

3716  
LACWD No. 40  
Urban Water  
Management Plan



**2000  
Urban Water  
Management Plan  
Update**

*for*

**Los Angeles County  
Waterworks  
District 40**

**December 2000**

**PSOMAS**

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**COUNTY OF LOS ANGELES  
DEPARTMENT OF PUBLIC WORKS  
Waterworks District 40**

**2000  
URBAN WATER MANAGEMENT PLAN**

**December 2000**

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**LOS ANGELES COUNTY DEPARTMENT OF PUBLIC WORKS  
WATERWORKS DISTRICT 40  
2000 URBAN WATER MANAGEMENT PLAN**

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## 1.0 INTRODUCTION

This Urban Water Management Plan (UWMP) was prepared in accordance with the California Urban Water Management Planning Act of 1984. Appendix A presents a copy of the Act and its provisions. The Act has been amended several times since its passage, with the most recent amendment in 2000. The Act requires every urban water supplier providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually to prepare and adopt, in accordance with prescribed requirements, an Urban Water Management Plan. Pursuant to section 10621.a. of the Act, each urban water supplier shall update its plan at least once every five years on or before December 31, in calendar years ending in five and zero.

### 1.1 Formation of Waterworks District 40

The Los Angeles County Waterworks District No. 40 (LACWWD) was formed in accordance with Division 16 Sections 55000-55991 of the State Water Code to supply water for urban use throughout the Antelope Valley. A vicinity map of the service area is included in Figure 1-1. The District is governed by the Los Angeles County Board of Supervisors with the Waterworks and Sewer Maintenance Division of the County Department of Public Works providing administration, operation, and maintenance of the District's facilities.

The District is comprised of eight regions serving customers in the communities of Lancaster and Palmdale (Region Nos. 4 and 34), Pearblossom (Region No. 24), Littlerock (Region No. 27), Sun Village (Region No. 38), North East Los Angeles County (Region No. 35), Lake Los Angeles (Region No. 38), and Rock Creek (Region No. 39). Regions 4 and 34 are integrated and are operated as one system. Similarly, Regions 24, 27, and 33 are also integrated and are operated as one system. Figure 1-2 shows a map of the region boundaries.

### 1.2 Public Participation

A public hearing was held to include public review and comments on the 2000 UWMP. The UWMP was adopted by the Board of Supervisors and submitted to the California Department of Water Resources within 30 days of the Board's adoption.

### 1.3 Coordination within the County

The Los Angeles County Department of Public Works (LACDPW) Waterworks and Sewer Maintenance Division staff has coordinated with the County Planning Department to develop this plan.

Figure 1-1

Vicinity Map

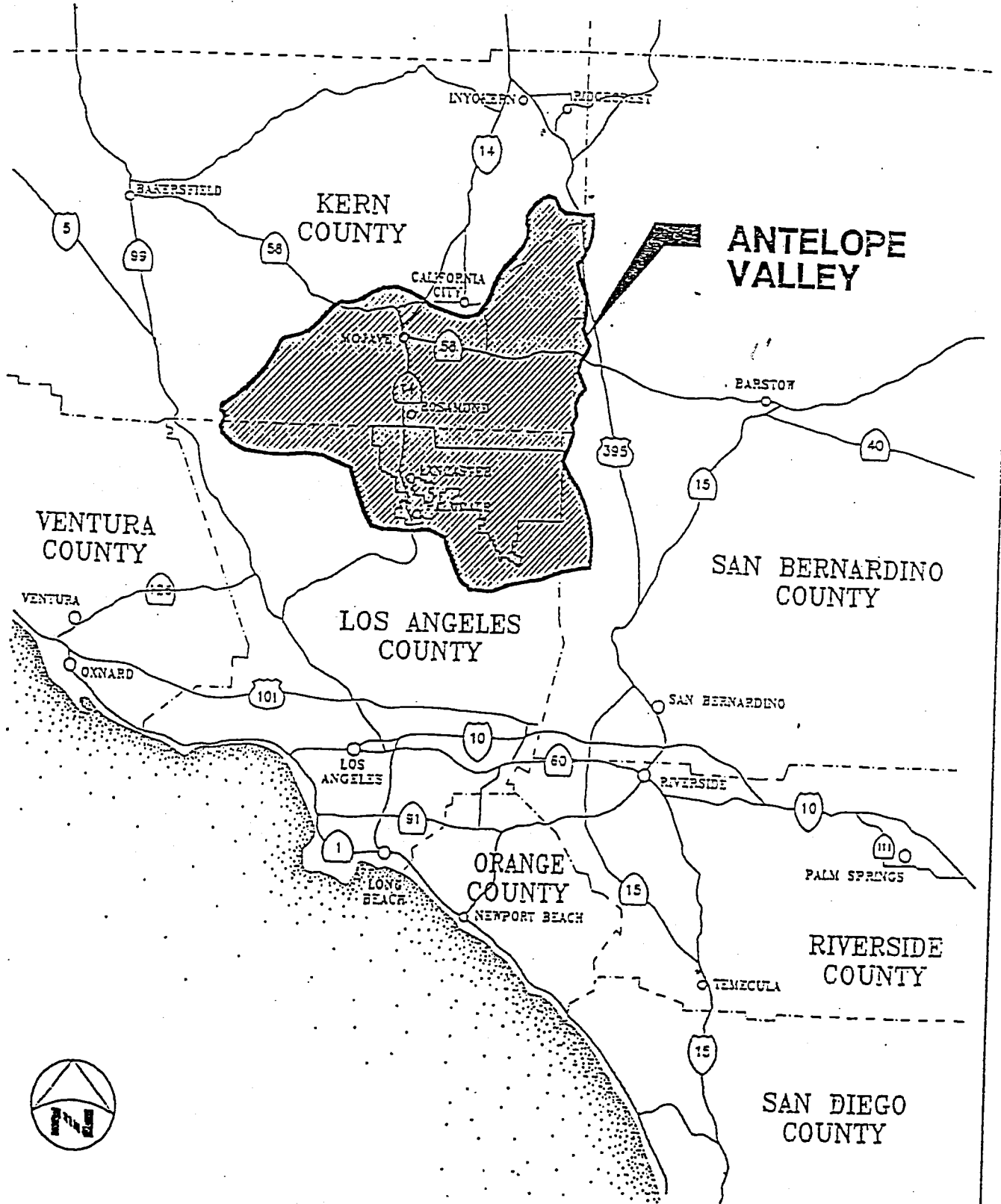
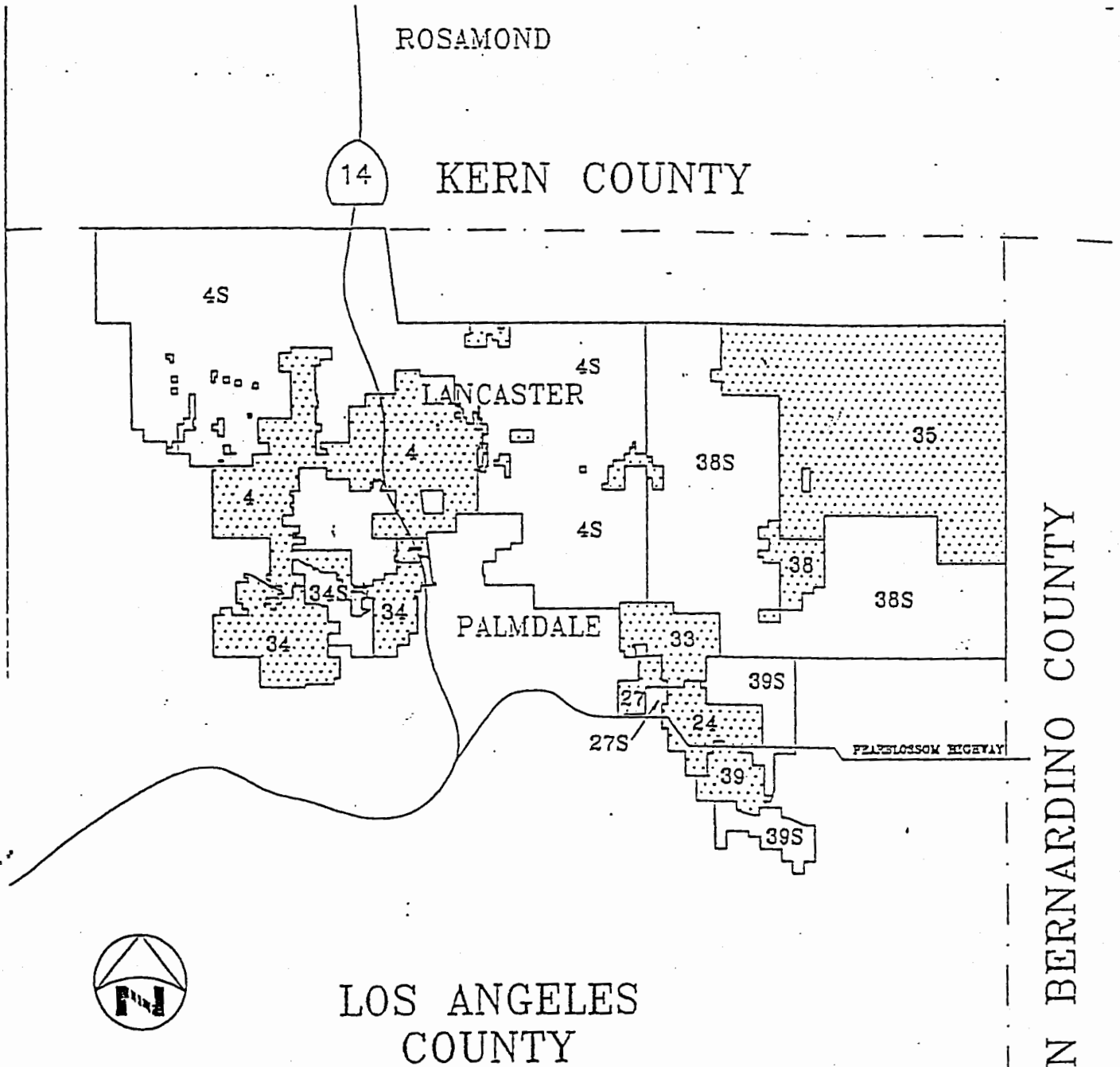


Figure 1-2

Region Boundary Map



LOS ANGELES COUNTY

SAN BERNARDINO COUNTY

LEGEND

NO.	DESCRIPTION
4	REGION 4
24	REGION 24
27	REGION 27
33	REGION 33
34	REGION 34
35	REGION 35
38	REGION 38
39	REGION 39
4S	REGION 4 SOI
27S	REGION 27 SOI
34S	REGION 34 SOI
38S	REGION 38 SOI
39S	REGION 39 SOI



#### 1.4 Interagency Coordination

LACDPW Waterworks District 40 is a retail agency under the service area of Antelope Valley East-Kern Water Agency (AVEK). There was coordination with AVEK's staff in estimating projected imported water supplies that will be available to District 40.

#### 1.5 Climate

The Antelope Valley is approximately 2,400 square miles and lies in the southwestern Mojave Desert, encompassing portions of northern Los Angeles County, southern Kern County, and western San Bernardino County. The valley is bounded on the southwest by the San Gabriel Mountains, on the northwest by the Techachapi Mountains, and on the east by a series of hills and buttes that generally follow the San Bernardino County line.

Ground surface elevations within the Antelope Valley range between 2,300 feet and 3,500 feet above mean sea level (MSL). Temperatures often exceed 100°F during the summer months, with a mean temperature range between 63°F and 93°F. During winter months, the mean temperature ranges between 34°F and 57°F.

Average precipitation within the Antelope Valley watershed ranges between five and ten inches per year, from less than five inches per year along the northerly boundary of the Valley to about ten inches per year along the southerly boundary. Most precipitation occurs between October and March. Short duration thunderstorms do sometimes occur during the summer months.

#### 1.6 Other Demographic Factors

District No. 40 and its sphere of influence (SOI) encompasses approximately 554 square miles of the valley floor and adjacent foothills of the Antelope Valley (190 square miles within District 40, 364 square miles within SOI). Of the 554 square miles, approximately five square miles are public lands (and therefore undevelopable) under the jurisdiction of the United States Bureau of Land Management (USBLM). As such, there are approximately 549 square miles of land within District No. 40 and its SOI that are available for development.

Prior to the 1940s, human activity within the Antelope Valley was largely confined to Native Americans, miners, and pioneering agricultural families. Significant growth began with rapidly increasing military and agricultural activity during and immediately after World War II. The military presence resulted from the opening of Muroc Army Air Base, which was subsequently, renamed Edwards Air Force Base (AFB) in memory of Captain Glen Edwards, who was killed while test flying an experimental bomber in 1948. By about 1953, agricultural uses occupied approximately 73,000 acres producing primarily feed crops such as alfalfa, barley, and wheat.

Land uses in the valley have been transitioning from agricultural uses to residential and commercial uses for some time. By 1993, only about 12,800 acres remained in agricultural production. Some industrial growth occurred, much of that is associated with the aerospace industry. The valley is also mined for various minerals, including borate, aggregate, and salt. Nevertheless, employment within the valley is limited, with a large percentage of the population commuting to jobs in the southerly portions of Los Angeles County.

The project planning area constitutes the portion of the Antelope Valley wherein LACWWD either already provides or is prepared to provide water service. Existing development primarily occupies Regions 4 and 34. It also occupies portions of the remaining regions, which are situated southerly, southeasterly, and easterly of Regions 4 and 34. Future development is expected to occur within Regions 4 and 34 primarily as infill and as new development westerly of the cities of Lancaster and Palmdale, and in undeveloped areas within the remaining regions.

### 1.7 Population

The population within the Districts service area has increased steadily over the past several years from about 108,000 persons in 1990 to about 128,000 persons in 2000. Population is expected to increase significantly over the next 20 years. Population estimates have been made by the Los Angeles County Department of Regional Planning (LACDRP) (LACDRP, 1994). Population projections are summarized in Table 1-1.

Table 1-1 Population Projections					
	2000	2005	2010	2015	2020
Service Area Population	128,000	210,900	293,800	328,050	362,300

### 1.8 Past Drought, Water Demand, and Conservation Information

The most recent drought was experienced between 1987 and 1992. Because the drought was preceded by the wettest period in California history, State reservoirs were full and the impact of the drought was not really felt until 1990. The District's approach was to implement a phased conservation plan to reduce the district water demands and make up the difference by pumping more groundwater. The District is currently planning to conduct a joint Artificial Storage and Recovery (ASR) project with Antelope Valley East-Kern Water Agency (AVEK). If this proves to be feasible, the District will then be able to store sufficient treated imported water from AVEK in the groundwater basin during wet years or winter months, and withdraw it during times of drought.

