

LAKESIDE WATER DISTRICT

URBAN WATER MANAGEMENT PLAN

December 2006

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Appendices

A	Urban Water Management Planning Act
B	DWR Check List
C	Board Resolution
D	Public Hearing Notice
E	Water Conservation Plan

Abbreviations

AF	Acre feet
AFY	Acre feet per year
BMP	Best Management Practice
Caltrans	California Department of Transportation
CUWCC	California Urban Water Conservation Council
CIMIS	California Irrigation Management Information Systems
CIP	Capital Improvement Plan
DWR	California Department of Water Resources
ESA	Eastern Service Area
ESP	Emergency Storage Project
FCF	Flow Control Facility
GIS	Geographic Information System
gpd	Gallons per day
gpm	Gallons per minute
IFP	Integrated Facilities Plan
IICP	Incremental Interruption and Conservation Program
Lakeside	Lakeside Water District
MAF	Million of acre-feet
MAFY	Million of acre-feet per year
MG	Million gallons
MGD	Million gallons per day
MGRA	Major Geographical Regional Area
MOU	Memorandum of Understanding
MWD	Metropolitan Water District of Southern California
NA	Not Applicable
PL4	Second Aqueduct Pipeline 4
psi	Pounds per square inch
Riverview	Riverview Water District
ROW	Right-of-Way
SANDAG	San Diego Association of Governments
SANGIS	San Diego Geographic Information System
SDCWA	San Diego County Water Authority
SPA	Specific Plan Area
ULFT	Ultra-Low-Flush Toilet
WD	Water District
WRF	Water Recycling Facility
WRO	Water Reclamation Ordinance
WSA	Western Service Area
WTP	Water Treatment Plant

Terms

Act	Urban Water Management Planning Act of 1983, including amendments
Board	Lakeside Water District's Board of Directors
Contingency Plan	Water Shortage Contingency Plan
County	County of San Diego
District	Lakeside Water District
Master Plan	Water Reclamation Master Plan
Plan	Urban Water Management Plan

1. Introduction

1.1 California Urban Water Management Planning Act

The California Urban Water Management Planning Act of 1983 (Act) which comprises sections 10610 through 10657 of the California Water Code, requires all urban water suppliers in the state to prepare and adopt an urban water management plan (Plan) and update it every five years, to assure the efficient use of urban water supplies and their reliability during normal, dry and multiple dry water years. The full text of the Act is contained in **Appendix A**. The Act states,

“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.”

1.2 Lakeside’s 2006 Urban Water Management Plan

This report is the 2006 update of Lakeside’s 2000 Urban Water Management Plan. In accordance with the Act, Lakeside coordinated its planning efforts with the San Diego County Water Authority, its wholesale water supplier, to ensure that supply and demand data and issues are presented accurately. The checklist provided by the California Department of Water Resources was also utilized to assure that the Plan meets all requirements. Lakeside’s completed DWR checklist is included in **Appendix B**.

Prior to adoption, Lakeside provided this Plan to its key stakeholders for review, including the San Diego County Water Authority and the County of San Diego. On January 2, 2007, Lakeside’s Board of Directors held a public hearing and adopted the 2006 Plan. A copy of the resolution adopting the 2006 Plan is in **Appendix C**.

1.3 History of Lakeside Water District

The District was organized as the Lakeside Irrigation District in 1924. Its source of water was ground water and a connection to the Cuyamaca Water Company. The District’s function was primarily as an agricultural water provider. In 1980, the District changed its name to the Lakeside Water District. Lakeside is a single purpose agency providing retail domestic water service. In 2006 Lakeside consolidated with Riverview Water District which was formed in 1916 as Riverview Farms Mutual Water District. In 1954 Riverview Water District became a local Public Agency and the District began to purchase water from the Metropolitan Water District via Padre Dam who was the wholesale distributor and the water supply came from the San Diego County Water Authority and the R. M. Levy Water Treatment and Filtration Plant, owned and operated by Helix Water District.

1.4 Service Area

1.4.1 Geography

Lakeside's service area spans approximately 20 square miles of the unincorporated community of Lakeside, including Eucalyptus Hills, Moreno Valley and Muth Valley, as shown in **Figure 1-1**. . An elevation gain from Lakeside's water connections with SDCWA to its Reservoirs' is only 575 feet but requires 10 pumping stations because it is a hilly area.

1.4.2 Climate

Lakeside's customers enjoy a Mediterranean climate with the average annual high and low temperatures of 78 degrees and 52 degrees. The annual precipitation is approximately 12 inches and over 80% of the precipitation occurs between December and March. Winter temperatures can dip below freezing and summer temperatures can exceed 100 degrees.

