledge that I am a principal clerk of the printer of The Desert Sun, printed and published weekly in the City of Palm Springs, County of Riverside, State of California. The Desert Sun was adjudicated a newspaper of general circulation on March 24, 1988 by the Superior Court of the County of Riverside, State of California Case No. 191236.

I declare under penalty of perjury that the foregoing is true and correct. Executed on this 19th day of June, 2011 in Palm Springs, California.



**Declarant's Signature**

No 2011  
**MISSION SPRINGS  
WATER DISTRICT  
NOTICE OF PUB  
LIC HEARING  
ON DRAFT 2011  
URBAN WATER  
MANAGEMENT  
PLAN**

Notice is hereby given that Mission Springs Water District will conduct a public hearing on Tuesday, June 28, 2011 at 9 a.m. at 66575 Second Street, Desert Hot Springs.

The Board of Directors will consider adoption of the draft 2011 Urban Water Management Plan (UWMP) as prepared in accordance with the California Urban Water Management Planning Act.

All interested parties are invited to attend the public hearing, and be heard in support of, or in opposition to, the draft Plan, or may submit written comments to the District.

A copy of the draft 2011 UWMP is available for inspection at the office of the District located at 66575 Second Street, Desert Hot Springs, CA.

Dated: June 6, 2011

/s/ Arden Wallum  
General Manager  
Mission Springs Water  
District

Pub: 6/12, 6/19/11

RESOLUTION NO. 2011-20

BOARD OF DIRECTORS OF MISSION SPRINGS WATER DISTRICT  
ADOPTING AND DIRECTING FILING AND IMPLEMENTATION OF THE  
2010 URBAN WATER MANAGEMENT PLAN  
PURSUANT TO CALIFORNIA WATER CODE SECTION 10610 TO 10657

**WHEREAS**, the waters of the state are a limited and renewable resource subject to ever-increasing demands, and the conservation and efficient use of urban water supplies are of statewide concern; and

**WHEREAS**, a long-term, reliable supply of water is essential and urban water management plans are required to actively pursue the efficient use of available supplies; and

**WHEREAS**, that Mission Springs Water District has completed an update to its 2005 Urban Water Management Plan (2010 Plan) pursuant to the requirements of the Urban Water Management Planning Act of 1983 and amendments thereto; and

**WHEREAS**, the 2010 Plan is a general information document and complements other regional planning documents; and

**WHEREAS**, the purpose of the 2010 Plan is to provide a local perspective and analysis of the current and alternative water demand, supplies and conservation activities of the District; and

**WHEREAS**, the 2010 Plan also addressed the effects and measures of coping with short-term and chronic water shortages within the District boundaries; and

**WHEREAS**, the 2010 Plan was circulated for public review and a properly noticed public hearing regarding the 2010 Plan was held by the Board of Directors on June 28, 2011.

**NOW THEREFORE, BE IT RESOLVED, DETERMINED AND ORDERED** that the Board of Directors of Mission Springs Water District:

1. Adopts the 2010 Plan.
2. Orders its filing with the California Department of Water Resources within 30 days after this date, and made available to other government jurisdictions as required by the UWMP Act.
3. Directs the implementation of the 2010 Plan.

**ADOPTED** this 28<sup>th</sup> day of June, 2011, by the following vote:

Ayes: Bowman, Brown, Furbee, Martin, Wright  
Noes: None  
Abstain: None

ATTEST:



President of Mission Springs Water District  
and its Board of Directors



Secretary of Mission Springs Water District  
and its Board of Directors

**CERTIFICATION OF ADOPTION**

STATE OF CALIFORNIA )  
                                  )  
COUNTY OF RIVERSIDE )

I, Arden Wallum, Secretary of the Board of Directors of Mission Springs Water District, certify that the foregoing is a full, true and correct copy of Resolution No. **2011-20**, which was adopted by the Board of Directors of said District at its special meeting held June 28, 2011.

It has not been amended or repealed.

Dated June 29, 2011



---

Secretary of Mission Springs Water District  
and its Board of Directors

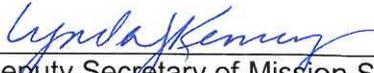
**CERTIFICATION OF ADOPTION**

STATE OF CALIFORNIA    )  
                                  )  
COUNTY OF RIVERSIDE    )

I, Lynda J. Kerney, Deputy Secretary of the Board of Directors of Mission Springs Water District, certify that the foregoing is a full, true and correct copy of Resolution No. **2011-20**, which was adopted by the Board of Directors of said District at its special meeting held June 28, 2011.

It has not been amended or repealed.

Dated July 25, 2011

  
\_\_\_\_\_  
Deputy Secretary of Mission Springs Water District  
and its Board of Directors

## **Appendix D**

### **References Used in the Production of this UWMP**

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## **Appendix E**

### **Water Regulations and Service Ordinance No. 93-3**

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**Mission Springs Water District's**

**Water Regulations and Service Ordinance**

**Ordinance No. 93-3**

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**Ordinance No. 93-3**

**An Ordinance of the Board of Directors of Mission Springs Water District Establishing a Water Department, Providing for Installation of and Connection to District Water Mains, and Regulating the Use of Cross Connection and Rescinding Ordinance No. 78-2 Entitled, "Ordinance Establishing Rules and Regulations for Water Service" and Ordinance No. 90-1 Entitled "Adopting a Program of Voluntary Water Conservation and Restricting Water Use During Water Supply Shortages and Emergencies"**

**Be it Ordained** by the Board of Directors of the Mission Springs Water District, that Ordinance No. 78-2 and Ordinance No. 90-1 are hereby rescinded.

**Be it also Ordained** that the following rules and regulations shall hereafter be effective as the rules and regulations of Mission Springs Water District regarding its water service, and shall also provide for the establishment of its water department, provide for installation of and connection to district water mains, and regulate the use of cross connection.

## Section 2 - General Provisions

- 2.01 **Short Title** - This Ordinance may be cited as the "Mission Springs Water District's Water Regulations and Service Ordinance".
- 2.02 **Intent** - This Ordinance is intended to provide rules and regulations applicable to the administration and operational activities of the district. It may be amended from time to time by action of the Board of Directors of Mission Springs Water District.
- 2.03 **Enabling Statutes** - This Ordinance is adopted pursuant to the applicable provisions of Division 12 of the Water Code and Division 5, Chapter 7, Title 5, Division 2 of the Government Code, and further pursuant to the Constitution of the State of California. The district is further authorized by Water Code Section 31027 to prescribe and define by ordinance those restrictions, prohibitions and exclusions it may determine to be necessary pursuant to the California Constitution Article X, Section 2 and Water Code Sections 31026, 375-277 and 1009 to restrict the use of district water during threatened or existing water shortages. It is also the intent of the Board of Directors to establish by this Ordinance those procedures and policies necessary for the orderly administration of a water conservation program to prohibit waste and to restrict water use during a water shortage emergency.
- 2.04 **Application** - This Ordinance shall apply to all water facilities constructed, maintained, and operated by the district.
- 2.05 **Enterprise** - The district will furnish and/or make available, a system, works, and undertakings used for and useful in, the delivery of water for the district's service area, including all annexations thereto, lands, easements, rights in land, contract rights, and franchises.
- 2.06 **Separability** - If any section, subsection, sentence, clause, phrase, or portion of this Ordinance or the application thereof to any person or circumstances are for any reason held to be unconstitutional or invalid by the decision of any court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of this Ordinance or the application of such provision to other persons or circumstances. The Board of Directors hereby declares that it would have passed this Ordinance or any section, subsection, sentence, clause or phrase hereof irrespective of the fact that any one or more section, subsection, sentences, clauses or phrases be declared to be unconstitutional.
- 2.07 **Words and Phrases** - For the purpose of this Ordinance all words using the present tense shall include the future; all words in the plural number shall include the singular number; and all words in the singular number shall include the plural number.
- 2.08 **Publication** - Upon adoption, this Ordinance shall be entered in the minutes of the Board of Directors and published in a newspaper of general circulation in the district's service area within ten (10) days following its adoption.
- 2.09 **Means of Enforcement** - The district hereby declares that the procedures contained herein are established as a means of enforcement of the terms and conditions of their ordinances, rules and regulations and not as a penalty.
- 2.10 **Notices** - Whenever a notice is required to be given under this Ordinance, unless different provisions are specifically made herein, such notice may be made either by

personal delivery thereof to the person to be notified or by deposit in the U.S. Mail in a sealed envelope, postage prepaid, addressed to such person at his last known business or residence address as the name appears on public records or other records pertaining to the matter to which the notice is directed. Service by mail shall be deemed to have been completed at the time of deposit in the post office.