Water conservation programs in the Antelope Valley are primarily directed at urban areas, and are provided through agencies like LACWWD, the City of Lancaster, and the City of Palmdale. Demand management is one of the most effective means of water conservation. Many specific demand management measures are already enforced by

existing federal and state law. For instance, water efficient showerheads and toilets are required by building codes. Additional measures are either mandated or allowed, such as the use of household gray water for residential irrigation purposes.

On April 11, 1996, District 40 became a signatory to the California Urban Water Conservation Council (CUWCC) Memorandum of Understanding (MOU). Becoming a signatory increases the District's commitment toward implementing water conservation projects to prepare the service area for potential water shortages.

## 2.0 WATER SUPPLY

Water supplies for the District are obtained from both local and imported sources. Local groundwater currently satisfies approximately 40 percent of the District's demand. Imported water is purchased from AVEK and provides the remaining 60 percent of the District's water demand. Except for emergency interconnections with some retail agencies, there are no water exchange or transfer programs on a short-term or long-term basis. Targeted contributions from groundwater production and imported water purchases have been established by LACWWD at a ratio of 80 percent imported water (including any waters produced from the ASR program) and 20 percent groundwater.

Table 2-1 sets forth current and projected water supply estimates. Current supply requirements reflect actual recorded quantities of groundwater production and imported water (AVEK) purchases. Projected supply estimates for imported water and groundwater are based on the Draft 1999 Master Plan.

Water Supply Sources	2000 <sup>(1)</sup>	2005	2010	2015	2020
Purchased from wholesaler					
AVEK	30,600	57,764	77,404	83,860	90,726
Supplier produced groundwater	18,600	14,441	19,351	20,965	22,681
Supplier produced surface diversions					
Transfers/Exchanges					
Recycled Water					
Other					
<b>Total</b>	<b>49,143</b>	<b>72,205</b>	<b>96,755</b>	<b>104,826</b>	<b>113,407</b>

Units of Measure: Acre-feet/Year  
 (1) Estimated based on 1999 data

### 2.1 Groundwater

The Antelope Valley Ground Water Basin (Basin) is comprised of two primary aquifers (commonly referred to as the deep aquifer and the principal aquifer), and is divided into twelve subunits. Due to past water extractions, primarily for agricultural purposes, pumping has exceeded the natural recharge. Water extractions (for the Los Angeles County portion of the Valley) increased from 29,000 AF in 1919 to approximately 400,000 AF in 1950. This was followed by a decline to 53,000 AF in 1983. However, due to increasing urban development, extractions have increased to a high of 92,000 AF in 1992. According to the USGS, the safe yield of the Basin is estimated to be somewhere between 31,200 AF/Yr and 59,100 AF/Yr.

The groundwater extractions between 1926 and 1972 resulted in the overdraft of the aquifer that caused the groundwater levels to drop 200 to 300 feet or an average of 4 to 6 feet per year.

With the completion of the state water project in the 1970's and the reduction of agricultural activity, groundwater extractions have been reduced. This has stabilized groundwater levels in some areas of the valley. Some District wells have actually shown a rise in groundwater levels.

The Antelope Valley Groundwater Basin is not adjudicated and existing pumpers and overlying landowners have correlative water rights in the basin and may pump without limit, so long as the water is being put to a beneficial use. To safeguard the basin and provide a reliable water supply for the present and future inhabitants of the area, there is a need to develop a program to manage the groundwater basin to bring extractions more in line with the perennial yield of the basin.

The District is currently planning to conduct an Artificial Storage and Recovery (ASR) full-scale project with Antelope Valley East-Kern Water Agency (AVEK). An EIR is currently being done for the ASR program. It is anticipated that the EIR process will be completed in October 2001 with the ASR program being implemented in November of that same year.

## 2.2 Imported Water

SWP deliveries to the valley began in 1972. AVEK, the Palmdale Water District (PWD), and the Little Rock Creek Irrigation District (LCID) provide SWP water to the Antelope Valley. SWP entitlements for the Valley State Water contractors currently total 158,000 AFY. Entitlements of AVEK, PWD, and LCID are 138,400, 17,300, and 2,300 AFY, respectively. However, a small portion of AVEK's SWP entitlement has historically been delivered to areas outside the Valley. Based on information provided by AVEK, it is estimated that approximately 3% of historic deliveries made by AVEK did not serve the Antelope Valley; as a result, it should be assumed that 3% of AVEK's future deliveries would be made to areas outside the Valley. The total amount of SWP entitlement water available to the valley is therefore about 153,800 AFY.

AVEK deliveries peaked in 1981 at approximately 79,400 AF, and overall SWP deliveries to the valley peaked the same year at approximately 80,600 AF. Since 1981, SWP deliveries to the valley have ranged between 14,000 and 58,700 AFY. Between 1976 and 1982, deliveries ranged between 19% and 92% of the total entitlements. Between 1983 and 1995, deliveries range between 9% and 69% of total entitlements.

California Department of Water Resources (CDWR) reports that existing SWP facilities have a 65% chance of making full deliveries for current demands and will have a 25% chance of making full deliveries for projected 2020 demands. The long term average of SWP deliveries to AVEK over the next 20 years is estimated to be 91,350 acre-feet per

year or 66 percent of AVEK's total entitlement. It is estimated that approximately 70 percent of AVEK's supplies will serve District 40 (personal communication, Russ Fuller, AVEK, 10/27/00).

Availability of SWP water varies from year to year, depending on the number of factors (precipitation, regulatory restrictions, legislative restrictions, and operational considerations), and is especially unreliable during dry years. Therefore, LACWWD groundwater supplies must be adequate to ensure that customer demands can be met.

In addition to SWP availability fluctuations, LACWWD's ability to use AVEK supplies is currently limited to certain portions of District 40 due to transmission facility restrictions. The maximum quantity of water that can currently be purchased from AVEK for direct delivery to LACWWD customers is about 60% of District Number 40's demand.

### 2.3 Reclaimed Water

There are several water reclamation plants (WRP) currently operating in the Antelope Valley; however, there are only two operating within Los Angeles County that treat significant waste streams and that generate large quantities of reclaimed water. The plants, which are both operated by the County Sanitation Districts of Los Angeles County (CSDLAC), serve the City of Palmdale and the City of Lancaster.

#### 2.3.1 Palmdale WRP

The CSDLAC's District 20 operates the Palmdale WRP, which is located on 30<sup>th</sup> Street East, southeast of the Palmdale Airport. The Palmdale WRP is an undisinfected secondary treatment facility with a capacity of 8.0 million gallons per day (MGD). A portion of the effluent from Palmdale WRP is currently used for irrigating farmland on Los Angeles County Department of Airports (DOA) property. The DOA has a contract for up to 12 MGD of effluent. The remaining effluent is spread over 2,600 acres of land owned by the DOA. Approximately 0.3 percent of reclaimed water was used by local farmers on DOA property in 1991-1992. To accommodate anticipated growth in the Antelope Valley, CSDLAC intends to expand the plant to a capacity of 15.0 MGD.

#### 2.3.2 Lancaster WRP

CSDLAC's District 14 operates the Lancaster WRP, which is located South East of the intersection of Antelope Valley Freeway (I-14) and Avenue C, near Edwards AFB. The Lancaster WRP is currently the only facility in Antelope Valley supplying tertiary treated water (0.6 MGD design capacity); however, the majority of the plant's flow is treated to a secondary treatment level. Total capacity of the plant is 10.0 MGD. Undisinfected secondary effluent from the WRP is used for irrigating farmland at Nebeker Ranch. Tertiary effluent is used at Apollo Lakes County Parks for lake and irrigation use. The

remaining effluent is disinfected and then discharged to Paiute Ponds. To accommodate anticipated growth in the Antelope Valley, CSDLAC intends to expand the plant to a capacity of 16.0 MGD.

### 3.0 WATER USE

#### 3.1 Past, Current and Projected Water Use

Presently, there are approximately 128,000 residents within the District No. 40 service area. There are also about 28,000 residents outside its service area but within its SOI. About 80% of the water served within District No. 40 is distributed to single family and multi-family residential services.

Table 3-1 illustrates Past, Current, and Projected Water Use 1990 – 2020 in acre-feet per year. Table 3-2 illustrates Past, Current, and Projected Water Use 1990 – 2020 in number of connections per year.

Table 3-1 Past, Current and Projected Water Use (In Acre-Feet/Year)							
Water Use Sectors	1990	1995	2000	2005	2010	2015	2020
Single family residential	25,264	29,828	35,334	51,915	69,567	75,370	81,540
Multi-family residential	3,373	3,983	4,718	6,932	9,288	10,063	10,887
Commercial	2,670	3,153	3,735	5,488	7,353	7,967	8,619
Industrial	141	166	197	289	387	419	454
Institutional and governmental	Included In Other	Included In Other	Included In Other	Included In Other	Included In Other	Included In Other	Included In Other
Landscape	1,054	1,245	1,474	2,166	2,903	3,145	3,402
Conjunctive use	0	0	0	0	0	0	0
Agriculture	0	0	0	0	0	0	0
Other	2,635	3,111	3,686	5,415	7,257	7,862	8,506
<b>Total</b>	<b>35,137</b>	<b>41,486</b>	<b>49,143</b>	<b>72,205</b>	<b>96,755</b>	<b>104,826</b>	<b>113,407</b>



<b>Customer Type</b>	<b>1990</b>	<b>1995</b>	<b>2000</b>	<b>2005</b>	<b>2010</b>	<b>2015</b>	<b>2020</b>
Single family residential	29,899	35,367	38,254	63,029	87,805	98,041	108,277
Multi-family residential	785	928	1,004	1,654	2,304	2,573	2,842
Commercial	1,014	1,200	1,298	2,139	2,979	3,327	3,674
Industrial	29	34	37	61	85	95	105
Institutional and governmental	140	165	179	295	411	459	507
Landscape/recreation	414	490	530	873	1,217	1,358	1,500
Agriculture	0	0	0	0	0	0	0
Other	339	401	434	715	996	1,112	1,228
<b>Total</b>	<b>32,620</b>	<b>38,586</b>	<b>41,736</b>	<b>68,767</b>	<b>95,797</b>	<b>106,965</b>	<b>118,132</b>

Past and current water use is based on supply requirements that reflect actual recorded quantities of groundwater production and imported water (AVEK) purchases. Projected water use includes unaccounted-for water at 5%. Projected supply requirements are obtained from the Districts 1999 Water System Master Plan and are based on projected population, planned land use, and water supply and consumption data. Future water requirements within the SOI of each of District No. 40's eight regions were included in the estimates assuming LACWWD will annex all areas within the current SOI.

### 3.2 Residential Sector

Single family residential customers are estimated to average about 3.17 persons per connection (Los Angeles County Department of Regional Planning, 1994), with an average consumption rate between 190 and 250 gallons/capita/day (gpcd). Multi-family residential customers are estimated to average about 2.3 persons per housing unit and seven units per multi-family complex, with an average consumption rate between 130 and 175 gpcd. Growth in the residential sector is projected to be considerable over the next 20 years as indicated on Table 3-1.

### 3.3 Commercial Sector

A variety of commercial customers exist within District No. 40 with uses that include family and high-volume restaurants, insurance offices, beauty shops, gas stations, hotels and motels, shopping centers, and other facilities that serve non-resident population. The commercial sector continues to expand each year, and growth is expected to continue to occur over the next 20 years in response to ongoing population increases. Average consumption rate for the commercial sector is estimated to be 2,000 gallons per acre per day.

### **3.4 Industrial Sector**

District No. 40 serves a relatively small industrial sector, primarily centered on aerospace and light manufacturing. The industrial sector has grown somewhat in the last decade and is expected to continue to expand over the next 20 years. The average consumption rate for the industrial sector is estimated to be 3,000 gallons per acre per day.

### **3.5 Institutional/Governmental Sector**

District No. 40 has a stable institutional/governmental sector, primarily local government, schools, visitor-serving public facilities, and medical facilities. This sector is expected to expand over the next 20 years in response to ongoing population increases. Consumption rates within this sector vary considerably depending upon the specific facility; however, for planning purposes, a consumption rate somewhere between commercial and industrial at 2,500 gallons per acre per day has been assumed (1999 Master Plan).

### **3.6 Landscape/Recreational Sector**

Landscape and recreation customer demand is expected to increase gradually over the next 20 years due to continued growth in visitor-serving facilities. Increased efficiency and landscape conversions at existing parks, golf courses, and cemeteries should help offset new demand resulting from projected increases in this sector. The average consumption rate for landscape/recreation sector is estimated to be 1,500 gallons per acre per day.

## 4.0 WATER RELIABILITY

### 4.1 Reliability

The only firm water supply in the Antelope Valley is the groundwater supply. Imported water from the State Water Project may be reduced because of drought or it may be interrupted to make repairs or because of disaster. In 1991, for example, the State Department of Water Resources (DWR) reduced deliveries to only 20 percent of normal. Valley water agencies, including District 40, made up the difference by increasing their use of groundwater. It should be noted that District 40 also imposed a conservation program that required customers to reduce water usage by 20 percent. Customers who exceeded specified goals based on historical usage were required to pay surcharges.

From time to time, the State aqueduct system requires repairs. To minimize the impact of these repairs on the delivery of water to contractors, DWR generally schedules the repairs during winter months when water demands are lowest. The State Water Project delivery system is also subject to disaster, such as earthquake. To date, no major interruption of imported water deliveries has occurred because of a disaster.

The Antelope Valley is very fortunate to have a vast groundwater supply to utilize as a source of water supply. As described in Section 2.1, steps must be taken to manage the groundwater basin to protect this valuable and essential resource from water quality problems and the problems associated with overdrafting.

Reliability is a measure of a water system's expected success in managing water shortages. Reliability planning requires information about the following: (1) expected frequency and severity of shortages; (2) how additional water management are likely to affect the frequency and severity of shortages; and (3) how available contingency measures can reduce the impact of shortages when they occur.

### 4.2 Frequency and Magnitude of Supply Deficiencies

The District experienced a drought during the years of 1987-1991. Because the drought was preceded by the wettest period in California history, State reservoirs were full and the impact of the drought was not really felt until 1990. The County of Los Angeles adopted three ordinances in 1991 to reduce water use.

The first was Ordinance No. 91-0046U, which called for a water waste prohibition for the unincorporated areas of the county. The water saving measures included limiting car washes, excessive landscape watering, and prohibited washing of paved surfaces. Any failures to comply with these provision resulted in a fine.