1.4.3 Population

Lakeside currently serves 7,055 accounts and a population of about 42,200. Population projections for Lakeside's service area are estimated with little growth because the district area is 90% built out and are presented in **Table 1-1**.

**Table 1-1
Current and Projected Service Area Population**

	2006	2010	2015	2020	2025	2030
Service Area Population	42,200	42,622	43,048	43,478	43,912	44,351

1.5 Physical Water Delivery System

1.5.1 Water System Specifications

Lakeside's water distribution system is a Grade 3 system including 90 miles of water mains, 11 reservoir tanks with a total storage capacity of 12.7 million gallons, and 11 pumping stations.

Lakeside Water District also has two well fields which produce a total of 1500 acft per year or about 27% of Lakeside's usage.

1.5.2 Capital Improvement Program

Lakeside reviews its capital improvement program on an annual basis to provide flexibility and to meet the needs of the district.

2. Water Demands

The District currently supplies approximately 5,400 AFY of potable water to its customers. The potable water supply is currently 73% imported from the SDCWA and 27% produced from local wells.

2.1 Historic and Projected Water Use

2.1.1 Historic Water Use

There was a decline in water use during the early 1990s when water conservation measures were first adopted, followed by a gradual increase for the last 10 years to about 5,400 AFY. There has only been a one percent increase when compared with 5 years ago in spite of a population increases.

2.1.2 Projected Water Use

Table 2-1 provides current and projected water deliveries to the District. Currently, the District's demand is approximately 89 percent single family; 8 percent multifamily; 2 percent commercial, industrial, and institutional; less than 1 percent agriculture; and less than 1 percent other, including construction meters and fire service. The projected demand by land use category for 2025 is expected to be similar.

**Table 2-1
Past, Current, and Projected Water Deliveries**

Year	Water Use Sectors	Single Family	Multi-Family	Comm/Inst	Ag/Rural	Other	System Losses	TOTAL
2000	No. of Accounts	4008	360	90	12	32		4502
	Deliveries (AF/Y)	3491	235	39	11	27	118	3921
2006	No. of Accounts	6280	564	141	19	49		7053
	Deliveries (AF/Y)	4797	323	54	15	38	161	5388
2010	No. of Accounts	6341	570	143	19	50		7123
	Deliveries (AF/Y)	4840	326	54	15	38	163	5436
2015	No. of Accounts	6405	576	144	19	50		7194
	Deliveries (AF/Y)	4882	329	55	15	38	165	5484
2020	No. of Accounts	6468	581	145	20	51		7265
	Deliveries (AF/Y)	4925	332	55	15	39	166	5532
2025	No. of Accounts	6532	587	147	20	51		7337
	Deliveries (AF/Y)	4969	335	56	15	39	167	5581
2030	No. of Accounts	6597	593	148	20	52		7410
	Deliveries (AF/Y)	5013	338	56	15	39	169	5630

Note 2000 was Lakeside District only. 2006 is combined with Riverview with 2177 meters and 10,500 population.

3. Water Demand Management

Currently the potable water supply is 73% imported from the SDCWA and 27% produced from local wells to reduce demand on SDCWA. The District has increase well production from 15% to 27% in the last five years.

3.1 Description

Demand management, better known as water conservation, comprises a number of methods to reduce the demand for water in San Diego County. The water saved through conservation can be used to offset the demand on other water sources, which is why water conservation is a critical part of the long term strategy of the San Diego County Water Authority to provide a diversified and reliable water supply for San Diego County’s future population and economy.

3.2 Best Management Practices

In 1991, during the fourth year of a severe drought in Southern California, a Memorandum of Understanding Regarding Urban Water Conservation in California (MOU) formed the California Urban Water Conservation Council (CUWCC) and water conservation Best Management Practices (BMPs) intended to reduce long-term urban water demand statewide. These BMPs are listed in Table 3-1 as follows:

Table 3-1
BMPs for Urban Water Conservation in California

BMP #	Description
1	Residential Surveys
2	Residential Planning Retrofit
3	Distribution System Water Audits
4	Metering with Commodity Rates
5	Large Landscape Program and Incentives
6	High-Efficiency Clothes Washer Rebates
7	Public Information Programs
8	School Education Programs
9	Commercial, Industrial & Institutional Water Conservation
10	Wholesale Agency Assistance Programs
11	Conservation Pricing
12	Water Conservation Coordinator
13	Water Waste Prohibition
14	Residential Ultra Low-Flush Toilet Replacement Program