Proof of giving any notice may be made by the certification of any officer or employee of the district or by affidavit of any person over the age of eighteen years, which shows service in conformity with this Ordinance or other provisions of law applicable to the subject matter concerned.

- 2.11 Effect of Heading** - The title, division or section headings contained in this Ordinance shall not be deemed to govern, limit or modify in any manner, the scope, meaning or intent of any section or subsection of this Ordinance.

### Section 3 - Definitions

- 3.01 **Applicant** - The person making application hereunder shall be the owner of the premises involved, or his authorized agents, so authorized in writing to the district, or a licensed plumber or contractor.
- 3.02 **Board** - The Board of Directors of Mission Springs Water District.
- 3.03 **Board of Directors** - The Governing Body of Mission Springs Water District.
- 3.04 **Connection** - The pipe line and appurtenant facilities such as the curb stop, meter and meter box, all used to extend water service from the main to premises, the laying thereof and the tapping of the main. Where services are divided at the curb or property line to serve several customers, each such branch service shall be deemed a separate service.
- 3.05 **Contractor** - Contractor shall mean an individual, firm, corporation, partnership, or association duly licensed by the State of California to perform the type of work to be done under a permit, contract or agreement.
- 3.06 **Controller** - Equivalent to Auditor of the district under Water Code Section 30540.
- 3.07 **Cost** - The cost of labor, materials, transportation, supervision, engineering, and all other necessary overhead expenses.
- 3.08 **County** - The County of Riverside, California.
- 3.09 **Cross-Connection** - Any physical connection between the piping system from the district service and that of any other water supply that is not, or cannot be, approved as safe and potable for human consumption, whereby water from the unapproved source may be forced or drawn into the district's distribution mains.
- 3.10 **Customer** - Any person supplied or entitled to be supplied with water service by the district.
- 3.11 **Customer's Service Valve** - A valve independent of the district's facilities located in the customer's piping as close to the meter as practical, the operation of which will control the entire water supply from the meter.
- 3.12 **Developer** - Shall mean any person commencing proceedings under applicable city or county ordinances to effect a land development.
- 3.13 **District** - Mission Springs Water District, Riverside County, California.
- 3.14 **District Engineer** - Shall mean the Engineer or Engineering Firm appointed by the Board and acting for the district.
- 3.15 **Equivalent Fixture Units (EFU)** - The number of Equivalent Fixture Units (EFUs) by the Uniform Plumbing Code or by provisions adopted by the Board.
- 3.16 **General Manager** - The General Manager of the district.
- 3.17 **Inspector** - The person who shall perform the work of inspecting water facilities under the jurisdiction or control of the district.
- 3.18 **Main** - A water line in a street, highway, alley or easement used for public and private fire protection and for the general distribution of water.
- 3.19 **Owner** - The person owning in fee title, or in whose name the legal title to the property appears, by deed duly recorded in the County Recorder's office, or the person in possession of the property or buildings under claim of, or exercising acts of

ownership over same for himself, or as executor, administrator, guardian or trustee of the owner.

- 3.20 **Permit** - Any written authorization required pursuant to this or any other regulation of the district.
- 3.21 **Person** - Any human being, individual, firm, company, partnership, association and private, public or municipal corporation, the United States of America, the State of California, a district and any political subdivision, governmental agency.
- 3.22 **Premises** - A lot or parcel of real property under one ownership, except where there are well-defined boundaries or partitions such as fences, hedges or other restrictions preventing the common use of the property by several tenants, in which case each portion shall be deemed a separate premise. Components of apartment houses and office buildings may be classified as single premises.
- 3.23 **Private Fire Protection Service** - Water service and facilities for building sprinkler systems, hydrants, hose reels and other facilities installed on private property for fire protection and the water available therefore.
- 3.24 **Public Fire Protection Service** - The service and facilities of the entire water supply, storage and distribution system of the district, including the fire hydrants affixed thereto, and the water available for fire protection, excepting house service connections and appurtenances thereto.
- 3.25 **Regular Water Service** - Water service and facilities rendered for normal domestic, commercial and industrial purposes on a permanent basis, and the water available therefore.
- 3.26 **Residential** - Any single-family unit, any duplex or triplex family unit not requiring licensing for occupancy and operation.
- 3.27 **Secretary** - The Secretary to the Board of Directors.
- 3.28 **Service Connection** - Shall mean the pipeline extending from the main, whether located in a public thoroughfare or private right-of-way, to the curb line or property line of the water user's premises, together with the valves, meter and fittings and appurtenances necessary to connect to the water user's private pipeline.
- 3.29 **Temporary Water Service** - Water service and facilities rendered for construction work and other uses of limited duration, and the water available therefore.
- 3.30 **Uniform Plumbing Code** - Shall be the most recent edition of the Code published by the International Association of Plumbing and Mechanical Officials.
- 3.31 **Waste** - Shall mean 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.
- 3.32 **Water** - Shall mean the water supplied by Mission Springs Water District.
- 3.33 **Water Department** - The Board of Directors of the district performing functions related to the district's water service, together with the General Manager, district Engineer, Controller, and any other duly authorized representatives.
- 3.34 **Water Supply Shortage** - Shall mean any water shortage caused by drought or any other threatened or existing water shortage, earthquake, disaster or facility failure, loss of electrical power, pipe line breakage, or other condition which results in, or threatens to result in, the district's inability to meet the water demands of its customers.

3.35 **Water User** - Shall mean any person, firm, partnership, association, corporation or political entity using water obtained from the water system of the district.

## Section 4 - Water Department

- 4.01 **Creation** - A Water Department is hereby created comprised of the Directors, the General Manager, the Controller and such other employees and assistants as may be hired.
- 4.02 **General Manager** - The General Manager, as provided for in Water Code Section 30580, shall have full charge and control of the maintenance, operation and construction of the water works and water distribution system of the district.
- 4.03 **Violation, Repairs** - The Director of Operations shall promptly report any violation or disrepair to the General Manager. If the work required is in the nature of an emergency, he shall take whatever steps are necessary to maintain service to customers pending action by the General Manager.
- 4.04 **Supervision** - The Director of Operations shall supervise all repair or construction work authorized by the General Manager, and perform any other duties prescribed by the General Manager.
- 4.05 **The Controller** - The Controller shall install and maintain a system of auditing and accounting that shall completely and at all times show the financial condition of the district. The Controller shall furthermore, compute, prepare, and mail bills as hereinafter prescribed, make and deposit collections, maintain proper books of account, collect, account for, and refund deposits, and do whatever else is necessary or directed by the General Manager to set up and maintain an efficient and economical bookkeeping system, and perform any other duties now and hereafter prescribed by General Manager.

## Section 5 - General Rules

- 5.01 **Standards** - The Board of Directors may, from time to time, adopt standard requirements for the design, construction, repair and maintenance, or connection to district water system.
- 5.02 **Violation Unlawful** - Following the effective date of this Ordinance, it shall be unlawful for any person to connect to, construct, install, provide, maintain or use any other means of water facilities from any building in the area serviced with water by said district except by connection to water facilities in the manner as provided for in this Ordinance. Any violation of this Ordinance will be subject to the provisions of this section, at the discretion of the General Manager.
- 5.03 **Notice of Violation** - Wherever or whenever practical under the particular circumstances and pursuant to the discretion of the General Manager, any person found to be violating any provision of this or any other ordinance, resolution, rule or regulation of the district shall be served, by the Inspector or other authorized person, with written notice stating the nature of the violation and providing a reasonable time limit for the satisfactory correction thereof. Said time limit shall be not less than two, nor more than seven working days unless otherwise specified. The offender shall, within the period of time stated in such notice, permanently cease all violations. Upon being notified by an authorized representative of the district of any defect arising in any water facility or of any violation of this ordinance, the person or persons having charge of said work shall immediately correct the same. All persons shall be held strictly responsible for any and all acts of agents or employees done under the provisions of this or any other ordinance, resolution, rule or regulation of the district.
- 5.04 **Protection from Damage** - No unauthorized person shall maliciously, willfully, or negligently break, damage, destroy, uncover, deface or tamper with any structure, appurtenance or equipment which is a part of the district's water works. Any person violating this provision shall be subject to the penalties provided by law.
- 5.05 **Investigation Powers** - The officers, inspectors, manager and any duly authorized employees of the district shall carry evidence establishing his position as an authorized representative of the district and upon exhibiting the proper credentials and identification shall be permitted to enter in and upon any and all building, industrial facilities and properties to which the district is furnishing water or has been requested to furnish water for the purpose of inspecting, reinspecting, observing, measuring, sampling, testing or otherwise performing such duties as may be necessary in the enforcement of the provisions of the ordinances, resolutions, rules and regulations of the district pursuant to the authorization contained in the required application for water service.
- 5.06 **Noncompliance with Regulations** - As an alternative method of enforcing the provisions of this or any other ordinance, resolution rule or regulation of the district, the district shall have the power to disconnect the user or subdivision water service from the water mains of the district. Upon disconnection, an authorized representative of the district shall estimate the cost of disconnection from and reconnection to the

system, and such user shall deposit the cost, as estimated, of disconnection and reconnection before such user is reconnected to the system.