The second and most significant measure adopted was Ordinance No. 91-0075M, which created the Phased Water Conservation Plan. This Plan would apply to all waterworks Districts within the County in order to meet available water supply. Through nine

phases, the Board of Supervisor would declare percentages of water use reductions in order to meet water supplies. In 1991, the Board of supervisors declared a "Phase Three" shortage with a goal to reduce water consumption in all District by 20 percent. Any customers that exceeded the target quantity a conservation surcharge would be assessed to their bill.

On June 27, 1991, the County adopted Ordinance No. 91-0097U, which amended the plumbing code by requiring the installation of ultra low flow toilet and urinals in all new buildings.

The District's implementation of these ordinances resulted in a 20 percent reduction in water use. An increase in groundwater pumping was used to supplement supplies in order to meet demands.

#### **4.3 Plans to Assure a Reliable Water Supply**

The District is currently planning to conduct a joint Artificial Storage and Recovery (ASR) full-scale project with Antelope Valley East-Kern Water Agency (AVEK). If feasible, the District will then be able to store sufficient treated imported water from AVEK in the groundwater basin during wet years or winter months, and withdraw it during times of high demand and drought. The ASR program is not only vital to enable LACWWD to achieve the targeted 80/20 production ratio, but will also help to mitigate groundwater depressions in the area where it is utilized.

The Antelope Valley Groundwater Basin is estimated to have a storage capacity of 68 million acre-feet, of which at least 13 million acre-feet is currently thought to be available for storage. The ASR program would serve to mitigate deterioration of the groundwater body and would enable LACWWD to utilize some of the Basin's available storage capacity.

#### **4.4 Reliability Comparison**

Table 4-1 details estimated water supply projections associated with several water supply reliability scenarios. The driest three-year sequence for the District's water supplies in recent history was from 1990 to 1992. Supply per service connection for these years, along with the current number of service connections, are used in Table 4-1 for the multiple dry water years scenario. The supply per service connection data for the dry years are multiplied by the current number of service connections in order to account for growth within the District. Supply data for 1991 is used for the single dry water year scenario.

Table 4-1 Supply Reliability (In Acre-Feet/Year)				
		Multiple Dry Water Years		
Average / Normal Water Year 2000	Single Dry Water Year	Year 1	Year 2	Year 3
49,143	33,710	43,320	33,710	37,050

#### 4.5 Water Transfers or Exchanges

Except for emergency interconnections with some retail agencies, there are no water exchange or transfer programs on a short-term or long-term basis.

## 5.0 SUPPLY AND DEMAND COMPARISON PROVISIONS

### 5.1 Supply and Demand Comparison

District 40 receives all of their water supply from AVEK and groundwater. Therefore, supply estimates are based upon the projected water deliveries from AVEK and assumed maximum groundwater extraction volumes.

Table 5-1 compares the projected supply and demand through the year 2020.

	2000	2005	2010	2015	2020
<b>Supply totals</b>	49,143	72,205	96,755	104,826	113,407
<b>Demand totals</b>	49,143	72,205	96,755	104,826	113,407
<b>Difference</b>	0	0	0	0	0

In the upcoming years, if there are consecutive dry years resulting in a water shortage, there is a water shortage contingency plan in place to reduce the amount of water use. The Los Angeles County Supervisors adopted such a plan in 1991 known as the "Phased Water Conservation Plan". In it reductions are made in phases to reduce water uses in percentages. Section 7 of this report goes into further detail of this plan.

Table 5-2 presents a supply and demand comparison for the Districts current demand requirements with supply scenarios of one dry year and consecutive dry years. In Table 5-2, demand is not reduced in conjunction with a change in supply. Tables 5-3, 5-4, and 5-5 detail how supply and demand options can alter the outcome of a water shortage.

Table 5-2 Single Dry Year and Multiple Dry Water Years (In Acre-Feet/Year)					
Water Supply Sources	Current Supply 2000	Single Dry Water Year	Multiple Dry Water Years		
			Year 1	Year 2	Year 3
Supply totals	49,143	33,710	43,320	33,710	37,050
Percent Shortage		31%	12%	31%	25%
Demand totals	49,143	49,143	49,143	49,143	49,143
Difference	0	(15,433)	(5,823)	(15,433)	(12,093)

Table 5-3 displays Supply and Demand comparisons in multiple dry water years with the Phased Water Conservation Plan in place. This comparison holds supply at the same level as Table 5-2.

Table 5-3 Supply Reliability and Demand Comparison with Phased Water Conservation Plan (In Acre-Feet/Year)					
Water Supply Sources	Average / Normal Water Year	Single Dry Water Year	Multiple Dry Water Years		
			Year 1	Year 2	Year 3
Supply totals	49,143	33,710	43,320	33,710	37,050
Demand totals	49,143	31,943	41,772	31,943	36,857
Difference	0	1,767	1,548	1,767	193

Table 5-4 modifies the comparison by increasing the supply available for use by increasing the amount of supply from groundwater in order to meet demands. Demand remains the same as in Table 5-2.

Table 5-4 Supply Reliability and Demand Comparison with Supply Options (In Acre-Feet/Year)					
Water Supply Sources	Average / Normal Water Year	Single Dry Water Year	Multiple Dry Water Years		
			Year 1	Year 2	Year 3
Supply totals	49,143	49,143	49,143	49,143	49,143
Demand totals	49,143	49,143	49,143	49,143	49,143
<b>Difference</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

Table 5-5 modifies the comparison by increasing supply and modifying water user habits through conservation measures with the Phase Water Conservation Plan in place.

Table 5-5 Supply Reliability and Demand Comparison with Supply and Demand Options (In Acre-Feet/Year)					
Water Supply Sources	Average / Normal Water Year	Single Dry Water Year	Multiple Dry Water Years		
			Year 1	Year 2	Year 3
Supply totals	49,143	34,400	44,229	34,400	36,857
Demand totals	49,143	34,400	44,229	34,400	36,857
<b>Difference</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>



## 6.0 WATER DEMAND MANAGEMENT MEASURES

On April 11, 1996, the County of Los Angeles Department of Public Works Waterworks District 40 became signatory to the Memorandum of Understanding (MOU) California Urban Water Conservation Council (CUWCC). Pursuant to Section 10631.h. of the Urban Water Management Plan Act (UWMPA), urban water suppliers that are members of the CUWCC may submit the annual reports identifying water demand management measures currently being implemented, or scheduled for implementation, to satisfy the requirements of Section 10631.f. of the UWMPA.

Please refer to Appendix D for the FY 1999/2000 Best Management Practices Annual Report

## 7.0 WATER SHORTAGE CONTINGENCY PLAN

### 7.1 Water Shortage Response

As a result of the drought (1987-1991) and the serious supply situation the region undertook at the time, the County Board of Supervisors approved on March 23, 1991 the "Nine Phase Water Conservation Plan." (A copy of the Plan is in Appendix C) This Plan imposed phased of voluntary and mandatory water reduction of water use for the waterworks districts, including District 40, up to 50 percent. The objective of the Plan is to minimize the effect of a water shortage on service area water users by encouraging customers to maximize beneficial use of water resources.

The "Phased Water Conservation Plan" is comprised of nine stages or "Phases" that call for the reduction of water use in order to meet a conservation target. The Plan was implemented at a time when the County determined that the water districts would suffer a severe water shortage unless water rationing was applied. The Plan accomplishes this by: (1) Setting in place a conservation target in phases to reduce water usage; (2) Financially discouraging wasteful or unreasonable water use and encouraging water conservation.

	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6	Phase 7	Phase 8	Phase 9
Anticipated shortage in water supply	10%	15%	20%	25%	30%	35%	40%	45%	50%
Conservation Target as a Percent of Baseline Use	90%	85%	80%	75%	70%	65%	60%	55%	50%
Type of Rationing Program	Voluntary	Mandatory	Mandatory	Mandatory	Mandatory	Mandatory	Mandatory	Mandatory	Mandatory

Source: Los Angeles County Ordinance No. 91-0075M

Table 7-1 displays the rationing stages the county adopted to reduce water usage. The conservation target is a percentage of the quantity used during a "base" billing period set by the Board of Supervisors. To discourage wasteful or unreasonable water use, a conservation surcharge is imposed for water use beyond those target goals. The conservation surcharge is \$3.00 per hcf (hundred cubic feet).

The baseline quantity amounts to the customer's actual water usage during the "base" billing period or the District average, whichever is higher. For water use in excess of the baseline quantity, the conservation surcharge is \$6.00 per hcf.

In 1991, the County Supervisors declared a "Phase 3" water shortage for the Waterworks Districts, which amounts to a 20 percent reduction of water usage. Therefore, a customer is charged the normal water rate for water usage up to 80 percent of the customer's baseline quantity. There is a \$3.00 per hcf surcharge for water usage between 80 percent and 100 percent of the baseline quantity. There is a \$6.00 per hcf surcharge for water used in excess of 100 percent of the baseline quantity. These surcharges are in addition to the normal quantity charges for water use.

In addition, the Plan will call upon the following water conservation measures as shown in Table 7-2, as water shortage increases.

Table 7-2 Phased Water Conservation Plan Water Conservation Measures in Phases				
Phase	Cutback %	Landscape Watering Restrictions	Construction Meter Restrictions	Other Restrictions
I	10	None	None	None
II	15	None	None	None
III	20	None	No New Construction Meters	Issuance Of "Will Serve" Letter Discontinued*
IV	25	Every Other Day	No New Construction Meters	Issuance Of "Will Serve" Letter Discontinued*
V	30	Every Other Day	No New Construction Meters	Issuance Of "Will Serve" Letter Discontinued*
VI	35	Every Third Day	No New Construction Meters	Issuance Of "Will Serve" Letter Discontinued*

VII	40	Trees and Shrubs only by Bucket	Remove All Construction Meters	Issuance Of "Will Serve" Letter and Installation of all New Permanent Meters Discontinued*
VIII	45	Trees and Shrubs only by Bucket	Remove All Construction Meters	Issuance Of "Will Serve" Letter and Installation of all New Permanent Meters Discontinued*
IX	50	Trees and Shrubs only by Bucket	Remove All Construction Meters	Issuance Of "Will Serve" Letter and Installation of all New Permanent Meters Discontinued*

\*"Will Serve" letters will be issued that will allow recordation of final maps; however, permanent metered service to the newly created lots will not be authorized until the current drought is over (mandatory rationing discontinued).

### 7.2 Catastrophic Water Supply Interruption

In the event of a catastrophe, the District has the following measures to prevent water shortages: (1) Groundwater supplies and emergency storage (2) Emergency connections to water retail agencies (3) Phased Water Conservation Plan (4) "No Waste" Ordinance.

### 7.3 Water Shortage Contingency Ordinances

The Board of Supervisors adopted Ordinances No. 91-0075M on May 23, 1991, which established the Phased Water Conservation Plan, and Water Wasting Prohibition Ordinance No. 91-0046U on March 21, 1991.

### 7.4 Three Year Minimum Water Supply

Table 7-3 Minimum Water Supply (in Acre-Feet/Year)				
Average / Normal Water Year	Single Dry Water Year	Multiple Dry Water Years		
		Year 2001	Year 2002	Year 2003
49,143	33,710	43,320	33,710	37,050

### 7.5 Water Shortage Stages Triggering Mechanisms

The Phased Water Conservation Plan's Authorization to Implement Water Conservation requires the Board of Directors of the Waterworks Districts to determine the projected

water shortage in the County. This will be influenced by the District's imported water from AVEK. There could be internal influences in the District that could trigger the implementation of water conservation, such as a break in one of the mains, landslide, or earthquake that could impair the water facilities.

However, once the Board determined a water conservation phase should be implemented a public hearing is called for the purposes of determining whether a shortage exists in the Districts and which phased should be implemented. There are a number of nine stages that exist in the Plan to adopt with provisions to meet the targeted goal.

## 7.6 Mandatory Prohibitions on Water Wasting

On March 21, 1991, the Board of Supervisors adopted Ordinance No. 91-0046U "No Waste" that specified a number of water saving measures that applied only to unincorporated areas of the County. As shown in Appendix C, this Ordinance includes the following prohibitions:

- Washing down paved surfaces is prohibited unless required for health or safety
- Landscape watering is prohibited between 10:00 a.m. and 5:00 p.m.
- Excessive landscape watering that results in runoff into adjoining streets, parking lots or alleys is prohibited
- Plumbing leaks must be repaired as soon as practical
- Washing of vehicles is prohibited excepted at a commercial carwash or with a hand-held bucket or hose equipped with an automatic shutoff nozzle
- Serving drinking water at public eating places is prohibited unless requested by customers
- Water used in decorative fountains must flow through a recycling system

This Ordinance was active from March 1991 to January 1993. Currently, there is no water-wasting ordinance in effect in the County.

## 7.7 Excessive Use Penalties

Any customer violating the regulations and restrictions on water use set forth in the "No Waste" Ordinance or Phased Water Conservation Plan shall be penalized. According to the Phased Water Conservation Plan, a customer that uses water in excess of the target quantity will be assessed a conservation surcharge of \$3.00 up to \$6.00 per hcf on to their next water bill. In the event a customer violates the provisions in the "No Waste" Ordinance a fine of \$100.00 will be issued for the first infraction and a \$500.00 fine for each subsequent infractions. If water service is disconnected due to excess water use, it shall be restored upon payment of a hook-up charged determined by the County Rate Structure.

## 7.8 Revenue and Expenditures Impacts and Measures to Overcome Impacts

The implementation of the Phased Water Conservation Plan could result in significant short-term reduction in the District's revenue. The estimate of reduction in operating revenue is based on the existing water usage of 60 percent AVEK water and 40 percent well water. Revenue losses could range from 10 percent during Phase 1 to approximately 50 percent by Phase 9

The District's sources of funding are structured into four categories: Service Charge, Facility Surcharge, Water Quantity Charge, and Standby Charges. The Service Charge is a fixed connection charge based on the size of the meter. The Facility Surcharge and Water Quantity Charge are based on the actual quantity of water used each month. Standby Charges are assessed on all property and shows up on the customer's owner's tax bill. A reduction in water sales will affect only the Water Quantity Charge and Facility Surcharge, which in turn affects the maintenance and operation revenues, and capital improvements for the District.

If water sales do affect the operation and maintenance revenues, the County has the following measures to reduce such an impact:

- Extra revenues contributed by the conservation surcharge. Past experiences of implementing conservation surcharge during a drought has generated funds which were used to offset a portion of the operation and maintenance costs
- Delay capital improvement projects. If necessary, the County can authorize the transfer of funds in the District's Accumulative Capital Outlay (ACO ) Fund allocated for capital improvement projects to be transferred to the District's General Fund.
- Increase Water rates. If ACO funds are not available, the County could recommend to Board of Supervisors to increase water rates to meet operating needs.

## 7.9 Reduction Measuring Mechanism in Water Use

During periods of normal supply conditions, District 40's supply and demand data are produced and distributed on a monthly basis. Water meter readings are collected bimonthly and compiled into yearly summaries.

During drought periods, supply and demand data is produced and distributed on a monthly basis, with excess water usage violation reported to the county and to the customer. Bi-monthly water meter reading are collected and compiled to determine if the water usage is reduced to the target goal.

## 8.0 WATER RECYCLING

### 8.1 Wastewater Collection and Treatment

There are several water reclamation plants (WRP) currently operating in the Antelope Valley; however, there are only two operating within Los Angeles County that treat significant waste streams and that generate large quantities of reclaimed water. The plants, which are both operated by the County Sanitation Districts of Los Angeles County (CSDLAC), serve the City of Palmdale and the City of Lancaster.

#### Palmdale WRP

The CSDLAC's District 20 operates the Palmdale WRP, which is located on 30<sup>th</sup> Street East, southeast of the Palmdale Airport. The Palmdale WRP is an undisinfected secondary treatment facility with a capacity of 8.0 million gallons per day (MGD). To accommodate anticipated growth in the Antelope Valley, CSDLAC intends to expand the plant to a capacity of 15.0 MGD.

#### Lancaster WRP

CSDLAC's District 14 operates the Lancaster WRP, which is located South East of the intersection of Antelope Valley Freeway (I-14) and Avenue C, near Edwards AFB. The Lancaster WRP is currently the only facility in Antelope Valley supplying tertiary treated water (0.6 MGD design capacity); however, the majority of the plant's flow is treated to a secondary treatment level. Total capacity of the plant is 10.0 MGD. To accommodate anticipated growth in the Antelope Valley, CSDLAC intends to expand the plant to a capacity of 16.0 MGD.

Average daily flow rates have been steadily increasing over the past several years. The Palmdale WRP's average flow of 7.9 MGD in 1991 approached the plant's average daily flow design capacity of 8.0 MGD. The average daily wastewater flow in 2020 is expected to be 37.2 MGD for the Palmdale WRP and 29.8 MGD for the Lancaster WRP.

### 8.2 Recycled Water Use and Wastewater Disposal Methods

#### Palmdale WRP

A portion of the effluent from Palmdale WRP is currently used for irrigating farmland on Los Angeles County Department of Airports (DOA) property. The DOA has a contract for up to 12 MGD of effluent. The remaining effluent is spread over 2,600 acres of land owned by the DOA. Approximately 0.3 percent of reclaimed water was used by local farmers on DOA property in 1991-1992.

#### Lancaster WRP

Undisinfected secondary effluent from the WRP is used for irrigating farmland at Nebeker Ranch. Tertiary effluent is used at Apollo Lakes County Parks for lake and irrigation use. The remaining effluent is disinfected and then discharged to Paiute Ponds.

### 8.3 Potential Uses of Recycled Water

Table 8-1 presents a list of potential reclaimed water users. The status, required treatment and estimated annual demands for potential reclaimed water users are also shown. The projected annual reclaimed water demand is approximately 32,200 acre-feet per year.

Table 8-1 Potential Reclaimed Water Customers			
User Name	Current Status	Required Treatment	Projected Demand (AF/YR)
<b>Palmdale/Lancaster Tertiary System</b>			
Palmdale High School	Existing	Tertiary	138
Desert Aire Golf Course	Existing	Secondary	120
McAdam Park	Existing	Tertiary	72
Courson Park	Existing	Tertiary	23
Desert Rose Elementary	Existing	Tertiary	26
Tumbleweed Elementary	Existing	Tertiary	26
Cactus K-8 School	Existing	Tertiary	36
Mesa Intermediate School	Existing	Tertiary	52
Palmdale Business Park	Future	Tertiary	118
Palmdale Business Park Golf	Future	Secondary	453
Antelope Valley Country Club	Existing	Secondary	375
Desert Sands Park	Existing	Tertiary	68
Yucca Elementary School	Existing	Tertiary	23
Highlands High School	Existing	Tertiary	100
Summerwind Elementary	Future	Tertiary	42
Lancaster Business Park	Existing	Tertiary	55
Serrano Ranch	Future	Tertiary	329
Serrano Ranch Golf Course	Future	Secondary	633
K&B Development Tract 49864	Future	Tertiary	47
Fox Airfield Commercial	Future	Tertiary	1,920
Lancaster City Park	Existing	Tertiary	150
Lancaster City Park	Existing	Tertiary	32
Jane Reynolds Park	Existing	Tertiary	30
Mariposa Park	Existing	Tertiary	28
Eastside Park	Existing	Tertiary	71
El Dorado Park	Existing	Tertiary	40
Skytower Park	Existing	Tertiary	48
Appollo Lakes County Park	Existing	Tertiary	129
Antelope Valley High School	Existing	Tertiary	130
Desert Winds High School	Existing	Tertiary	8
Parkview Intermediate School	Existing	Tertiary	65
Mariposa Elementary School	Existing	Tertiary	38
Joshua Elementary School	Existing	Tertiary	56
El Dorado Elementary School	Existing	Tertiary	25
Linda Verde Elementary School	Existing	Tertiary	28
Joshua Memorial Park	Existing	Secondary	90
Joshua Memorial Park	Future	Secondary	21
New Vista Elementary School	Future	Tertiary	43
<b>Tertiary System Total</b>			<b>5,688</b>
<b>Secondary System Total (Agriculture/Ponds)</b>			<b>26,494</b>



## **9.0 REFERENCES**

Los Angeles County Department of Public Works. *1995 Urban Water Management Plan District 40*

Los Angeles County Department of Public Works. *1999 Water System Master Plan for Los Angeles County Waterworks District 40*

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# APPENDIX A

## URBAN WATER MANAGEMENT PLANNING ACT

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# CALIFORNIA URBAN WATER MANAGEMENT PLANNING ACT

Established: AB 797, Klehs, 1983

Amended: AB 2661, Klehs, 1990

AB 11X, Filante, 1991

AB 1869, Speier, 1991

AB 892, Frazee, 1993

SB 1017, McCorquodale, 1994

AB 2853, Cortese, 1994

AB 1845, Cortese, 1995

SB 1011, Polanco, 1995

## CALIFORNIA WATER CODE DIVISION 6 PART 2.6. URBAN WATER MANAGEMENT PLANNING

### CHAPTER 1. GENERAL DECLARATION AND POLICY

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

10610.2. The Legislature finds and declares as follows:

- (a) The waters of the state are a limited and renewable resource subject to ever increasing demands.
- (b) 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.
- (c) A long-term, reliable supply of water is essential to protect the productivity of California's businesses and economic climate.
- (d) 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.
- (e) 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 the needs of both existing customers 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.

## CHAPTER 2. DEFINITIONS

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

10611.5. "Demand management" means those water conservation measures, programs, and incentives that prevent the waste of water and promote the reasonable and efficient use and reuse of available supplies.

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

10613. "Efficient use" means those management measures that result in the most effective use of water so as to prevent its waste or unreasonable use or unreasonable method of use.

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

10615. "Plan" means an urban water management plan prepared pursuant to this part. A plan shall describe and evaluate sources of supply, reasonable and practical efficient uses, and 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, 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 7 (commencing with Section 4010) of Part 1 of Division 5 of the Health and Safety Code.

### CHAPTER 3. URBAN WATER MANAGEMENT PLANS

#### Article 1. General Provisions

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

(b) Every person that becomes an urban water supplier after December 31, 1984, 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.

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

## Article 2. Contents of Plans

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

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

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

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

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

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

For any water source that may not be available at a consistent level of use, given specific legal, environmental, water quality, or climatic factors, describe plans to 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 as 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) Interior and exterior water audits and incentive programs for single-family residential, multifamily residential, governmental, and institutional customers.
- (B) Enforcement of plumbing fixture efficiency standards and programs to retrofit less efficient fixtures.
- (C) Distribution system water audits, leak detection, and repair.
- (D) Metering with commodity rates for all new connections and retrofit of existing connections.
- (E) Large landscape water audits and incentives.
- (F) Landscape water conservation requirements for new and existing commercial, industrial, institutional, governmental, and multifamily developments.
- (G) Public information.
- (H) School education.
- (I) Commercial and industrial water conservation.
- (J) New commercial and industrial water use review.

(K) Conservation pricing for water service and conservation pricing for sewer service, where the urban water supplier also provides sewer service.

(L) Landscape water conservation for new and existing single-family homes.

(M) Water waste prohibitions.

(N) Water conservation coordinator.

(O) Financial incentives to encourage water conservation.

(P) Ultra-low-flush toilet replacement.

(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 such 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, which 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) Urban water suppliers that are members of the California Urban Water Conservation Council and submit annual reports to the council in accordance with the "Memorandum of Understanding Regarding Urban Water Conservation in California," dated September 1991, may submit the annual reports identifying water demand management measures currently being implemented, or scheduled for implementation, to satisfy the requirements of subdivisions (f) and (g).

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(d) The projected use of recycled water within the supplier's service area at the end of 5, 10, 15, and 20 years.

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

(f) A plan for optimizing the use of recycled water in the supplier's service area, including actions to facilitate the installation of dual distribution systems and to promote recirculating uses.

### **Article 2.5 Water Service Reliability**

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

has filed its plan with the department. The department shall also prepare reports and provide data for any legislative hearings designed to consider the effectiveness of plans submitted pursuant to this part.

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

#### CHAPTER 4. MISCELLANEOUS PROVISIONS

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

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

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

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

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

10653. The adoption of a plan shall satisfy any requirements of state law, regulation, or order, including those of the State Water Resources Control Board and the Public Utilities Commission, for the preparation of water management plans or conservation plans; provided, that if the State Water Resources Control Board or the Public Utilities Commission requires additional information concerning water conservation to implement its existing authority, nothing in this part shall be deemed to limit the board or the commission in obtaining that information. The requirements of this part shall be

which it provides water supplies within 60 days of 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 future, potential customers.

### **Article 3. Adoption and Implementation of Plans**

10640. Every urban water supplier required to prepare a plan pursuant to this part shall prepare its plan pursuant to Article 2 (commencing with Section 10630). The supplier shall likewise periodically review the plan as required by Section 10621, and any amendments or changes required as a result of that review shall be adopted pursuant to this article.

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

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

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

10644. (a) An urban water supplier shall file with the department a copy of its plan no later than 30 days after adoption. Copies of amendments or changes to the plans shall be filed with the department within 30 days after adoption.

(b) The department shall prepare and submit to the Legislature, on or before December 31, in the years ending in six and one, a report summarizing the status of the plans adopted pursuant to this part. The report prepared by the department shall identify the outstanding elements of individual plans. The department shall provide a copy of the report to each urban water supplier that

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 drought assistance from the state until the urban water management plan is submitted pursuant to Article 3 (commencing with Section 10640) of Chapter 3.

SEC. 2. No appropriation is made and no reimbursement is required by this act pursuant to Section 6 of Article XIII B of the California Constitution or Section 2231 or 2234 of the Revenue and Taxation Code because the local agency or school district has the authority to levy service charges, fees, or assessments sufficient to pay for the program or level of service mandated by this act.

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## APPENDIX B

LOS ANGELES COUNTY RESOLUTION TO ADOPT THE 2000 URBAN  
WATER MANAGEMENT PLAN FOR DISTRICT 40

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# APPENDIX C

## LOS ANGELES COUNTY ORDINANCES

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Water Wasting

ORDINANCE NO. 91-0046U

An urgency ordinance amending Title 11, Chapter 11.38 of the Los Angeles County Code relating to Water and Sewers to add Part 4, Water Conservation.

The Board of Supervisors of the County of Los Angeles ordains as follows:

Section 1. Title 11, Chapter 11.38 of the County Code is amended by adding Part 4, to read:

Part 4. Water Conservation Requirements For The Unincorporated Los Angeles County Area.

Section 11.38.620 Hose Watering Prohibition.

No person shall hose water or wash down any sidewalks, walkways, driveways, parking areas or other paved surfaces, except as is required for the benefit of public health and safety. Willful violation hereof shall be an infraction punishable by a fine of \$100.00 for the first infraction and \$500.00 each for subsequent infractions.



Section 11.38.630 Watering of Lawns and Landscaping.

- a). No person shall water or cause to be watered any lawn or landscaping between the hours of 10:00 a.m. and 5:00 p.m.
- b). No person shall water or cause to be watered any lawn or landscaping more than once a day.
- c). No person shall water or cause to be watered any lawn or landscaping to such an extent that runoff into adjoining streets, parking lots or alleys occurs due to incorrectly directed or maintained sprinklers or excessive watering.
- d). It shall be the duty of all persons to inspect all hoses, faucets and sprinkling systems for leaks and to cause all leaks to be repaired as soon as is reasonably practicable.
- e). Willful violation hereof shall be an infraction punishable by a fine of \$100.00 for the first infraction and \$500.00 each for subsequent infractions.

Section 11.38.640 Indoor Plumbing and Fixtures.

a). It shall be the duty of all persons to inspect all accessible indoor plumbing and faucets for leaks and to cause all leaks to be repaired as soon as is reasonably practicable.

b). Willful violation hereof shall be an infraction punishable by a fine of \$500.00.

Section 11.38.650 Washing Vehicles.

No motor vehicle, boat, trailer or other type of mobile equipment may be washed, except at a commercial car wash or with reclaimed water, unless such vehicle is washed by using a hand-held bucket or a water-hose equipped with an automatic shutoff nozzle. No person shall leave a water hose running while washing a vehicle or at any other time. Willful violation hereof shall be an infraction punishable by a fine of \$100.00 for the first infraction and \$500.00 each for subsequent infractions.

Section 11.38.660 Public Eating Places.

No restaurant, hotel, cafeteria, cafe or other public place where food is sold or served shall serve drinking water to any customer unless specifically requested to

do so by such customer. Willful violation hereof shall be an infraction punishable by a fine of \$100.00 for the first infraction and \$500.00 each for subsequent infractions.

Section 11.38.670 Decorative Fountains.

No person shall use water to clean, fill or maintain levels in decorative fountains, ponds, lakes, or other similar aesthetic structures unless such water flows through a recycling system. Willful violation hereof shall be an infraction punishable by a fine of \$100.00 for the first infraction and \$500.00 each for subsequent infractions.

Section 2. This ordinance shall terminate on January 1, 1993, unless renewed or terminated earlier by ordinance.

Section 3. Due to the severity of the drought in the State of California, there is an immediate need to prohibit the wasting of water in the Los Angeles County unincorporated area to better utilize the available water supplies. This ordinance is urgently needed for the preservation of the public health, safety and general welfare and shall take effect immediately.

Section 4. This ordinance shall be published in

Metropolitan News Enterprise

a newspaper printed and published in the County of Los Angeles.