- 5.07 Liability for Violation** - Any person violating any of the provisions of the ordinances, rules or regulations of the district shall become liable to the district for any expense, loss or damage, occasioned by the district by reason of such violation.
- 5.08 Relief on Appeal** - When any person, by reason of special circumstances, is of the opinion that any provision of the ordinances, rules or regulations of the district is unjust or inequitable as applied to the person or premises, they may file a written appeal to the Board of Directors stating the special circumstances, citing the provision complained of, and requesting suspension or modification of that provision as applied to a particular premises. If such appeal is approved, the Board of Directors may suspend or modify the provision complained of, as applied to such person or premises, to be effective as of the date of the appeal and continuing during the period of the special circumstances. All decisions of the Board of Directors regarding such appeal are final.
- 5.09 Relief on Own Motion** - The Board of Directors may, on its own motion, find that by reason of special circumstances, any provisions of its ordinances, rules or regulations should be suspended or modified as applied to a particular person or premises and may order such suspension or modification for such premises during the period of such special circumstances or any part thereof. All decisions of the Board of Directors regarding such relief are final.
- 5.10 Maintenance of Water Pressure and Pressure Conditions** - The district shall not accept any responsibility for the maintenance of pressure. The district also reserves the right to discontinue service while making emergency repairs, or other work required on the water system as determined by the General Manager. Customers dependent upon a continuous supply should provide emergency storage. All applicants for service connections or water service shall be required to accept such conditions of pressure and service as are provided by the distribution system at the location of the proposed service connection, and to hold the district harmless for any damages arising out of low pressure or high pressure conditions or interruptions of service.
- 5.11 Water Pressure Conditions** - Due to topography and other causes, the pressure is not uniform over the territory the system serves. The district reserves the right to change to different pressure in various areas served. However, it shall be the aim and attempted function of the district to maintain adequate pressure at all existing services. Water users dependent upon a continuous water supply should provide adequate storage for emergencies; however, the district assumes no obligation to serve water to elevations higher than its existing facilities serve.
- Water users having water heaters, boilers, or other devices requiring a continuous water supply, should take all necessary action to prevent damage or injury to such devices as a result of the shutting off of the water supply.
- 5.12 Tampering with District Property** - Except as otherwise specifically authorized by the General Manager, no one, except an employee or representative of the district, shall at any time in any manner operate the curb stops or valves, main stops, gate valves of

the district's system; or interfere with meters or their connections, street mains or other parts of the water system.

- 5.13 **Charge for Violation** - Failure of a customer to comply with all or any parts of this ordinance, or any other ordinance, resolution or order fixing rates and charges of this district's water service, shall result in said service being discontinued and water shall not be supplied such customer until the customer is in full compliance with the rules and regulations, rates or charges which have been violated.
- 5.14 **Water System** - The district will furnish a system, works and undertakings used for and useful in obtaining, conserving, and dispensing of water for public and private uses, including all parts of the district, all appurtenances to it, all lands, easements, rights in land, water rights, contract rights, franchises, and other water supply, storage and distribution facilities and equipment.
- 5.15 **Number of Services per Premise** - The applicant may apply for as many services as may be reasonably required for his premises provided that the pipe line system for each service be independent of the others and that they not be interconnected.
- 5.16 **Waste of Water** - No customer shall knowingly permit leaks or waste of water. Where water is wastefully or negligently used on a customer's premises, the district may discontinue the service if such conditions are not corrected after giving notice of violation as provided in Section 5.03 herein.
- 5.17 **Responsibility for Equipment on Customer's Premises** - The district's responsibility ends at the beginning of the water user's side of the meter, or in the case of an unmetered or other special installation, at the point where the district's facilities end. All services, valves and water meters installed by the district shall at all times remain the property of the district and shall be maintained, repaired and removed by the district whenever rendered unserviceable through normal wear and tear. Where replacements, repairs or adjustments of any meter are rendered necessary by the act, negligence or carelessness of the water user or any member of his family or person in his employ, the district shall be reimbursed by the customer for any such damage promptly on presentation of a bill.
- 5.18 **Damage to Water System Facilities** - The customer shall be liable for any damage to the service facilities when such damage is from causes originating on the premises by an act of the customer or his tenants, agents, employees, contractors, licensees or permittees, including the breaking or destruction of locks by the customer or others on or near a meter, and any damage to a meter that may result from hot water or steam from a boiler or heater on the customer's premises. The district shall be reimbursed by the customer for any such damage promptly on presentation of a bill.
- 5.19 **Ground-Wire Attachments** - All individuals or business organizations are forbidden to attach any ground-wire or wires to any plumbing which is or may be connected to a service connection or main belonging to the district. The district will hold the owner liable for any damage to its property occasioned by such ground-wire attachments.
- 5.20 **Control Valve on the Customer's Property** - The customer shall provide a valve on his side of the service installation, as close to the meter location as practical, to control the flow of water to the piping on his premises. The customer shall not use the service curb stop to turn water on and off for his convenience.

- 5.21 **Unsafe Apparatus** - Water service may be refused or discontinued to any premises where apparatus or appliances are in use which might endanger or disturb the service to other customers.
- 5.22 **Cross-Connections** - Water service may be refused or discontinued to any premises where there exists a cross-connection as defined in Section 9 of this Ordinance.
- 5.23 **Fraud or Abuse** - If necessary, service may be discontinued to protect the district against fraud or abuse.
- 5.24 **Interruptions in Service** - The district shall not be liable for damage which may result from an interruption in service from a cause beyond the control of the district.
- 5.25 **Ingress and Egress** - District representatives shall have the right of ingress and egress to the customer's premises at reasonable hours for any purpose reasonably connected with the furnishing of water service.
- 5.26 **Installation of Services** - Only duly authorized employees or agents of the district shall be authorized to install service connections. All service connections shall comply with the specifications of the district, including automatic meter reading devices. Meters will be installed in easements and right of ways, and shall be owned by the district. No rent or other charge will be paid by the district for a meter or other facilities, including connections. All meters will be sealed by the district at the time of installation, and no seal shall be altered or broken except by one of its authorized employees or agents.
- 5.27 **Change in Location of Meters** - Meters moved for the convenience of the customer will be relocated at the customer's expense. Meters moved for the convenience of the district will be moved at the district's expense.
- 5.28 **Service Size and Location** - Where practical, the district will install the service connection at a location selected by the applicant. However, the district reserves the right to determine the size of the service connection and its location in relation to boundaries of the premises to be served. Customarily, a service connection will terminate at a point behind and adjacent to the curb in streets or adjacent to the property line in alleys or other utility right-of-way.
- In locations where the applicant's premises do not directly abut a public thoroughfare, the district, at its option, may provide a service connection of conventional length terminating at some practical location on public property, and applicant shall be responsible for providing a connection thereto. The applicant's pipe to connect to the district's service connection shall not be laid until the service connection is installed.
- In the event the applicant's pipe is laid prior to the time the service connection is installed, and this location does not correspond with that of the service connection, then applicant shall bear the additional cost of connecting the service connection pipe with the applicant's pipe.
- 5.29 **Curb Stop** - Each service connection installed by the district shall be equipped with a curb stop or gate valve on the inlet side of the meter. Such valve or curb stop is intended for the exclusive use of the district in controlling the water supply through the service connection pipe. If the curb stop or gate valve is damaged by the customer's use, the replacement shall be at the customer's expense.

5.30 **Access to Meters** - The district reserves the right to enter upon the applicant's premises for the purpose of reading, repairing or replacing the water service meter. The applicant shall be solely responsible for the control of all animals which may pose a potential threat to district employees and shall be liable for any injury to district employee resulting from unrestrained animals. Should an applicant for new service fail to properly restrain animals present on his property, the district may, upon written notice, refuse to install or turn on service until such time as the district determines that a threat to its employees no longer exists. In the case of existing customers, where district employees may encounter some personal risk in attempting to read a meter (due to the presence of unrestrained animals, or otherwise), the employee is not required to read the meter, and the customer's bill will be estimated based upon the last year's consumption plus the average increase in consumption in the district. The meter will be read quarterly in the presence of the customer or someone of his choosing, so that over estimates and under estimates of use may be rectified on the bill.

## Section 6 - Application for Water Service

- 6.01 Application for Water Service** - The property owner or his agent designated in writing, shall make application for regular water service by personally signing an "Application For Water Service" form provided by the district and paying the necessary fee for connection to district facilities, as prescribed in the latest resolution on fees adopted by the Board of Directors.
- 6.02 Water Service to Customers Other Than Property Owners** - Service to other than property owners shall be made as follows:
- 6.02.01 Property Owner's Signature** - Water service is to be in the name of the property owner. If a property owner rents the premises, the owner or owner's agent designated in writing must complete and sign the application for service.
- 6.02.02 Temporary Service** - A tenant may be given temporary service for fifteen (15) days upon payment of a security deposit and furnishing the district with the owner's name, mailing address and telephone number. The security deposit will be refunded to the tenant upon receipt of the signed application for service from the owner.
- 6.02.03 Inability to Secure Property Owner's Signature** - The district will mail the application for service to the owner for signature. If the application for water service, signed by the owner, is not returned to the district within fifteen (15) days, service will be terminated, pursuant to the district's rules, regulation, ordinances and resolutions.
- 6.02.04 Owner's Responsibility** - Whether or not a property owner has signed the district's application for service form, the property owner is not relieved of his or her responsibility for unpaid water charges for the subject property as provided in this ordinance and pursuant to California Water Code Section 31701 et. seq.
- 6.03 Security Deposits**
- 6.03.01 Security Deposit Residential** - A security deposit for a single family residential unit shall not be required except upon the determination by the district that the person requesting service is not creditworthy or as specified in Section 6.02.02. The determination of credit worthiness shall be upon criteria determined by the Controller, and may be appealed as provided in Section 11.
- 6.03.02 Security Deposit Commercial** - A security deposit for each commercial unit, retail unit, or multi-unit complex shall be deposited at the time application is made.
- 6.04 Security Deposit Refund** - The district shall refund each security deposit to the residential customer when funds have been on deposit for one year in a customer's account and there has been no more than one delinquent payment on that account during the year; within thirty (30) days after the date of termination of the account provided the applicant gives the district written notice to terminate water services; or when a new property owner makes a deposit for the same property. The district shall refund the security deposit for commercial, retail, or industrial connections within thirty (30) days after the date of termination of the account provided the customer gives the district written notice to terminate water service; or when a new property owner makes a deposit for the same property.
- 6.05 Change In Customer's Equipment** - Customers who make any material change in the size, character, or extent of the equipment or operations utilizing water service, or

whose change in operations results in a significant increase in the use of water shall immediately give the district written notice of the nature of the change and, if necessary, amend their application. The district at its discretion may change the size of the service and charge the customer according to current fee resolution.

**6.06 Domestic, Commercial and Industrial Service Connections** - It shall be unlawful to maintain a connection except in conformity with the following:

**6.06.01 Multiple Units** - Multiple units shall include separate houses, buildings, condominiums, living or business quarters on the same premises or on adjoining premises under single control or management. The district may determine the size of the service connections and their locations in relation to boundaries of the premises to be served and the point of connection to the water user's facilities. The district may limit the number of houses, units, buildings or area of land under one ownership to be supplied by one service connection.

**6.06.02 Single Connection** - Not more than one service connection for domestic or commercial supply shall be installed for a building, except under special conditions as provide in Section 8 (Fire Protection).

**6.06.03 Service Connection** - A service connection shall not be used to supply any adjoining property, or property across a street, alley or easement.

**6.06.04 Divided Property** - When property provided with a service connection is divided, the service connection shall be considered as belonging to the lot or parcel of land which it directly enters.

**6.07 Service Connection Maintenance** - The service connection extending from the water main to the meter, meter box, and curb stop shall be maintained by the district. All pipes and fixtures extending or lying beyond the meter box shall be installed and maintained by the owner of the property, with the exception of the backflow prevention devices, if required. Installation and maintenance of such devices shall be in accordance with Section 9.

**6.08 Damages Through Leaking Pipes and Fixtures** - When turning on the water supply as requested to a vacant house or property, the district will make a reasonable attempt to determine if water is running inside of the building. If such is found to be the case, the water will be left shut off at the curb stop or the private shutoff. The district's jurisdiction and responsibility ends at the property line and the district will in no case be liable for damages occasioned by water running from open or faulty fixtures, or from broken or damaged pipes inside the property line.

**6.09 Damage to Meters** - The district reserves the right to set and maintain a meter on any service connection. The water customer shall be held liable for any damage to the meter due to his negligence or carelessness.

**6.10 Main Extension Required** - The district will provide for all main extensions upon application for service and payment of required charges.

**6.10.01 Application** - Any owner of one or more lots, parcels, or subdivider of a tract of land desiring the extension of one or more water mains to serve such property, shall make written application to the district. Said application shall contain the legal description of the property to be served, tract number, and any additional information

which may be required by the district, and may be accompanied by a map showing the location of the proposed connections.

- 6.10.02 **Investigation** - Upon receipt of the application, the district shall make an investigation and survey of the proposed extension and estimate the cost thereof.
- 6.10.03 **Dead-End Lines** - No dead-end lines shall be permitted, except at the discretion of the General Manager. In cases where circulation lines are necessary they shall be designed and installed by the district as a part of the main extension.
- 6.10.04 **Specifications and Construction** - The size, type and quality of materials and location of the lines shall be specified by the district. Actual construction will be performed by the district or a contractor acceptable to the district.
- 6.10.05 **Property of District** - Upon completion of such installation, the facilities shall be dedicated to and become property of the district.
- 6.10.06 **Connections** - The applicant shall, at his cost, provide all connections to buildings and private water systems, as herein provided.

## Section 7 - Temporary Service

**7.01 General Provisions** - Upon application to the district, water may be procured from fire hydrants if in the opinion of the General Manager or his authorized representative such excess water is available. The applicant must complete and sign an appropriate permit and deposit with the district an amount established pursuant to the current fee resolution.

Temporary services, whether from a fire hydrant or otherwise, are installed for the convenience and use of persons doing construction work. Temporary services are not limited to construction purposes but may be installed for any use. Any temporary service may be discontinued during any emergency for the duration of the emergency. Temporary services are not transferable except to the successors in interest of the applicants by operation of law.

**7.02 Duration of Service** - Temporary service connections shall be disconnected and terminated within four (4) months after installation unless an extension of time is granted in writing by the General Manager.

**7.03 Security Deposit** - The applicant shall deposit, in advance, the estimated cost of the temporary service. Upon discontinuance of service, the actual cost shall be determined and an adjustment made as an additional charge, refund or credit.

**7.04 Installation and Operation** - All facilities for temporary service to the customer shall be installed and operated in accordance with district instructions.

**7.05 Responsibility for Meters and Installations** - The customer shall use all possible care to prevent damage to the meter or to any other loaned facilities of the district which are involved in furnishing the temporary service from the time they are installed until they are removed. If the meter or other facilities are damaged, the cost of making repairs shall be paid by the customer. The customer shall give notice to the district in writing at least forty-eight (48) hours prior to the time the customer or other person is finished with the meter or meters and the installation.

**7.06 Unauthorized Use of Hydrants** - Tampering with any fire hydrant for the unauthorized use of water therefrom, or for any other purpose, is subject to a penalty charge for each occurrence as may be set by the Board.