Michael D. Antonovich  
Chairman

ATTEST:

[Signature]  
Executive Officer  
Board of Supervisors  
of the County of Los Angeles



I hereby certify that at its meeting of March 21, 1991,  
the foregoing ordinance was adopted by the Board of Supervisors  
of said County of Los Angeles by the following vote, to wit:

Ayes:

Noes:

Supervisors Gloria Molina  
Edmund D. Edelman  
Deane Dana  
Michael D. Antonovich

Supervisors None  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



[Signature]  
Executive Officer  
Board of Supervisors  
of the County of Los Angeles

Effective Date: March 21, 1991

~~OPERATIVE DATE~~ \_\_\_\_\_

I hereby certify that pursuant to  
Section 25103 of the Government Code,  
delivery of this document has been made.

LARRY J. MONTEILH  
Executive Officer  
Clerk of the Board of Supervisors

By [Signature]  
DEPUTY

APPROVED AS TO FORM:

DE WITT W. CLINTON  
County Counsel

By [Signature]  
GERALD F. CRUMP  
Chief Assistant County Counsel

An Ordinance amending the Rules and Regulations of the Los Angeles County Waterworks Districts relating to the implementation of a water conservation plan, by adding Part 5 - Phased Water Conservation Plan.

The Board of Supervisors, as the Board of Directors of the Los Angeles County Waterworks Districts, ordain as follows:

Section 1. The Rules and Regulations of the Los Angeles County Waterworks Districts are amended by adding Part 5, to read:

PART 5 - PHASED WATER CONSERVATION PLAN

RULE

5-A-1 STATEMENT OF POLICY AND DECLARATION OF PURPOSE

Because of the water supply conditions prevailing in any or all of the County Waterworks Districts and/or in the area from which any or all of the Districts obtain all or a portion of their supply, the general welfare requires that the water resources available to any or all of the Districts be put to the maximum beneficial use to the extent to which they are capable, and that the unreasonable use, or unreasonable method of use of water be discouraged and that the conservation of such water be practiced with a view to the reasonable and beneficial use thereof in the interest of the people of any or all of the Districts and for the public welfare. The purpose of this Phased Water Conservation Plan is to minimize the effect of a shortage of water supplies on the customers of any or all of the Districts during a water shortage emergency.

5-B-1 AUTHORIZATION TO IMPLEMENT WATER CONSERVATION

5-B-1a The Board of Directors of the Waterworks Districts may implement the applicable provisions of this conservation plan, following the public hearing required by Rule 5-B-1b, upon its determination that such implementation is necessary to protect the public welfare and safety.

5-B-1b The Board of Directors of the Waterworks Districts shall hold a public hearing for the purpose of determining whether a shortage exists in any or all of the Districts and which measures provided by this ordinance should be implemented. Notice of the time and place of the public hearing shall be published not less than ten (10) days before the hearing in a newspaper of general circulation within the affected District or Districts.

PART 5 - PHASED WATER CONSERVATION PLAN (Continued)

5-B-1c The Board of Directors shall issue its determination of shortage and corrective measures by resolution published in a daily newspaper of general circulation within the affected District or Districts. Conservation surcharges assessed per Rule 5-0-1 shall become effective no sooner than the first full billing period commencing on or after the date of such publication.

RULE

5-C-1 GENERAL PROHIBITION

No customer of the District or Districts shall make, cause, use, or permit the use of water from the District or Districts in a manner contrary to any provision of this ordinance.

5-D-1 PHASE I SHORTAGE

5-D-1a A Phase I Shortage shall be declared whenever the Board of Directors determines that it is likely that the District will suffer a ten percent (10%) shortage in its water supplies.

5-D-1b A customer with a meter size of one and one-half (1½) inches or larger shall be billed at his or her normal established water rate for all water used up to a target quantity of ninety percent (90%) of the base quantity. All water used in excess of the target quantity shall be subject to a conservation surcharge per Rule 5-0-1. The base quantity shall be determined by the amount of water used on the customer's premises during the corresponding billing period of a base period to be defined by the Board of Directors.

5-D-1c For meter sizes of one (1) inch or less, a base quantity shall be computed by averaging the water usage for all similar sized meters during the corresponding billing period of a base period to be defined by the Board of Directors. A customer with a meter size of one (1) inch or less shall be billed at his or her normal established water rate for all water used up to a target quantity of ninety percent (90%) of the base quantity. All water used in excess of the target quantity shall be subject to a conservation surcharge per Rule 5-0-1.

5-E-1 PHASE II SHORTAGE

5-E-1a A Phase II Shortage shall be declared whenever the Board of Directors determines that it is likely that the District suffer a shortage of between ten percent (10%) and fifteen percent (15%) in its water supplies.

5-E-1b A customer with a meter size of one and one-half (1½) inches or larger shall be billed at his or her normal established water rate for all water used up to a target quantity of eighty-five percent (85%) of the base quantity. All water used in excess of the target quantity shall be subject to a conservation surcharge per Rule 5-0-1. The base quantity shall be determined by the amount of water used on the customer's premises during the corresponding billing period of a base period to be defined by the Board of Directors.

PART 5 - PHASED WATER CONSERVATION PLAN (Continued)

5-E-1c For meter sizes of one (1) inch or less, a base quantity shall be computed by averaging the water usage for all similar sized meters during the corresponding billing period of a base period to be defined by the Board of Directors. A customer with a meter size of one (1) inch or less shall be billed at his or her normal established water rate for all water used up to a target quantity of eight-five percent (85%) of the base quantity. All water used in excess of the target quantity shall be subject to a conservation surcharge per Rule 5-0-1.

5-F-1 PHASE III SHORTAGE

5-F-1a A Phase III Shortage shall be declared whenever the Board of Directors determines that it is likely that the District will suffer a shortage of between fifteen percent (15%) and twenty percent (20%) in its water supplies.

5-F-1b A customer with a meter size of one and one-half (1½) inches or larger shall be billed at his or her normal established water rate for all water used up to a target quantity of eighty percent (80%) of the base quantity. All water used in excess of the target quantity shall be subject to a conservation surcharge per Rule 5-0-1. The base quantity shall be determined by the amount of water used on the customer's premises during the corresponding billing period of a base period to be defined by the Board of Directors.

5-F-1c For meter sizes of one (1) inch or less, a base quantity shall be computed by averaging the water usage for all similar sized meters during the corresponding billing period of a base period to be defined by the Board of Directors. A customer with a meter size of one (1) inch or less shall be billed at his or her normal established water rate for all water used up to a target quantity of eighty percent (80%) of the base quantity. All water used in excess of the target quantity shall be subject to a surcharge per Rule 5-0-1.

5-F-1d ~~New meters to provide construction water service shall not be issued.~~

5-F-1e ~~Water service ("Will Serve") letters will be issued but such letters will be issued with the condition that permanent metered service to any newly created lot will be prohibited until the Board of Directors determines that the provisions of the Phased Water Conservation Plan are no longer in effect or that the severity of the water supply condition may be reduced to a Phase I or Phase II shortage.~~

5-G-1 PHASE IV SHORTAGE

5-G-1a A Phase IV Shortage shall be declared whenever the Board of Directors determines that it is likely that the District will suffer a shortage of between twenty percent (20%) and twenty-five percent (25%) in its water supplies.

PART 5 - PHASED WATER CONSERVATION PLAN (Continued)

- 5-G-1b A customer with a meter size of one and one-half (1½) inches or larger shall be billed at his or her normal established water rate for all water used up to a target quantity of seventy-five percent (75%) of the base quantity. All water used in excess of the target quantity shall be subject to a conservation surcharge per Rule 5-0-1. The base quantity shall be determined by the amount of water used on the customer's premises during the corresponding billing period of a base period to be defined by the Board of Directors.
- 5-G-1c For meter sizes of one (1) inch or less, a base quantity shall be computed by averaging the water usage for all similar sized meters during the corresponding billing period of a base period to be defined by the Board of Directors. A customer with a meter size of one (1) inch or less shall be billed at his or her normal established water rate for all water used up to a target quantity of seventy-five percent (75%) of the base quantity. All water used in excess of the target quantity shall be subject to a conservation surcharge per Rule 5-0-1.
- 5-G-1d ~~The watering of lawn, landscape or other turf area with water supplied by the District shall be limited to not more than every other day and shall be prohibited between the hours of 10:00 a.m. and 5:00 p.m.~~
- 5-G-1e ~~New meters to provide construction water service shall not be issued.~~
- 5-G-1f ~~Water service ("Will Serve") letters will be issued but such letters will be issued with the condition that permanent metered service to any newly created lot will be prohibited until the Board of Directors determines that the provisions of the Phased Water Conservation Plan are no longer in effect or that the severity of the water supply condition may be reduced to a Phase I or Phase II shortage.~~

5-H-1 PHASE V SHORTAGE

- 5-H-1a A Phase V Shortage shall be declared whenever the Board of Directors determines that it is likely that the District will suffer a shortage of between twenty-five (25%) and thirty percent (30%) in its water supplies.
- 5-H-1b A customer with a meter size of one and one-half (1½) inches or larger shall be billed at his or her normal established water rate for all water used up to a target quantity of seventy percent (70%) of the base quantity. All water used in excess of the target quantity shall be subject to a conservation surcharge per Rule 5-0-1. The base quantity shall be determined by the amount of water used on the customer's premises during the corresponding billing period of a base period to be defined by the Board of Directors.
- 5-H-1c For meter sizes of one (1) inch or less, a base quantity shall be computed by averaging the water usage for all similar sized meters during the corresponding billing period of a base period to be defined by the Board of Directors. A customer with a meter size of (1) inch or



PART 5 - PHASED WATER CONSERVATION PLAN (Continued)

less shall be billed at his or her normal established water rate for all water used up to a target quantity of seventy percent (70%) of the base quantity. All water used in excess of the target quantity shall be subject to a conservation surcharge per Rule 5-0-1.

- 5-H-1d ~~The watering of lawn, landscape or other turf area with water supplied by the District shall be limited to not more than every other day and shall be prohibited between the hours of 10:00 a.m. and 5:00 p.m.~~
- 5-H-1e ~~New meters to provide construction water service shall not be issued.~~
- 5-H-1f ~~Water service ("Will Serve") letters will be issued but such letters will be issued with the condition that permanent metered service to any newly created lot will be prohibited until the Board of Directors determines that the provisions of the Phased Water Conservation Plan are no longer in effect or that the severity of the water supply condition may be reduced to a Phase I or Phase II shortage.~~

5-I-1 PHASE VI SHORTAGE

- 5-I-1a A Phase VI Shortage shall be declared whenever the Board of Directors determines that it is likely that the District will suffer a shortage of between thirty (30%) and thirty-five percent (35%) in its water supplies.
- 5-I-1b A customer with a meter size of one and one-half (1½) inches or larger shall be billed at his or her normal established water rate for all water used up to a target quantity of sixty-five percent (65%) of the base quantity. All water used in excess of the target quantity shall be subject to a conservation surcharge per Rule 5-0-1. The base quantity shall be determined by the amount of water used on the customer's premises during the corresponding billing period of a base period to be defined by the Board of Directors.
- 5-I-1c For meter sizes of one (1) inch or less, a base quantity shall be computed by averaging the water usage for all similar sized meters during the corresponding billing period of a base period to be defined by the Board of Directors. A customer with a meter size of one (1) inch or less shall be billed at his or her normal established water rate for all water used up to a target quantity of sixty-five percent (65%) of the base quantity. All water used in excess of the target quantity shall be subject to a conservation surcharge per Rule 5-0-1.
- 5-I-1d ~~The watering of lawn, landscape or other turf area with water supplied by the District shall be limited to not more than every third day and shall be prohibited between the hours of 10:00 a.m. and 5:00 p.m.~~
- 5-I-1e ~~New meters to provide construction water service shall not be issued.~~

PART 5 - PHASED WATER CONSERVATION PLAN (Continued)

5-I-1f Water service ("Will Serve") letters will be issued but such letters will be issued with the condition that permanent metered service to any newly created lot will be prohibited until the Board of Directors determines that the provisions of the Phased Water Conservation Plan are no longer in effect or that the severity of the water supply condition may be reduced to a Phase I or Phase II shortage.

5-J-1 PHASE VII SHORTAGE

5-J-1a A Phase VII Shortage shall be declared whenever the Board of Directors determines that it is likely that the District will suffer a shortage of between thirty-five (35%) and forty percent (40%) in its water supplies.

5-J-1b A customer with a meter size of one and one-half (1½) inches or larger shall be billed at his or her normal established water rate for all water used up to a target quantity of sixty percent (60%) of the base quantity. All water used in excess of the target quantity shall be subject to a conservation surcharge per Rule 5-0-1. The base quantity shall be determined by the amount of water used on the customer's premises during the corresponding billing period of a base period to be defined by the Board of Directors.

5-J-1c For meter sizes of one (1) inch or less, a base quantity shall be computed by averaging the water usage for all similar sized meters during the corresponding billing period of a base period to be defined by the Board of Directors. A customer with a meter size of one (1) inch or less shall be billed at his or her normal established water rate for all water used up to a target quantity of sixty percent (60%) of the base quantity. All water used in excess of the target quantity shall be subject to a surcharge per Rule 5-0-1.

5-J-1d ~~The watering of lawn, landscape or other turf area with water supplied by the District shall be prohibited, except that trees and shrubs may be watered at any time by bucket.~~

5-J-1e ~~All meters to provide construction water shall be removed.~~

5-J-1f Water service ("Will Serve") letters will be issued but such letters will be issued with the condition that permanent metered service to any newly created lot will be prohibited until the Board of Directors determines that the provisions of the Phased Water Conservation Plan are no longer in effect or that the severity of the water supply condition may be reduced to a Phase I or Phase II shortage.

5-J-1g ~~No new permanent meters shall be installed.~~

PART 5 - PHASED WATER CONSERVATION PLAN (Continued)

5-K-1 PHASE VIII SHORTAGE

5-K-1a A Phase VIII Shortage shall be declared whenever the Board of Directors determines that it is likely that the District will suffer a shortage of between forty (40%) and forty-five percent (45%) in its water supplies.

5-K-1b A customer with a meter size of one and one-half (1½) inches or larger shall be billed at his or her normal established water rate for all water used up to a target quantity of fifty-five percent (55%) of the base quantity. All water used in excess of the target quantity shall be subject to a conservation surcharge per Rule 5-0-1. The base quantity shall be determined by the amount of water used on the customer's premises during the corresponding billing period of a base period to be defined by the Board of Directors.

5-K-1c For meter sizes of one (1) inch or less, a base quantity shall be computed by averaging the water usage for all similar sized meters during the corresponding billing period of a base period to be defined by the Board of Directors. A customer with a meter size of one (1) inch or less shall be billed at his or her normal established water rate for all water used up to fifty-five percent (55%) of the base quantity. All water used in excess of the target quantity shall be subject to a conservation surcharge per Rule 5-0-1.

5-K-1d The watering of lawn, landscape or other turf area with water supplied by the District shall be prohibited except that trees and shrubs may be watered at any time by bucket.

5-K-1e All meters to provide construction water shall be removed.

5-K-1f Water service ("Will Serve") letters will be issued but such letters will be issued with the condition that permanent metered service to any newly created lot will be prohibited until the Board of Directors determines that the provisions of the Phased Water Conservation Plan are no longer in effect or that the severity of the water supply condition may be reduced to a Phase I or Phase II shortage.

5-K-1g No new permanent meters shall be installed.

5-L-1 PHASE IX SHORTAGE

5-L-1a A Phase IX Shortage shall be declared whenever the Board of Directors determines that it is likely that the District will suffer a shortage of between forty-five (45%) and fifty percent (50%) in its water supplies.

PART 5 - PHASED WATER CONSERVATION PLAN (Continued)

- 5-L-1b A customer with a meter size of one and one-half (1½) inches or larger shall be billed at his or her normal established water rate for all water used up to a target quantity of fifty percent (50%) of the base quantity. All water used in excess of the target quantity shall be subject to a conservation surcharge per Rule 5-0-1. The base quantity shall be determined by the amount of water used on the customer's premises during the corresponding billing period of a base period to be defined by the Board of Directors.
- 5-L-1c For meter sizes of one (1) inch or less, a base quantity shall be computed by averaging the water usage for all similar sized meters during the corresponding billing period of a base period to be defined by the Board of Directors. A customer with a meter size of one (1) inch or less shall be billed at his or her normal established water rate for all water used up to a target quantity of fifty percent (50%) of the base quantity. All water used in excess of the target quantity shall be subject to a conservation surcharge per Rule 5-0-1.
- 5-L-1d The watering of lawn, landscape or other turf area including trees and shrubs, with water supplied by the District shall be prohibited.
- 5-L-1e All meters to provide construction water shall be removed.
- 5-L-1f Water service ("Will Serve") letters will be issued but such letters will be issued with the condition that permanent metered service to any newly created lot will be prohibited until the Board of Directors determines that the provisions of the Phased Water Conservation Plan are no longer in effect or that the severity of the water supply condition may be reduced to a Phase I or Phase II shortage.
- 5-L-1g No new permanent meters shall be installed.
- 5-M-1 RELIEF FROM COMPLIANCE
- 5-M-1a A customer may file an application for relief from any provisions of this ordinance. The Director of Public Works shall develop such procedures as he or she considers necessary to resolve such applications and shall, upon the filing by a customer of an application for relief, take such steps as he or she deems reasonable to resolve the application for relief. The decision of the Director of Public Works shall be final. The Director of Public Works may delegate his or her duties and responsibilities under this Rule as appropriate.
- 5-M-1b The application for relief may include a request that the customer be relieved, in whole or in part, from the conservation surcharge provisions of Rules 5-D-1b, 5-D-1c, 5-E-1b, 5-E-1c, 5-F-1b, 5-F-1c, 5-G-1b and 5-G-1c, 5-H-1b, 5-H-1c, 5-I-1b, 5-I-1c, 5-J-1b, 5-J-1c, 5-K-1b, 5-K-1c, 5-L-1b and 5-L-1c.

PART 5 - PHASED WATER CONSERVATION PLAN (Continued)

5-M-1c In determining whether to grant relief, and the nature of any relief, the Director of Public Works shall take into consideration all relevant factors including, but not limited to:

1. Whether any additional reduction in water consumption will result in unemployment;
2. Whether additional members have been added to the household;
3. Whether any additional landscaped property has been added to the property since the corresponding billing period of the base year;
4. Changes in vacancy factors in multi-family housing;
5. Increased number of employees in commercial, industrial, and governmental offices;
6. Increased production requiring increased process water;
7. Water uses during new construction;
8. Adjustments to water use caused by emergency health or safety hazards;
9. First filling of a permit-constructed swimming pool; and
10. Water use necessary for reasons related to family illness or health.
11. Whether the basic period for billing should be adjusted due to the unique circumstances of the type of facility, such as a boat, which results in irregular, intermittent periods of consumption.

5-M-1d In order to be considered, an application for relief must be filed with the District within twenty (20) days from the date the provision from which relief is sought becomes applicable to the applicant. No relief shall be granted unless the customer shows that he or she has achieved the maximum practical reduction in water consumption other than in the specific areas in which relief is being sought. No relief shall be granted to any customer who, when requested by the Director of Public Works or designee, fails to provide any information necessary for resolution of the customer's application for relief. The decision shall be issued within twenty (20) days and provided to the customer.

5-N-1 NOTIFICATION OF CUSTOMERS

5-N-1a Each customer will be notified on his or her bill as to what the target quantity and the base quantity will be for the applicable billing period.

PART 5 - PHASED WATER CONSERVATION PLAN (Continued)

5-0-1 CONSERVATION SURCHARGES

5-0-1a Water use in excess of target quantities specified in Rules 5-D-1b, 5-D-1c, 5-E-1b, 5-E-1c, 5-F-1b, 5-F-1c, 5-G-1b, 5-G-1c, 5-H-1b, 5-H-1c, 5-I-1b, 5-I-1c, 5-J-1b, 5-J-1c, 5-K-1b, 5-K-1c, 5-L-1b and 5-L-1c shall be subject to the following conservation surcharges:

1. A conservation surcharge of \$3.00 per 100 cubic feet shall be assessed for water usage in excess of the target quantity but less than the base quantity set in these Rules for the applicable billing cycle. This conservation surcharge shall be in addition to the normal established water rate.
2. A conservation surcharge of \$6.00 per 100 cubic feet shall be assessed for water usage in excess of the base quantity set in these Rules for the applicable billing cycle. This conservation surcharge shall be in addition to the normal established water rate.

5-0-1b Violation by any customer of the water use prohibitions of Rules 5-G-1d, 5-H-1d, 5-I-1d, 5-J-1d, 5-K-1d and 5-L-1d shall be penalized as follows:

1. First violation. The Director of Public Works or designee shall issue a written notice of the fact of a first violation to the customer.
2. Second violation. For a second violation during any one water shortage emergency, the Director of Public works or designee shall issue a written notice of the fact of a second violation to the customer.
3. Third and subsequent violations. For a third and each subsequent violation during any one water shortage emergency, the Director of Public Works or designee may install a flow restricting device on the service of the customer at the premises at which the violation occurred for a period of not less than forty-eight (48) hours. The Director of Public Works shall charge the customer the reasonable costs incurred for installing and for removing the flow-restricting devices, and for restoration of normal service. The charge shall be paid before normal service can be restored.

5-0-1c All monies collected by a District pursuant to this ordinance shall be deposited in that District's General Fund as reimbursement for the District's costs and expenses of administering this conservation plan.

5-0-1d The District shall give notice to customer of water conservation surcharges or of water usage violations as follows:

1. Notice of water conservation surcharges or of first and second violations of the water use prohibitions of Rules 5-G-1d, 5-H-1d, 5-I-1d, 5-J-1d, 5-K-1d and 5-L-1d shall be given to the customer in person or by regular mail.

PART 5 - PHASED WATER CONSERVATION PLAN (Continued)

1. Notice of water conservation surcharges or of first and second violations of the water use prohibitions of Rules 5-G-1d, 5-H-1d, 5-I-1d, 5-J-1d, 5-K-1d and 5-L-1d shall be given to the customer in person or by regular mail.
  - B. If the customer is absent from or unavailable at the premises at which the violation occurred, by leaving a copy with some person of suitable age and discretion at the premises and sending a copy through the regular mail to the address at which the customer is normally billed; or
  - C. If a person of suitable age or discretion cannot be found, then by affixing a copy in a conspicuous place at the premises at which the violation occurred and also sending a copy through the regular mail to the address at which the customer is normally billed.

5-O-1e The notice of a violation of the water use prohibitions of Rules 5-G-1d, 5-H-1d, 5-I-1d, 5-J-1d, 5-K-1d and 5-L-1d shall contain a description of the facts of the violation, a statement of the possible penalties for each violation and a statement informing the customer of his right to a hearing on the merits of the violation pursuant to Rule 5-P-1.

5-O-1f Nothing in these regulations shall prohibit any customer from either installing sub-meters or from pro-rating and collecting from the ultimate users any conservation surcharges assessed when the customer's master meter measures consumption of water for multiple tenancy facilities. However, unless the sub-meters are subsequently billed directly by the District, the customer responsible for the master meter shall continue to be responsible directly to the District for all payments including conservation surcharges.

5-P-1 HEARING REGARDING VIOLATIONS

5-P-1a Any customer receiving notice of a third or subsequent violations of the water use prohibitions of Rules 5-G-1d, 5-H-1d, 5-I-1d, 5-J-1d, 5-K-1d or 5-L-1d shall have a right to a hearing by the Director of Public Works or his designee within fifteen (15) days of a mailing or other delivery of the notice of violation.

5-P-1b The customer's written request for a hearing must be received within ten (10) days of the issuance of the notice of violation. This request shall stay installation of a flow-restricting device on the customer's premises and the assessment of any surcharge until the Director of Public Works or designee renders his or her decision. The decision shall be issued within ten (10) days of the hearing, a copy of which shall be provided to the customer.

5-P-1c The decision of the Director of Public Works shall be final except for judicial review.

PART 5 - PHASED WATER CONSERVATION PLAN (Continued)

5-Q-1 ADDITIONAL WATER SHORTAGE MEASURES

The Board of Directors may order implementation of water conservation measures in addition to those set forth in Rules 5-D-1, 5-E-1, 5-F-1, 5-G-1, 5-H-1, 5-I-1, 5-J-1, 5-K-1 and 5-L-1. Such additional water conservation measures shall be implemented in the manner provided in Rule 5-B-1.

5-R-1 PUBLIC HEALTH AND SAFETY NOT TO BE AFFECTED

Nothing in this ordinance shall be construed to require the District to curtail the supply of water to any customer when such water is required by that customer to maintain an adequate level of public health and safety.

5-S-1 SEVERABILITY

If any part of this ordinance or the application thereof to any person or circumstances is for any reason held invalid or unconstitutional by a decision of any court of competent jurisdiction, the validity of the remainder of the ordinance or the application of such provision to other persons or circumstances shall not be affected. The board of Directors of the District or Districts declares that it would have adopted this ordinance and all provisions hereof irrespective of the fact that any one or more of the provisions be declared in valid or unconstitutional.



Section 2. This ordinance shall be published in

Metropolitan News Enterprise

a newspaper printed and published in the County of Los Angeles.

*Michael D. Antonovich*  
Chairman

ATTEST:

*[Signature]*  
Executive Officer  
Board of Supervisors  
of the County of Los Angeles



I hereby certify that at its meeting of May 23, 1991,  
the foregoing ordinance was adopted by the Board of Supervisors  
of said County of Los Angeles by the following vote, to wit:

Ayes:

Noes:

Supervisors Edmond D. Edelman  
Deane Dana  
Michael D. Antonovich  
\_\_\_\_\_  
\_\_\_\_\_

Supervisors \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



*[Signature]*  
Executive Officer  
Board of Supervisors  
of the County of Los Angeles

Effective Date: May 23, 1991

~~Operative Date: xxxxxxxxxxxxxxxxxxxxxxx~~

APPROVED AS TO FORM:

DE WITT W. OLINTON  
County Counsel

By *[Signature]*  
GERALD F. CRUMP  
Chief Assistant County Counsel

ANALYSIS

This ordinance amends Title 28 of the Los Angeles County Code to require the use of ultra low flush water closets and urinals in all new buildings.

EFFECTIVE : 7/9/91

DATE: 6-27-91

DE WITT W. CLINTON  
County Counsel

By:   
JOHN F. KRATTLI  
Principal Deputy County Counsel

ORDINANCE NO. 91-0097 U

An ordinance amending Title 28 (Plumbing Code) of the Los Angeles County Code to require the installation of ultra low flush water closets and urinals in all new buildings.

WHEREAS, Los Angeles County is now experiencing its fifth consecutive year of drought which has resulted in a water shortage and an immediate need to conserve scarce water resources; and

WHEREAS, the arid, dry climate of Los Angeles County has further aggravated the effects of the drought; and

WHEREAS, the public welfare requires that the limited water resources available to the County be put to maximum beneficial use and that the conservation of potable water be maximized in the best interests of all citizens of the County; and

WHEREAS, the current Los Angeles County Plumbing Code does not include provisions to require the use of ultra low flush water closets and urinals in new buildings, and

WHEREAS, the use of such devices will conserve needed water resources;

NOW THEREFORE, the Board of Supervisors finds and determines that amending the County Plumbing Code to require the use of ultra low flush water closets and urinals in all new buildings will reduce water use and is reasonably necessary because of local climatic, geological and topographical conditions as set forth above.

The Board of Supervisors of the County of Los Angeles ordains as follows:

SECTION 1. New Section 913 is added to Title 28 of the Los Angeles County Code to read:

SEC. - ULTRA LOW FLUSH WATER CLOSETS AND URINALS

All new buildings shall use water closets and associated flushometer valves, if any, which use no more than 1.6 gallons per flush, and urinals and associated flushometer valves, if any, which use no more than one gallon per flush. These fixtures shall meet the performance requirements established by the appropriate nationally recognized standards as approved by the Chief Plumbing Inspector.

SECTION 2. This ordinance shall be published in

\_\_\_\_\_

a newspaper printed and published in the County of Los Angeles.