**7.07 Meter Availability** - The applicant shall make the hydrant meter available as prescribed by the district for reading on a monthly or bimonthly basis.

**7.08 Pools and Tanks** - When an abnormally large quantity of water is desired for filling a swimming pool or for other purposes, arrangements must be made with the district prior to taking such water. Permission to take water in unusual quantities will be given only if it can be safely delivered through the district's facilities and if other customers are not inconvenienced thereby.

**7.09 Responsibility for Equipment** - The customer shall, at his own risk and expense, furnish, install and keep in good and safe condition all equipment that may be required for receiving, controlling, applying and utilizing water. The district shall not be responsible for any loss or damage caused by the improper installation of such equipment, or the negligence or wrongful act of the customer or any of his tenants, agents, employees, contractors, licensees or permittees in installing, maintaining,

operating or interfering with such equipment. The district shall not be responsible for damage to property caused by faucets, valves and other equipment, which are open when water is turned on at the meter, either originally or when turned on after a temporary shutdown.

## Section 8 - Fire Protection

- 8.01 Public Fire Protection** - The following pertains to the use of district facilities for public fire protection:
- 8.01.01 Use of Fire Hydrants** - Fire hydrants are for use by the district or by organized fire protection agencies pursuant to contract with the district. Other parties desiring to use fire hydrants for any purpose must first obtain written permission from the district prior to use and shall operate the hydrant in accordance with instructions issued by the Water Department. Unauthorized use of hydrants will be prosecuted according to law.
- 8.01.02 Moving of Fire Hydrants** - When a fire hydrant has been installed in a location specified by the proper authority, the district has fulfilled its obligation. If a property owner or other party desire a change in the size, type or location of the hydrant, they shall bear all costs of such charges, without refund. Any change in a location of fire hydrant must be approved by the proper authority.
- 8.02 Private Fire Protection Service** - The following pertains to the use of district facilities for private fire protection systems with the exception of single-family residences:
- 8.02.01 Payment of Cost** - The applicant for private fire protection service shall pay the total actual cost of installation of the service from the distribution main to the service location including the cost of a detector check meter or other suitable and equivalent device, valve and meter box, said installation to become the property of the district.
- 8.02.02 No Connection to Other System** - There shall be no connection between this fire protection system and any other water distribution system on the premises.
- 8.02.03 Use** - There shall be no water used through the fire protection service except to extinguish fires and for testing the fire fighting equipment.
- 8.02.04 Charges for Water Used** - Any consumption recorded on the meter will be charged as provided in district resolution except that no charge will be made for water used to extinguish fires where such fires have been reported to the fire department.
- 8.02.05 Monthly Rates** - The monthly rates for private fire protection shall be established from time to time by resolution of the Board of Directors.
- 8.02.06 Water for Fire Storage Tanks** - Occasionally water may be obtained from a private fire service for filling a tank connected with the fire service, but only if written permission is secured from the district in advance and an approved means of measurement is available.
- 8.02.07 Violation of Agreement** - If water is used from a private fire service in violation of the agreement or this ordinance, the district may, at its option, discontinue and remove the service.
- 8.02.08 Valve** - When a fire service connection is installed, the valve governing same will be closed and sealed and remain so until a written order is received from the owner of the premises to have the water turned on.
- 8.02.09 Meter** - If the district does not require a meter, and if water is used through a fire service connection for any other purpose than extinguishing of fires, the district shall have the right to place a meter on the fire service connection at the owner's expense, or shut off the entire water supply from such premises.

- 8.02.10 **Additional Service** - The district shall have the right to take a domestic, commercial or industrial meter service connection from the fire service connection at the curb to supply the same premises as those to which the fire service connection belongs. The district shall also have the right to determine the proportion of the installation costs properly chargeable to each service connection, if such segregation of costs shall become necessary.
- 8.02.11 **Check Valve** - The district reserves the right to install on all fire service connections a check valve of a type approved by the National Board of Fire Underwriters and/or the most recent edition of the Manual of Cross-Connection Control published by the Foundation for Cross-Connection Control Research, University of Southern California, and to equip the same with a bypass meter at the expense of the owner of the property.

## Section 9 - Cross-Connection Control

**9.01 Cross Connections** - The purpose of this Section is to protect the public potable water supply system of Mission Springs Water District by establishing a Cross Connection Control Program to effect the control of cross connections, actual or potential, thereby isolating within the customer's private water system or internal piping, contaminants or pollutants which could backflow or back siphon into the district's water supply system.

The regulations relating to cross connections as established in the California Administrative Code, Title 17, as amended from time to time and the most recent edition of Cross-Connection Control published by the Foundation for Cross-Connection Control Research, University of Southern California, insofar as these regulations are applicable to the protection of water supply of this district are hereby adopted, incorporated herein by reference and made a part hereof.

**9.02 Determination of Cross-Connection** - Upon the determination by the district that a backflow prevention device is required in the customer's private piping system for the safety of the public water supply system, the district shall immediately install such a device in the manner and location prescribed in Section 9.06.03. All costs for such installation will be paid by the customer.

**9.03 Discontinuance of Service** - Failure to install said device as prescribed shall constitute grounds for discontinuance of water service to the premise. No water service shall be installed or maintained by the district to any premises on which there exists or there is suspected to exist cross-connection between the public water supply and other piping, fixtures, appliances, equipment, drains or any system which might cause contamination or pollution through backflow or back-siphonage, unless such service is protected by the installation of a backflow prevention device.

**9.04 Degree of Hazard** - The type or kind of device installed shall depend on the degree of hazard involved. The degree of hazard shall be determined by the most recent edition of the Manual of Cross-Connection Control published by the Foundation for Cross-Connection Control Research, University of Southern California.

**9.05 Approved Devices** - The district shall maintain and make available a list of approved backflow prevention devices which may be installed for the protection of the public water supply system.

**9.06 Inspection, Testing and Maintenance** - All backflow prevention devices shall be inspected and tested at least annually for proper operation. Inspection and testing shall be performed by the district's certified inspector or a district approved private inspector. The results of each test, including repairs, shall be recorded on a form maintained by the district.

**9.06.01 Repair of Defective Devices** - In the event that the device is found to be defective, the district shall make the necessary repairs and/or replacement and bill the customer for the repair and/or replacement. All annual inspections, testing, and acceptance tests after installation, repair and/or replacement shall be at the expense of the owner.

- 9.06.02 No Service Unless Properly Protected** - A water service connection to any premise shall not be installed or maintained unless the public water supply system is protected in accordance with the laws of the State of California and this ordinance. If a backflow prevention device has not been installed, tested and maintained in accordance with the provisions of this ordinance, or if a backflow prevention device has been removed or bypassed, or if an unprotected cross connection exists on the premise, water service shall be discontinued immediately and not restored until such condition or defect have been corrected.
- 9.06.03 Installation Required** - Upon the determination by the district that a backflow prevention device is required on a customer's water service line, it shall be installed immediately behind the meter and before the first branch line leading off the service line.
- 9.07 Cross-Connection Control Criteria** - Criteria examined to determine whether a backflow prevention device is required shall include, but not be limited to, the following:
- 9.07.01 Auxiliary Water Supply** - A premise being or to be served with water by the district having an auxiliary water supply of a quality which is not acceptable to the district as an additional source.
- 9.07.02 Industrial Hazards** - A premise on which industrial fluids or other objectionable substances are being handled in a manner as to create an actual or potential hazard to the public water supply.
- 9.07.03 Inspection Not Possible** - A premise whose internal piping system has cross-connections that cannot be corrected or controlled, or the system is not accessible for inspection to make a determination of the existence of a cross connection.
- 9.08 Enforcement** - Service of water to any premise shall be discontinued by the district if a backflow prevention device required by the rules and regulations of the district is not installed, tested and maintained or if defects are found in the installed backflow prevention device or if it is found that a backflow prevention device has been removed or bypassed or if unprotected cross-connections exist on the premises. Service will not be restored until such condition or defects are corrected. The district representative assigned to inspect premises relative to possible cross connection hazards, shall carry proper credential of his office, upon exhibition of which, he shall have the right of entry during usual business hours to inspect any and all buildings and premises in the performance of his duty. This right of entry shall be a condition of water service in order to provide assurance that the continuation of service to the premises will not constitute a menace to health, safety and welfare to the people throughout the district's water system.

## Section 10 - Customer Billing Procedures

- 10.01 Establishment of Rates and Charges** - The Board of Directors shall from time to time by resolution, establish rates and charges for water and other service provided by the Mission Springs Water District.
- 10.02 Charges** - Water charges shall begin when a water service connection is installed and the meter is set or an existing service is requested to be turned on, unless the water is ordered to be left shut off when the service connection is ordered or installed.
- 10.03 Liability for Water Used** - The property owner shall be held liable for water used until the district is notified in writing to discontinue service or to transfer the account to another property owner.
- 10.04 Liens for Unpaid Bills** - All unpaid bills will be made a lien against the property pursuant to California Water Code Section 31701 et. seq. and to these rules and regulations.
- 10.05 Owner Liability** - The property owner remains responsible for all charges owed to the district whether or not the property owner actually lives on the premises, or signs the application for water service form.
- 10.06 Billing Period** - The regular billing period will be monthly or bimonthly at the option of the district.
- 10.07 Opening and Closing Bills** - Opening and closing bills for less than the normal billing period shall not be pro-rated. Closing bills may be estimated by the district for the final period as an expediency to permit the customer to pay the closing bill at the time service is discontinued.
- 10.08 Payment of Bills** - Bills for metered water service shall be rendered at the end of each billing period and are due and payable upon presentation. If full payment is not received at the business office of the district on or before the final payment date, the bill shall become past due and delinquent.
- 10.09 Delinquency Notice** - A delinquency notice shall be mailed to customers whose accounts are delinquent, warning that service will be disconnected unless payment is made within seven (7) calendar days from the date of preparation of the delinquency notice. The delinquency notice shall indicate amount due, including delinquent charges, and the total amount which must be paid. Notice of any delinquency in a tenant's account shall also be sent to the owner of the property with indication of the owner's liability.
- 10.10 Suit** - All unpaid rates, charges and penalties herein provided may be collected by suit.
- 10.11 Costs** - Defendant shall pay all costs of suit in any judgment rendered in favor of district, including reasonable attorney's fees.
- 10.12 Upon Vacating Premises** - Customers desiring to discontinue service should so notify the district in writing at least two (2) days prior to vacating the premises. Unless discontinuance of service is ordered in this manner, the customer shall be liable for ongoing charges whether or not any water is used, up until time of requested discontinuance of service.

## Section 11 - Complaints and Disputed Bills

- 11.01 Right to Meet** - Should a customer have a complaint with regard to water service, the district rules, regulations, resolutions, ordinances, or dispute the accuracy of a bill for water service or other charges, for any reason whatsoever, the customer has the right to meet first with the Controller and then the General Manager to discuss the dispute and present any evidence the customer has to support their position.
- 11.02 Arrangement of Meeting** - To arrange such a meeting the customer shall contact the district office, either in writing or by telephone, during normal business hours as may be set by the Board.
- 11.03 Presentation of Evidence** - The customer may be accompanied by a friend, attorney, or other representative to meet with the Controller or General Manager and may present any evidence they may have to support their position.
- 11.04 Unresolved Disputes** - If the customer is unable to resolve his dispute with the Controller or General Manager he may submit the complaint in writing, along with a full and detailed explanation to the Public Affairs Committee of the Board of Directors for resolution or referral to the Board of Directors pursuant to Section 5.08 (Relief on Appeal).
- 11.05 Discontinuance of Service** - No water or other service shall be discontinued pending the final resolution of a dispute.
- 11.06 Meter Test Deposit** - Should a customer desire to have the water meter service serving their premises tested, he shall first deposit an amount as specified in district resolutions, for testing of meters up to one inch (1") in size, and shall be present when the meter is tested in the meter shop of the Water Department. Should the meter register more than two percent (2%) fast, the deposit will be refunded, but should the meter register less than two (2%) fast, the deposit will be retained by the district.
- 11.07 Adjustment for Fast Meter Errors** - If a meter tested at the request of a customer is found to be more than two percent (2%) fast, the excess charges for the time service was rendered the customer requesting the test, or for a period of six months, whichever shall be the lesser, shall be refunded to the customer.
- 11.08 Adjustment for Slow Meter Errors** - If a meter tested at the request of a customer is found to be more than ten percent (10%) slow, the district may bill the customer for the amount of the undercharge based upon corrected meter readings for the period, not exceeding six months, that the meter was in use.
- 11.09 Non-Registering Meters** - If a meter is found to be not registering, the charges for service shall be based on estimated consumption using previous consumption for a comparable period or by such other method as is determined appropriate. Such estimates shall be made by the general manager, subject to the right of appeal under Section 5.08.

## Section 12 - Disconnection for Non-payment

- 12.01 Disconnection for Non-payment** - Water service shall be discontinued if payment for water service is not made within seven (7) calendar days of the date of mailing the delinquent notice. At least forty-eight (48) hours prior to termination, the district will make a reasonable attempt to notify the resident of the affected property by telephone or by personal contact.
- 12.02 Complaint Procedures for Disconnection** - Service disconnection for non-payment of bills or violation of any of the district's rules, regulations, ordinances or resolutions is subject to the complaint procedures specified in Section 11 herein.
- 12.03 Refusal or Neglect to Pay Debt** - Any amount due is a debt to the district and any person, firm or corporation failing, neglecting, or refusing to pay this debt may be subject to a civil action for the amount due in a court of competent jurisdiction.
- 12.04 Lien Against Property for Non-Payment** - Any unpaid debt will be deemed a lien against the real property to which service is rendered as specified herein and California Water Code Section 31701 et seq.
- 12.05 Service Charges for Violations** - If water service is disconnected for violation of any of the district's rules, regulations, resolutions or ordinances, service shall not be reinstated until the violations have been corrected and all applicable service charges and fees as provided for herein are paid.
- 12.06 Partial Payments** - A partial payment of a delinquent account may be accepted and credited to a customer's account, but such partial payment shall not be cause for removing the account from a delinquent status and shall not preclude the meter from being turned off for delinquency.
- 12.07 Authorization for Continuance of Service for Delinquent Accounts** - The General Manager, or his designee, may authorize continuation of service to a delinquent account if financial arrangements satisfactory to the district are established.

## Section 13 - Adding Delinquent Charges to Tax Roll

- 13.01 Report of Delinquent and Unpaid Charges** - A report of delinquent and unpaid charges for water and other services which remain unpaid and delinquent for sixty (60) days or more on July 1 of each year shall be prepared and submitted to the Board for consideration as tax liens. The unpaid and delinquent charges listed in said report for each parcel of property shall be fixed at the amount listed in said report.
- 13.02 Adoption and Filing of Report** - The secretary shall file with the Riverside County Assessor and Board of Supervisors, in the time and manner specified by the County Assessor and Board of Supervisors, a copy of such written report with a statement endorsed thereon over the signature of the secretary, that such a report has been adopted and approved by the Board of Directors and that the County Assessor shall enter the amount of such charges against the respective lots or parcels of land as they appear on the current assessment roll.
- 13.03 Collection of Delinquent and Unpaid Charges** - The County Assessor shall include the amount of charges on bills for taxes levied against their respective lots and parcels of land and thereafter, the amount of such unpaid and delinquent charges shall be collected at the same time and in the same manner by the same person as, together with and not separately from, the general taxes, if any, for the district or the County and shall be delinquent at the same time and thereafter be subject to the same delinquency penalties.