\_\_\_\_\_  
Chairman

ATTEST:

\_\_\_\_\_  
Executive Officer  
Board of Supervisors  
of the County of Los Angeles

I hereby certify that at its meeting of \_\_\_\_\_,  
the foregoing ordinance was adopted by the Board of Supervisors of  
said County of Los Angeles by the following vote, to wit:

Ayes:

Noes:

Supervisors \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

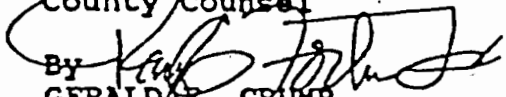
Supervisors \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
Executive Officer  
Board of Supervisors  
of the County of Los Angeles

Effective Date: \_\_\_\_\_

APPROVED AS TO FORM:

DE WITT W. CLINTON  
County Counsel

By   
GERALD P. CRUMP  
Chief Assistant County Counsel

WP/P91

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## APPENDIX D

**CALIFORNIA URBAN WATER CONSERVATION COUNCIL BEST  
MANAGEMENT PRACTICES – DISTRICT 40 ANNUAL REPORT FOR FISCAL  
YEAR 2000**

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## BMP 01: Water Survey Programs for Single-Family and Multi-Family Residential Customers

**Reporting Unit:**  
**Los Angeles County Waterworks**  
**District 40 - Antelope Valley**

**Submitted to**  
**CUWCC**  
**12/27/2000**

**Year:**  
**2000**

### A. Implementation

- |  |            |
|--|------------|
| 1. Based on your signed MOU date, 04/11/1996, your Agency STRATEGY DUE DATE is:  | 07/01/1998 |
| 2. Has your agency developed and implemented a targeting/marketing strategy for SINGLE-FAMILY residential water use surveys? | no         |
| a. If YES, when was it implemented?  |            |
| 3. Has your agency developed and implemented a targeting/marketing strategy for MULTI-FAMILY residential water use surveys?  | no         |
| a. If YES, when was it implemented?  |            |

### B. Water Survey Data

Survey Counts:	Single Family Accounts	Multi-Family Units
1. Number of surveys offered:	0	0
2. Number of surveys completed:	0	0
<b>Indoor Survey:</b>		
3. Check for leaks, including toilets, faucets and meter checks	no	no
4. Check showerhead flow rates, aerator flow rates, and offer to replace or recommend replacement, if necessary	no	no
5. Check toilet flow rates and offer to install or recommend installation of displacement device or direct customer to ULFT replacement program, as necessary; replace leaking toilet flapper, as necessary	no	no
<b>Outdoor Survey:</b>		
6. Check irrigation system and timers	no	no
7. Review or develop customer irrigation schedule	no	no
8. Measure landscaped area (Recommended but not required for surveys)	no	no
9. Measure total irrigable area (Recommended but not required for surveys)	no	no
10. Which measurement method is typically used (Recommended but not required for surveys)		Other
11. Were customers provided with information packets that included evaluation results and water savings recommendations?	no	no
12. Have the number of surveys offered and completed, survey results, and survey costs	no	no

been tracked?

a. If yes, in what form are surveys tracked?

None

### C. Water Survey Program Expenditures

	This Year	Next Year
1. Budgeted Expenditures	0	0
2. Actual Expenditures	0	

### D. "At Least As Effective As"

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP? No

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**BMP 02: Residential Plumbing Retrofit**

<b>Reporting Unit:</b> Los Angeles County Waterworks District 40 - Antelope Valley	<b>Submitted to</b> CUWCC 12/27/2000	<b>Year:</b> 2000
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**A. Implementation**

- 1. Is there an enforceable ordinance in effect in your service area requiring replacement of high-flow showerheads and other water use fixtures with their low-flow counterparts? no
- 2. Has your agency satisfied the 75% saturation requirement for single-family housing units? no
- 3. Estimated percent of single-family households with low-flow showerheads: %
- 4. Has your agency satisfied the 75% saturation requirement for multi-family housing units? no
- 5. Estimated percent of multi-family households with low-flow showerheads: %

**B. Low-Flow Device Distribution Information**

- 1. Has your agency developed a targeting/ marketing strategy for distributing low-flow devices? no
  - a. If YES, when did your agency begin implementing this strategy?

Low-Flow Devices Distributed/ Installed	SF Accounts	MF Units
2. Number of low-flow showerheads distributed:	0	0
3. Number of toilet-displacement devices distributed:	0	0
4. Number of toilet flappers distributed:	0	0
5. Number of faucet aerators distributed:	0	0
6. Does your agency track the distribution and cost of low-flow devices?		no
a. If YES, in what format are low-flow devices tracked?		

**C. Low-Flow Device Distribution Expenditures**

	This Year	Next Year
1. Budgeted Expenditures	0	0
2. Actual Expenditures	0	

**D. "At Least As Effective As"**

- 1. Is your AGENCY implementing an "at least as effective as" variant of this BMP? yes

## **BMP 2 RESPONSE**

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### **Section D:**

The County passed Ordinance No. 91-0097U to require all new building to use Ultra Low Flow toilets and urinals.

**BMP 03: System Water Audits, Leak Detection and Repair**

Reporting Unit:  
**Los Angeles County**  
**Waterworks District**  
**40 - Antelope Valley**

Submitted to  
**CUWCC**  
 12/27/2000

Year:  
**2000**

**A. Implementation**

- 1. Has your agency completed a pre-screening system audit for this reporting year? no
- 2. If YES, enter the values (AF/Year) used to calculate verifiable use as a percent of total production:
  - a. Determine metered sales (AF)
  - b. Determine other system verifiable uses (AF)
  - c. Determine total supply into the system (AF)
  - d. Using the numbers above, if (Metered Sales + Other Verifiable Uses) / Total Supply is < 0.9 then a full-scale system audit is required. 0.00
- 3. Does your agency keep necessary data on file to verify the values used to calculate verifiable uses as a percent of total production? no
- 4. Did your agency complete a full-scale audit during this report year? [Field Tag: The field "awwa\_audit\_required\_yn" could not be found]
- 5. Does your agency maintain in-house records of audit results or the completed AWWA audit worksheets for the completed audit? no
- 6. Does your agency operate a system leak detection program? yes

**B. Survey Data**

- 1. Total number of miles of distribution system line. 800
- 2. Number of miles of distribution system line surveyed. 0

**C. System Audit / Leak Detection Program Expenditures**

	This Year	Next Year
1. Budgeted Expenditures	0	0
2. Actual Expenditures	0	

**D. "At Least As Effective As"**

- 1. Is your AGENCY implementing an "at least as effective as" variant of this BMP? yes

## **BMP 3 RESPONSE**

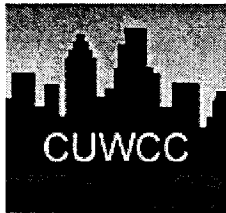
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### **Section A. 6:**

The County Waterworks Districts maintain leak records and as street improvement projects are submitted for review old deteriorated water main are replaced. Our field personnel also report high leak incidents on mains and replacement of deteriorated mains are promptly made. Waterworks meter reading employees are also on the lookout for leaks. These leaks are reported and our maintenance crews make the necessary repairs.

### **Section D 1:**

The water audit program in place within the County compares the supply purchased versus the water used in order to determine the water loss.



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**Memorandum of Understanding**

<b>BMP 04: Metering with Commodity Rates for all New Connections and Retrofit of Existing</b>		
Reporting Unit: <b>Los Angeles County Waterworks District 40 - Antelope Valley</b>	Submitted to CUWCC 12/27/2000	Year: <b>2000</b>
<b>A. Implementation</b>		
	1. Does your agency require meters for all new connections and bill by volume-of-use?	Yes <input checked="" type="radio"/> No <input type="radio"/>
❖	2. Does your agency have a program for retrofitting existing unmetered connections and bill by volume-of-use?	Yes <input type="radio"/> No <input checked="" type="radio"/>
	a. If YES, when was the plan to retrofit and bill by volume-of-use existing unmetered connections completed? (Year must be four digit mm/dd/yyyy)	<input style="width: 100%;" type="text"/>
	b. Describe the program: <div style="border: 1px solid black; height: 40px; width: 100%;"></div>	
❖	3. Number of previously unmetered accounts fitted with meters during report year:	<input style="width: 50%;" type="text" value="0"/>
<b>B. Feasibility Study</b>		
❖	1. Has your agency conducted a feasibility study to assess the merits of a program to provide incentives to switch mixed-use accounts to dedicated landscape meters?	Yes <input type="radio"/> No <input checked="" type="radio"/>
	a. If YES, when was the feasibility study conducted? (mm/dd/yy)	<input style="width: 100%;" type="text"/>
	b. Describe the feasibility study: <div style="border: 1px solid black; height: 40px; width: 100%;"></div>	
❖	2. Number of CII accounts with mixed-use meters:	<input style="width: 50%;" type="text" value="0"/>
❖	3. Number of CII accounts with mixed-use meters retrofitted with dedicated irrigation meters during reporting period	<input style="width: 50%;" type="text" value="0"/>
<b>C. Meter Retrofit Program Expenditures</b>		
		<b>This Year</b>
		<b>Next Year</b>
❖	1. Budgeted Expenditures	<input style="width: 50%;" type="text" value="0"/>
❖	2. Actual Expenditures	<input style="width: 50%;" type="text" value="0"/>

<b>D. "At Least As Effective As"</b>			
◆	<table border="1" style="width: 100%;"> <tr> <td style="width: 70%;">1. Is your AGENCY implementing an "at least as effective as" variant of this BMP?</td> <td style="width: 30%; text-align: right;">                 Yes <input type="radio"/>                  No <input checked="" type="radio"/> </td> </tr> </table>	1. Is your AGENCY implementing an "at least as effective as" variant of this BMP?	Yes <input type="radio"/> No <input checked="" type="radio"/>
1. Is your AGENCY implementing an "at least as effective as" variant of this BMP?	Yes <input type="radio"/> No <input checked="" type="radio"/>		
	<p>a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."</p> <div style="border: 1px solid black; height: 40px; width: 100%;"></div>		
<b>E. Comments</b>			
	<div style="border: 1px solid black; height: 40px; width: 100%;"></div>		

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**BMP 05: Large Landscape Conservation Programs and Incentives**

Reporting Unit:

**Los Angeles County  
Waterworks District 40 -  
Antelope Valley**

Submitted to CUWCC  
12/27/2000

Year:  
2000

**A. Water Use Budgets**

- 1. Number of Dedicated Irrigation Meter Accounts: 530
- 2. Number of Dedicated Irrigation Meter Accounts with Water Budgets: 0
- 3. Budgeted Use for Irrigation Meter Accounts with Water Budgets (AF): 0
- 4. Actual Use for Irrigation Meter Accounts with Water Budgets (AF): 0
- 5. Does your agency provide water use notices to accounts with budgets each billing cycle? no

**B. Landscape Surveys**

- 1. Has your agency developed a marketing / targeting strategy for landscape surveys? no
  - a. If YES, when did your agency begin implementing this strategy?
- 2. Number of Surveys Offered. 0
- 3. Number of Surveys Completed. 0
- 4. Indicate which of the following Landscape Elements are part of your survey:
  - a. Irrigation System Check no
  - b. Distribution Uniformity Analysis no
  - c. Review / Develop Irrigation Schedules no
  - d. Measure Landscape Area no
  - e. Measure Total Irrigable Area no
  - f. Provide Customer Report / Information no
- 5. Do you track survey offers and results? no
- 6. Does your agency provide follow-up surveys for previously completed surveys? no

**C. Other BMP 5 Actions**

- 1. An agency can provide mixed-use accounts with ETo-based landscape budgets in lieu of a large landscape survey program. Does your agency provide mixed-use accounts with landscape budgets? no
- 2. Number of CII mixed-use accounts with landscape budgets. 0
- 3. Do you offer landscape irrigation training? no
- 4. Does your agency offer financial incentives to improve landscape water use efficiency? no

Type of Financial Incentive:	Budget (Dollars/Year)	Number Awarded to Customers	Total Amount Awarded

a. Rebates	0	0	0
b. Loans	0	0	0
c. Grants	0	0	0

- 5. Do you provide landscape water use efficiency information to new customers and customers changing services? No
- 6. Do you have irrigated landscaping at your facilities? no
  - a. If yes, is it water-efficient? no
  - b. If yes, does it have dedicated irrigation metering? no
- 7. Do you provide customer notices at the start of the irrigation season? no
- 8. Do you provide customer notices at the end of the irrigation season? no

**D. Landscape Conservation Program Expenditures**

	This Year	Next Year
1. Budgeted Expenditures	0	0
2. Actual Expenditures	0	

**E. "At Least As Effective As"**

- 1. Is your AGENCY implementing an "at least as effective as" variant of this BMP? No



## BMP 06: High-Efficiency Washing Machine Rebate Programs

Reporting Unit:  
 Los Angeles County Waterworks  
 District 40 - Antelope Valley

Submitted to  
 CUWCC  
 12/27/2000

Year:  
 2000

### A. Implementation

- |   |    |
|---|----|
| 1. Do any energy service providers or waste water utilities in your service area offer rebates for high-efficiency washers? | no |
| 2. Does your agency offer rebates for high-efficiency washers?  | no |
| 3. What is the level of the rebate?   | 0  |
| 4. Number of rebates awarded.   | 0  |

### B. Rebate Program Expenditures

	This Year	Next Year
1. Budgeted Expenditures	0	0
2. Actual Expenditures	0	

### C. "At Least As Effective As"

- |   |    |
|---|----|
| 1. Is your AGENCY implementing an "at least as effective as" variant of this BMP? | no |
|---|----|

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## BMP 07: Public Information Programs

Reporting Unit: <b>Los Angeles County Waterworks District 40 - Antelope Valley</b>	Submitted to <b>CUWCC 12/27/2000</b>	Year: <b>2000</b>
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### A. Implementation

1. Does your agency maintain an active public information program to promote and educate customers about water conservation? yes

2. Indicate which and how many of the following activities are included in your public information program.

Public Information Program Activity	Yes/No	Number of Events
a. Paid Advertising	no	
b. Public Service Announcement	no	
c. Bill Inserts / Newsletters / Brochures	yes	1
d. Bill showing water usage in comparison to previous year's usage	yes	
e. Demonstration Gardens	no	
f. Special Events, Media Events	yes	1
g. Speaker's Bureau	no	
h. Program to coordinate with other government agencies, industry and public interest groups and media	no	

### B. Conservation Information Program Expenditures

	This Year	Next Year
1. Budgeted Expenditures	0	0
2. Actual Expenditures	0	

### C. "At Least As Effective As"

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP? No

## **BMP 7 RESPONSE**

---

### **Section A. 1:**

The County has provided bill inserts and water usage comparisons to its customers. The County also, has called upon the public for how and when to implement water shortage reduction phases. During the month of May the County sets up a booth in the Los Angeles County Fair to promote water conservation.