## Section 14 - Charges

- 14.01 **Charges** - All charges described herein shall be adopted by board resolution.
- 14.02 **Adjustment of Connection Charges** - To reflect the changing cost of construction, the charges contained herein may be adjusted annually by the district in accordance with its actual costs for connections from the previous year.
- 14.03 **Consumption Charge** - The charge per hundred cubic feet for all water registered by the customer's water service meter.
- 14.04 **Delinquency Charge** - A charge added to each delinquent account at the time any amount becomes delinquent with the exception of an account that has had no delinquencies in the prior 12-month period. When a delinquency charge is made, such charge shall be added to the delinquent account as of the date the account becomes delinquent. This charge shall become an inseparable part of the amount due as of that time.
- 14.05 **Disconnect/Reconnect Charge** - The charge which covers reasonable district costs for disconnection and reconnection of service connections which are in violation of the provisions contained herein.
- 14.06 **Fire Hydrant Installation Charge** - The charge for installation of fire hydrants as may be required.
- 14.07 **Fire Service Standby Charge** - The standby charge per diameter inch of the district fire service meter. Water use through this service is limited to emergency fire requirements only.
- 14.08 **Inspection Charge** - The charge to a customer when a service connection or facility requires inspection by district personnel.
- 14.09 **Meter Test Charge** - The charge which covers district costs for pulling, testing, and reinstalling the water meter to be tested.
- 14.10 **Security Deposit Charge** - The charge which insures payment of minimum district charges. Upon discontinuance of service, the Security Deposit shall be applied to reduce any unpaid charges outstanding on the customer's account. The amount of deposit required shall be established by the Board of Directors in the Resolution on Fees. The Security Deposit shall be refunded to the customer as provided in Section 6.04 herein.
- 14.11 **Special Facilities Charge** - A charge required for development of limited service areas whenever special facilities, including, but not limited to, booster stations, hydropneumatic stations and pressure regulators, are required. The charge to be made to a developer or owner of land that is considered by the district to be within a limited service area shall be based upon the developer's or landowner's proportionate share of the cost for the installation of such special facility. Such proportionate share to be borne by the developer or landowner shall be based on the percentage of such development to the entire limited service area to be served by the special facilities; and the difference between the cost of facilities to serve the same number of acres or area under normal conditions and the cost of facilities to serve the acreage or area under special conditions at a higher cost.
- 14.12 **Service Charge** - The monthly service charge applicable to all metered services.

- 14.13 **Unauthorized Use of Water Charge** - The charge to any person, organization or agency for each unauthorized use of district water, or for tampering in any manner with any meter belonging to the district, in which tampering shall affect the accuracy of such meter.
- 14.14 **Water Main Extension Charge** - The charge for the replacement or construction of the water main fronting on the property to be served.
- 14.15 **Water Service Connection Charge** - The charge for the type and size of water service connection desired. Such regular charge shall be paid in advance by the applicant. Where there is no regular charge, the district reserves the right to require the applicant to deposit an amount equal to the estimated cost of such service connection.
- 14.16 **Water System Design Charge** - A non-refundable charge which shall be required for all main extensions, service connections and/or special facilities requiring the preparation of engineering plans and drawings.
- 14.17 **Construction Water Charge** - A charge for temporary water service. It is a monthly billing and includes a service charge and a consumption charge billed at the highest rate for consumption.

## Section 15 - Water Conservation

- 15.01 Waste or Nuisance Water and Other Substances** - It is unlawful for any person, firm or corporation, to deposit, drain, wash, allow to run or divert into or upon any public road, highway, street or alley, drainage ditch, storm drain, or flood control channel owned by or controlled by any public agency within the district, any water, mud, or sand except that, upon written application of any person filed with the district and approved by the General Manager, which the district may, upon such terms and conditions as it may deem advisable to impose, including the charging of a fee therefore, grant a permit to such person to do any of the acts prohibited by this section, provided the same shall not be detrimental to public health, safety or welfare. For purposes of enforcement of this Section, the owner of the meter or property which is the source of the waste or nuisance water or other substance as defined herein is considered the party responsible for any violations cited hereunder.
- 15.02 Conservation Measures Stage No. 1 - Normal Conditions:** Voluntary Conservation Measures - Normal conditions shall be in effect when the district is able to meet all the water demands of its customers in the immediate future. During normal conditions, all water users should continue to use water wisely, to prevent the waste or unreasonable use of water, and to reduce water consumption to that necessary for ordinary domestic and commercial purposes.
- 15.03 Threatened Water Supply Shortage Stage No. 2** - In the event of a threatened water supply shortage which could affect the district's ability to provide water for ordinary domestic and commercial uses, the Board of Directors shall hold a public hearing at which customers of the water supply shall have the opportunity to protest and to present their respective needs to the district. The Board may then, by Resolution, declare a water shortage condition to prevail, and the following conservation measures shall be in effect:
- 15.03.01 Exterior Landscape Plans** - Exterior landscape plans for all new commercial and industrial development shall provide for timed irrigation and shall consider the use of drought resistant varieties of flora. Such plans shall be presented to and approved by the district prior to issuance of a water service letter.
- 15.03.02 Excessive Irrigation and Related Waste** - No customer of the district or other person acting on behalf of or under the direction of a customer shall cause or permit the use of water for irrigation of landscaping or other outdoor vegetation, plantings, lawns or other growth, to exceed the amount required to provide reasonable irrigation of same, and shall not cause or permit any unreasonable or excessive waste of water from said irrigation activities or from watering devices or systems. The free flow of water away from an irrigated site shall be presumptively considered excessive irrigation and waste as defined in Section 3.26 herein.
- 15.03.03 Agricultural Irrigation** - Persons receiving water from the district who are engaged in commercial agricultural practices, whether for the purpose of crop production or growing of ornamental plants shall provide, maintain and use irrigation equipment and practices which are the most efficient possible. Upon the request of the General Manager, these persons may be required to prepare a plan describing their

irrigation practices and equipment, including but not limited to, an estimate of the efficiency of the use of water on their properties.

- 15.03.04 Commercial Facilities** - Commercial and industrial facilities shall, upon request of the General Manager, provide the district with a plan to conserve water at their facilities. The district will provide these facilities with information regarding the average monthly water use by the facility for the last two-year period. The facility will be expected to provide the district with a plan to conserve or reduce the amount of water used by that percentage deemed by the Board of Directors to be necessary under the circumstances. After review and approval by the General Manager, the water conservation plan shall be considered subject to inspection and enforcement by the district.
- 15.03.05 Parks, Golf Courses, Swimming Pools, and School Grounds** - Public and private parks, golf courses, swimming pools, and school grounds which use water provided by the district shall use water for irrigation and pool filling between the hours of 6:00 p.m. and 6:00 a.m.
- 15.03.06 Domestic Irrigation** - Upon notice and public hearing, the district may determine that the irrigation of exterior vegetation shall be conducted only during specified hours and/or days, and may impose other restrictions on the use of water for such irrigation. The irrigation of exterior vegetation at other than these times shall be considered to be a waste of water.
- 15.03.07 Swimming Pools** - All residential, public and recreational swimming pools, of all sizes, shall use evaporation resistant covers and shall recirculate water. Any swimming pool which does not have a cover installed during periods of nonuse shall be considered a waste of water.
- 15.03.08 Run-off and Wash-down** - No water provided by the district shall be used for the purposes of wash-down of impervious areas, without specific written authorization of the General Manager. Any water used on a premises that is allowed to escape the premises and run off into gutters or storm drains shall be considered a waste of water.
- 15.03.09 Vehicle Washing** - The washing of cars, truck or other vehicles is not permitted, except with a hose equipped with an automatic shut-off device, or at a commercial facility designed and so designated on the district's billing records.
- 15.03.10 Drinking Water Provided by Restaurants** - Restaurants are requested not to provide drinking water to patrons except by request.
- 15.04 Water Shortage Emergency Stage No. 3 - Mandatory Conservation Measures** - In the event of a water shortage emergency in which the district may be prevented from meeting the water demands of its customers, the Board of Directors shall, if possible given the time and circumstances, immediately hold a public hearing at which customers of the district shall have the opportunity to protest and to present their respective needs to the Board. No public hearing shall be required in the event of a breakage or failure of a pump, pipeline, conduit causing an immediate emergency. The General Manager is empowered to declare a water shortage emergency, subject to the ratification of the Board of Directors within 72 hours of such declaration, and the following rules and regulations shall be in effect immediately following such declaration:

- 15.04.01 Prohibition** - Watering of parks, school grounds, golf courses, lawn watering, landscape irrigation, washing down of driveways, parking lots or other impervious surfaces, washing of vehicles, except when done by commercial car wash establishments using only recycled or reclaimed water, filling or adding water to swimming pools, wading pools, spas, ornamental ponds, fountains and artificial lakes are prohibited.
- 15.04.02 Restaurants** - Restaurants shall not serve drinking water to patrons except by request.
- 15.04.03 Construction Meters** - No new construction meter permits shall be issued by the district. All existing construction meters shall be removed and/or locked.
- 15.04.04 Commercial Nurseries and Livestock** - Commercial nurseries shall discontinue all watering and irrigation. Watering of livestock is permitted as necessary.
- 15.05 Implementation and Termination of Mandatory Compliance Stages** - The General Manager of the district shall monitor the supply and demand for water on a daily basis to determine the level of conservation required by the implementation or termination of the Water Conservation Plan Stages, and shall notify the Board of Directors of the necessity for the implementation or termination of each stage. Each declaration of the Board of Directors implementing or terminating a water conservation stage shall be published at least once in a newspaper of general circulation, and shall be posted at the district offices. Each declaration shall remain in effect until the Board of Directors otherwise declares, as provided herein.
- 15.06 Exceptions** - Application for Exception Permit - The General Manager may grant permits for uses of water otherwise prohibited under the provisions of this Ordinance if he finds and determines that restrictions herein would either:
- 15.06.01 Hardship** - Cause an unnecessary and undue hardship to the water user or the public; or
- 15.06.02 Emergency** - Cause an emergency condition affecting the health, sanitation, fire protection or safety of the water use or of the public.
- 15.06.03 Exemptions Granted** - Such exceptions may be granted only upon written application therefore. Upon granting such exception permit, the General Manager may impose any conditions he determines to be just and proper.
- 15.07 Enforcement, Inspection** - Authorized employees of the district, after proper identification may, during reasonable hours, inspect any facility having a water conservation plan, and may enter onto private property for the purpose of observing the operation of any water conservation device, irrigation equipment or water facility. Employees of the district may also observe the use of water or irrigation equipment within the district from public rights-of-way and as alleged violations are reported to the district.
- 15.08 Criminal Penalties for Violation** - Water Code Section 31029 makes any violation of this Ordinance a misdemeanor, and upon conviction thereof, the violator shall be punished by imprisonment, fine or by both such fine and imprisonment as may be allowed by law.

- 15.09 Civil Penalties for Violation** - In addition to criminal penalties, violators of the mandatory provisions of this Ordinance shall be subject to civil action initiated by the district, as follows:
- 15.09.01 First Violation** - For a first violation, the district shall issue a written notice of violation to the water user violating the provisions of this Ordinance. The notice shall be given pursuant to the requirements of Section 15.10 below.
- 15.09.02 Second Violation - \$100.00 Surcharge** - For a second violation of this Ordinance within a 12-month period, or for failure to comply with the notice of violation within the period stated, a one-month penalty surcharge of \$100.00 is hereby imposed for the meter through which the wasted water was supplied.
- 15.09.03 Third Violation - \$200.00 Surcharge and/or Installation of Flow Restrictor** - For a third violation of this Ordinance within a 12-month period, or for continued failure to comply within 30 days after notice and imposition of second violation sanctions, a one-month penalty surcharge in the amount of \$200.00 is hereby imposed for the meter through which the wasted water was supplied. In addition to the surcharge, the district may, at its discretion, install a flow-restricting device at such meter with a one-eighth inch orifice for services up to one and one-half inch size, and comparatively sized restrictors for larger services, on the service of the customer at the premises at which the violation occurred for a period of not less than 48 hours. The charge to the customer for installing a flow-restricting device shall be based upon the size of the meter and the actual cost of installation but shall not be less than that provided in the district's Rules and Regulations. The charge for removal of the flow-restricting device and restoration of normal service shall be as provided in the district's Rules and Regulations.
- 15.09.04 Subsequent Violations - Discontinuance of Service** - For any subsequent violation of this Ordinance within the 24 calendar months after a first violation as provided in Section 15.09.02 hereof, the penalty surcharge provided in Section 15.09.03 hereof shall be imposed and the district may discontinue water service to that customer at the premises or to the meter where the violation occurred. The charge for reconnection and restoration of normal service shall be as provided in the Rules and Regulations of the district. Such restoration of service shall not be made until the General Manager of the district has determined that the water user has provided reasonable assurances that future violations of this Ordinance by such user will not occur.
- 15.10 Notice of First Violation** - For a first violation, written notice shall be given to the customer and/or property owner personally or by regular mail.
- 15.10.01 Subsequent Violations** - If the penalty assessed is a surcharge for a second or third violation, notice may be given by regular mail.
- 15.10.02 Violations Involving Flow Restrictor Installation or Discontinuance of Water Service** - If the penalty assessed is, or includes, the installation of a flow restrictor or the discontinuance of water service to the customer for any period of time, notice of the violation shall be given in the following manner:
- 15.10.02.01 Personal Service** - By giving written notice thereof to the occupant and/or property owner personally; or if the occupant and/or property owner is absent from

his/her place of residence and from his/her assumed place of business, by leaving a copy with some person of suitable age and discretion at either place, and sending a copy through the United States Mail addressed to the occupant and/or owner at his/her place of business or residence; or

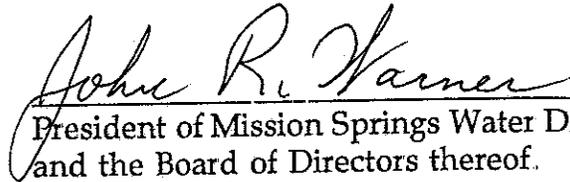
- 15.10.02.02 Posting** - If such place of residence and business cannot be ascertained, or a person of suitable age or discretion cannot be located, then by affixing a copy in a conspicuous place on the property where the failure to comply is occurring and also by delivering a copy to a person there residing, if such person can be found, and also sending a copy through the United States Mail addressed to the occupant at the place where the property is situated and to the owner, if different.
- 15.10.03 Form of Notice** - All notices provided for in this Section shall contain, in addition to the facts of the violation, a statement of the possible penalties for each violation and a statement informing the occupant/owner of his/her right to a hearing on the violation.
- 15.11 Hearing** - Any customer or property owner against whom a penalty is levied pursuant to this Ordinance shall have a right to a hearing, in the first instance by the General Manager, with the right of appeal to the Public Affairs Committee of the Board of Directors, on the merits of the alleged violation upon the written request of that customer within fifteen (15) days of the date of alleged violation. At the next regularly scheduled meeting, the customer may then appear and present any evidence in support of his position and ask for a decision by the Public Affairs Committee.
- 15.12 Delays on Action** - The Public Affairs Committee shall act promptly to resolve the dispute, but may delay a resolution of the dispute to the time of its next regular meeting in order to investigate the dispute or receive special reports related to the dispute.
- 15.13 Decision of the Public Affairs Committee** - The decision of the Public Affairs Committee of the Board of Directors shall be final. Should the Committee not render a decision within sixty (60) days of appeal to the Committee, this failure to act shall be deemed a denial of the requested action, unless both parties have agreed to extend the resolution period.

**Section 16 - Effective Date**

This Ordinance shall become effective upon adoption.

APPROVED AND ADOPTED this 18th day of October, 1993.

Ayes: Gibson, Glass, Warner, Webb, Wright  
Noes:       None  
Absent:     None

  
\_\_\_\_\_  
President of Mission Springs Water District  
and the Board of Directors thereof.

ATTEST:

  
\_\_\_\_\_  
Secretary of Mission Springs Water District  
and the Board of Directors thereof.

STATE OF CALIFORNIA)  
 )  
COUNTY OF RIVERSIDE)

I, JOHN L. MORGAN, Secretary of the Board of Directors of Mission Springs Water District, HEREBY CERTIFY that the foregoing Ordinance was duly adopted by the Board of Directors of said district at a regular meeting held on the 18th day of October 1993 and that it was so adopted by the following vote:

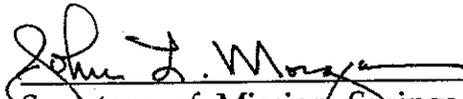
AYES: Directors Warner, Webb, Gibson, Glass, Wright

NOES: None

ABSENT: None

I ALSO CERTIFY that the foregoing is a full, true and correct copy of Ordinance No. 93-3 of said Board, and that it has not been amended or repealed.

DATED this 18th day of October, 1993.

  
Secretary of Mission Springs Water District  
and the Board of Directors thereof.

(SEAL)

**Mission Springs Water District**  
**Water Regulations and Service Ordinance**

**Ordinance No. 93-3**

**Amendments and Revisions**

**Amended by Ordinance 97-1:**      **6.10.7 Added Recapture Agreement**  
   **14.18 Added Lien Release Fee**  
   **14.19 Added Returned Check Charge**

**Rescinds Ordinance 90-1**

**Rescinds Ordinance 78-2**

# MISSION SPRINGS WATER DISTRICT

66575 Second Street  
Desert Hot Springs, CA 92240