## BMP 08: School Education Programs

Reporting Unit:

Los Angeles County  
Waterworks District 40 -  
Antelope Valley

Submitted to CUWCC  
12/27/2000

Year:  
2000

### A. Implementation

1. Has your agency implemented a school information program to promote water conservation? yes

2. Please provide information on your school programs (by grade level):

Grade	Are grade-appropriate materials distributed?	No. of class presentations	No. of students reached	No. of teachers' workshops
Grades K-3rd	no	0	0	0
Grades 4th-6th	no	0	0	0
Grades 7th-8th	no	0	0	0
High School	no	0	0	0

3. Did your Agency's materials meet state education framework requirements? yes

4. When did your Agency begin implementing this program? 04/20/1999

### B. School Education Program Expenditures

	This Year	Next Year
1. Budgeted Expenditures	0	0
2. Actual Expenditures	0	

### C. "At Least As Effective As"

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP? No

## BMP 09: Conservation Programs for CII Accounts

Reporting Unit:

**Los Angeles County  
Waterworks District 40 -  
Antelope Valley**

Submitted to CUWCC  
12/27/2000

Year:  
2000

### A. Implementation

1. Has your agency identified and ranked COMMERCIAL customers according to use? no
2. Has your agency identified and ranked INDUSTRIAL customers according to use? no
3. Has your agency identified and ranked INSTITUTIONAL customers according to use? no

### Option A: CII Water Use Survey and Customer Incentives Program

4. Is your agency operating a CII water use survey and customer incentives program for the purpose of complying with BMP 9 under this option? yes

CII Surveys	Commercial Accounts	Industrial Accounts	Institutional Accounts
a. Number of New Surveys Offered	0	0	0
b. Number of New Surveys Completed	0	0	0
c. Number of Site Follow-ups of Previous Surveys (within 1 yr)	0	0	0
d. Number of Phone Follow-ups of Previous Surveys (within 1 yr)	0	0	0
CII Survey Components	Commercial Accounts	Industrial Accounts	Institutional Accounts
e. Site Visit	no	no	no
f. Evaluation of all water-using apparatus and processes	no	no	no
g. Customer report identifying recommended efficiency measures, paybacks and agency incentives	no	no	no
Agency CII Customer Incentives	Budget (\$/Year)	No. Awarded to Customers	Total \$ Amount Awarded
h. Rebates	0	0	0
i. Loans	0	0	0
j. Grants	0	0	0
k. Others	0	0	0

---



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### Option B: CII Conservation Program Targets

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- |   |    |
|---|----|
| 5. Does your agency track CII program interventions and water savings for the purpose of complying with BMP 9 under this option?    | no |
| 6. Does your agency document and maintain records on how savings were realized and the method of calculation for estimated savings? | no |
| 7. Estimated annual savings (AF/yr) from site-verified actions taken by agency since 1991.  | 0  |
| 8. Estimated annual savings (AF/yr) from non-site-verified actions taken by agency since 1991.                                      | 0  |

### B. Conservation Program Expenditures for CII Accounts

	This Year	Next Year
1. Budgeted Expenditures	0	0
2. Actual Expenditures	0	

### C. "At Least As Effective As"

- |   |    |
|---|----|
| 1. Is your AGENCY implementing an "at least as effective as" variant of this BMP? | No |
|---|----|

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**Memorandum of Understanding**

### BMP 09a: CII ULFT Water Savings

Reporting Unit:	BMP Form Status: <b>0% Complete</b>	Year: <b>2000</b>
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<input checked="" type="checkbox"/> 1. Did your agency implement a CII ULFT replacement program in the reporting year? If No, please explain why on Line B. 10.	Yes <input type="radio"/> No <input type="radio"/>
---	---

#### A. Targeting and Marketing

<input checked="" type="checkbox"/> 1. What basis does your agency use to target customers for participation in this program? Check all that apply.	Consumption ranking <input type="checkbox"/> Service area zones <input type="checkbox"/> Potential savings <input type="checkbox"/> Oldest meter <input type="checkbox"/> CII Sector or subsector <input type="checkbox"/> CII ULFT Study subsector targeting <input type="checkbox"/>
---	---

	a. Describe which method you found to be the most effective overall, and which was the most effective per dollar expended.
	<div style="border: 1px solid black; width: 100%; height: 100%;"></div>

<input checked="" type="checkbox"/> 2. How does your agency advertise this program? Check all that apply.	Direct letter <input type="checkbox"/> Bill insert <input type="checkbox"/> Bill message <input type="checkbox"/> Newsletter <input type="checkbox"/> Telephone <input type="checkbox"/> Web page <input type="checkbox"/> TV PSAs <input type="checkbox"/> TV paid announcements <input type="checkbox"/> Radio PSAs <input type="checkbox"/> Radio paid announcements <input type="checkbox"/> Newspapers <input type="checkbox"/> Trade publications <input type="checkbox"/> Other print media <input type="checkbox"/> Trade shows and events <input type="checkbox"/> Telemarketing <input type="checkbox"/>
---	--

	a. Describe which method you found to be the most effective overall, and which was the most effective per dollar expended.
--	--

--	--

**B. Implementation**

◆	1. Does your agency keep and maintain customer participant information? (Read the Help information for a complete list of all the information for this BMP.)	Yes <input type="radio"/>	No <input type="radio"/>
◆	2. Would your agency be willing to share this information if the CUWCC did a study to evaluate the program on behalf of your agency?	Yes <input type="radio"/>	No <input type="radio"/>
◆	3. What is the total number of customer accounts participating in the program during the last year ?		



◆	CII Subsector	Number of Toilets Replaced			
	4.	Standard Gravity Tank	Air Assisted	Valve Floor Mount	Valve Wall Mount
	a. Offices				
	b. Retail / Wholesale				
	c. Hotels				
	d. Health				
	e. Industrial				
	f. Schools: K to 12				
	g. Eating				
	h. Government				
	i. Churches				
	j. Other				

◆	5. Program design.	Rebate or voucher <input type="checkbox"/> Direct installation <input type="checkbox"/> Direct installation with customer co-payment <input type="checkbox"/> Direct distribution <input type="checkbox"/> Direct distribution with customer co-payment <input type="checkbox"/> Retrofit on resale <input type="checkbox"/> Regulated condition of service <input type="checkbox"/>
---	--------------------	--

◆	6. Does your agency use outside services to implement this	Yes <input type="radio"/>
---	--	---------------------------



program?	No <input type="radio"/>
a. If yes, check all that apply.	Community Based Organization <input type="checkbox"/> Consultant <input type="checkbox"/> Plumbing contractors/subcontracts <input type="checkbox"/>
7. Participant tracking and follow-up.	No follow-up <input type="checkbox"/> Letter <input type="checkbox"/> Telephone <input type="checkbox"/> Site Visit <input type="checkbox"/>
8. Based on your program experience, please rank on a scale of 1 to 5, with 1 being the least frequent cause and 5 being the most frequent cause, the following reasons why customers refused to participate in the program.	
a. Disruption to business	<input type="text"/>
b. Inadequate payback	<input type="text"/>
c. Inadequate ULFT performance	<input type="text"/>
d. Lack of funding	<input type="text"/>
e. American's with Disabilities Act	<input type="text"/>
f. Permitting	<input type="text"/>
g. Other. Please describe in B. 9.	<input type="text"/>
9. Please describe general program acceptance/resistance by customers, obstacles to implementation, and other issues affecting program implementation or effectiveness.	
	<input type="text"/>
10. Please provide a general assessment of the program for this reporting year. Did your program achieve its objectives? Were your targeting and marketing approaches effective? Were program costs in line with expectations and budgeting?	
	<input type="text"/>

<b>C. Conservation Program Expenditures for CII ULFT</b>				
 1. CII ULFT Program: Annual Budget & Expenditure Data				
			Budgeted	Actual Expenditure
		a. Labor	<input type="text"/>	<input type="text"/>
		b. Materials	<input type="text"/>	<input type="text"/>
		c. Marketing & Advertising	<input type="text"/>	<input type="text"/>
		d. Administration & Overhead	<input type="text"/>	<input type="text"/>
		e. Outside Services	<input type="text"/>	<input type="text"/>
		f. Total		
 2. CII ULFT Program: Annual Cost Sharing				
		a. Wholesale agency contribution	<input type="text"/>	<input type="text"/>
		b. State agency contribution	<input type="text"/>	<input type="text"/>
		c. Federal agency contribution	<input type="text"/>	<input type="text"/>
		d. Other contribution	<input type="text"/>	<input type="text"/>
		e. Total		
<b>D. Comments</b>				

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## BMP 11: Conservation Pricing

Reporting Unit: <b>Los Angeles County Waterworks District 40 - Antelope Valley</b>	BMP Form Status: <b>36% Complete</b>	Year: <b>2000</b>
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### A. Implementation

#### Rate Structure Data Volumetric Rates for Water Service by Customer Class

##### 1. Residential

- a. Water Rate Structure Uniform
- b. Sewer Rate Structure
- c. Total Revenue from Volumetric Rates \$
- d. Total Revenue from Non-Volumetric Charges, Fees and other Revenue Sources \$

##### 2. Commercial

- a. Water Rate Structure Uniform
- b. Sewer Rate Structure
- c. Total Revenue from Volumetric Rates \$
- d. Total Revenue from Non-Volumetric Charges, Fees and other Revenue Sources \$

##### 3. Industrial

- a. Water Rate Structure Uniform
- b. Sewer Rate Structure
- c. Total Revenue from Volumetric Rates \$
- d. Total Revenue from Non-Volumetric Charges, Fees and other Revenue Sources \$

##### 4. Institutional / Government

- a. Water Rate Structure Uniform
- b. Sewer Rate Structure
- c. Total Revenue from Volumetric Rates \$
- d. Total Revenue from Non-Volumetric Charges, Fees and other Revenue Sources \$

##### 5. Irrigation

- a. Water Rate Structure Uniform
- b. Sewer Rate Structure
- c. Total Revenue from Volumetric Rates \$

d. Total Revenue from Non-Volumetric Charges, Fees and other Revenue Sources \$

**6. Other**

a. Water Rate Structure Uniform

b. Sewer Rate Structure

c. Total Revenue from Volumetric Rates \$

d. Total Revenue from Non-Volumetric Charges, Fees and other Revenue Sources \$

**B. Conservation Pricing Program Expenditures**

	This Year	Next Year
1. Budgeted Expenditures	0	0
2. Actual Expenditures	0	

**C. "At Least As Effective As"**

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP? No

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**BMP 12: Conservation Coordinator**

Reporting Unit: <b>Los Angeles County Waterworks District 40 - Antelope Valley</b>	Submitted to <b>CUWCC 12/27/2000</b>	Year: <b>2000</b>
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**A. Implementation**

- |   |                               |
|---|-------------------------------|
| 1. Does your Agency have a conservation coordinator?  | no                            |
| 2. Is this a full-time position?  | yes                           |
| 3. If no, is the coordinator supplied by another agency with which you cooperate in a regional conservation program ? | no                            |
| 4. Partner agency's name:   |                               |
| 5. If your agency supplies the conservation coordinator:  |                               |
| a. What percent is this conservation coordinator's position?  | 100%                          |
| b. Coordinator's Name   | Position currently not filled |
| c. Coordinator's Title  | Conservation Coordinator      |
| d. Coordinator's Experience and Number of Years   | Position currently not filled |
| e. Date Coordinator's position was created (mm/dd/yyyy)   | 05/01/1998                    |
| 6. Number of conservation staff, including Conservation Coordinator.  | 1                             |

**B. Conservation Staff Program Expenditures**

	This Year	Next Year
1. Budgeted Expenditures	0	0
2. Actual Expenditures	0	

**C. "At Least As Effective As"**

- |   |     |
|---|-----|
| 1. Is your AGENCY implementing an "at least as effective as" variant of this BMP? | yes |
|---|-----|

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## **BMP 12 RESPONSE**

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### **Section C. 1:**

The County's has a Conservation Coordinator position available, however the position is currently vacated. The County is in the process of hiring a coordinator.

## BMP 13: Water Waste Prohibition

Reporting Unit: <b>Los Angeles County Waterworks District 40 - Antelope Valley</b>	Submitted to <b>CUWCC 12/27/2000</b>	Year: <b>2000</b>
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### A. Requirements for Documenting BMP Implementation

- |   |    |
|---|----|
| 1. Is a water waste prohibition ordinance in effect in your service area? | no |
| 2. Is a copy of the most current ordinance(s) on file with CUWCC?         | no |

### B. Implementation

1. Indicate which of the water uses listed below are prohibited by your agency or service area.
- |  |     |
|--|-----|
| a. Gutter flooding   | no  |
| b. Single-pass cooling systems for new connections                   | no  |
| c. Non-recirculating systems in all new conveyor or car wash systems | no  |
| d. Non-recirculating systems in all new commercial laundry systems   | no  |
| e. Non-recirculating systems in all new decorative fountains         | no  |
| f. Other, please name<br>See Question 2                              | yes |

#### Water Softeners:

3. Indicate which of the following measures your agency has supported in developing state law:
- |  |    |
|--|----|
| a. Allow the sale of more efficient, demand-initiated regenerating DIR models.   | no |
| b. Develop minimum appliance efficiency standards that:  |    |
| i.) Increase the regeneration efficiency standard to at least 3,350 grains of hardness removed per pound of common salt used.  | no |
| ii.) Implement an identified maximum number of gallons discharged per gallon of soft water produced.   | no |
| c. Allow local agencies, including municipalities and special districts, to set more stringent standards and/or to ban on-site regeneration of water softeners if it is demonstrated and found by the agency governing board that there is an adverse effect on the reclaimed water or groundwater supply. | no |
| 4. Does your agency include water softener checks in home water audit programs?  | no |
| 5. Does your agency include information about DIR and exchange-type water softeners in educational efforts to encourage replacement of less efficient timer models?  | no |

### C. Water Waste Prohibition Program Expenditures

	This Year	Next Year
1. Budgeted Expenditures	0	0

2. Actual Expenditures

0

**D. "At Least As Effective As"**

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP?

no

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## **BMP 13 RESPONSE**

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### **Section A. 1:**

On March 21, 1991, the County Board of Supervisors adopted Ordinance No. 91-0046U that called for "No Water Wasting" in only unincorporated areas of the County. They include the following measures:

- Washing down paved surfaces is prohibited unless required for health or safety
- Landscape watering is prohibited between 10:00 a.m. and 5:00 p.m.
- Excessive landscape watering that results in runoff into adjoining streets, parking lots or alleys is prohibited
- Plumbing leaks must be repaired as soon as practical
- Washing of vehicles is prohibited excepted at a commercial carwash or with a hand-held bucket or hose equipped with an automatic shutoff nozzle
- Serving drinking water at public eating places is prohibited unless requested by customers
- Water used in decorative fountains must flow through a recycling system

Failure to comply with these measures could have resulted in fines up to \$500. However, this Ordinance was active from March 1991 to January 1993. Currently, there is no water wasting ordinance in effect in the District.



## **BMP 14 RESPONSE**

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### **Section C.1:**

In 1991, the County Board of Supervisors adopted Ordinance No. 91-0097U, which required the installation of ultra low flush toilets and urinals in all new buildings within the service area of District 40.

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Department of Public Works  
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LOS ANGELES COUNTY WATERWORKS DISTRICTS

Department of Public Works

P.O. Box 1460

Alhambra, CA 91802-1460

A handwritten signature in black ink, appearing to be a stylized name, possibly "D. [unclear]".