**Table 3-2
Water Conservation Programs**

Residential Programs	Commercial Programs	Educational Programs
Public Information <ul style="list-style-type: none"> • Customer newsletter • Website and brochures • Newspaper column • Newspaper advertising • Speakers bureau 	Public Information <ul style="list-style-type: none"> • Customer newsletter • Website and brochures • Newspaper column • Newspaper advertising • Speakers bureau 	SDCWA Classroom Presentations/Activities Water Conservation Poster Contest and Activities in Lakeside and MWD.
Conservation Pricing	Conservation Pricing	
Voucher Programs <ul style="list-style-type: none"> • ULFTs • HEWs • Residential surveys 	Water Conservation Garden <ul style="list-style-type: none"> • Sponsorship • Promotion 	Water Conservation Garden tours
Water Conservation Garden <ul style="list-style-type: none"> • Sponsorship • Promotion 		

3.3 Effectiveness of Conservation Measures

The District is committed to promoting water conservation among its customers to reduce the consumption of potable water. For the past 10 years the District’s water consumption has remained steady while the population within the District’s service area has grown substantially.

4. Water Supply

4.1 Water Sources

The District purchases 73% to 80% of its water supply from SDCWA, which buys it from MWD. MWD, in turn, imports water through the Colorado River Aqueduct and facilities of the State Water Project (SWP). SDCWA imports 90 percent of the water used by county residents; the remaining 10 percent is from local sources, such as water recycling and local runoff. Critical issues in water resources planning, such as the County's rapidly growing population, limited storage capacity, water transmission facilities, uncertainties over water imported from northern California, and the loss of water imported from the Colorado River, are requiring SDCWA to develop long-range plans for meeting future water demands.

The District produces 20% to 27% of its water supply from local wells. One well field has three wells with a package treatment plant for iron and manganese that produced 1204 acft in fiscal year 2005-2006. The other well field has four wells with an aeration treatment plant to remove MTBE, a gasoline additive, which produced another 220 acft fiscal year 2005-2006.

4.1.1 Imported Water Connections

The District currently imports potable water through SDCWA via five connections to Padre Dam's wholesale system. There is three meters on Woodside Avenue, two are 6" and one is 10". There is two 6" with one on Julian and Poteet Lane and the other on El Monte Road. There is also one 6" emergency connection with Helix Water District on Melrose Street.

In the next 18 months Lakeside will construct a new 12" metered connection via Helix Water District's 54" line at Channel Road with a 10.2 mgd maximum through an agreement with SDCWA. All other connections will be converted to emergency connections only. The Helix WD treats raw water, stored at Lake Jennings, at its Levy WTP, which is located just to the east of the District's boundary.

4.1.2 Groundwater

The District produces 27% of its water supply from local wells and proactively meets all groundwater management standards.

One well field on Vine Street has three wells with a package treatment plant for iron and manganese that produced 1204 acft in fiscal year 2005-2006. This is twice of the production from five years previous to reduce the demand on SDCWA and to improve reliability of service for Lakeside customers.

The other well field off of Highway 67 between Wintergardens Blvd. and Riverford Ave. has four wells with an aeration treatment plant to remove MTBE, a gasoline additive, which produced another 220 acft fiscal year 2005-2006. This well field's production is considerably lower when compared to the other well field but is being utilized to reduce demand on SDCWA and to help reduce expensive imported water costs.

4. Water Supply

Groundwater Basins

Two primary aquifers exist within the District's service area. The first and most important of these aquifers is the Santee-El Monte Alluvial Aquifer. Underlying the Santee-El Monte aquifer is an aquifer comprised of fractured sedimentary, metamorphic and igneous rock. The availability of groundwater within this fractured rock aquifer is limited, and well yields are typically low (on the order of several gallons per minute). Because of low storage and well yield characteristics, this underlying fractured rock aquifer offers little potential for developing municipal water supplies.

The Santee-El Monte aquifer is comprised of loose alluvial sediments that extend along the San Diego River and major tributaries. The Santee-El Monte Alluvial Aquifer provides significant groundwater storage capacity, and has excellent recharge characteristics. Well yields within the Santee-El Monte Alluvial Aquifer are good (typically on the order of hundreds of gallons per minute). The Santee-El Monte alluvial groundwater aquifer covers an area of approximately 4,600 acres. The aquifer stretches approximately 11 miles along the San Diego River from the eastern portion of the community of Lakeside to the western portions of the City of Santee.

The Santee-El Monte Basin consists of three distinct subbasins. The Santee Subbasin comprises the western half of the basin, and extends along the broad San Diego River flood plain downstream from the intersection of San Vicente Creek and the San Diego River. The Moreno Valley subbasin extends downstream from San Vicente Reservoir to the San Diego River. The El Monte Subbasin comprises the eastern portion of the Santee-El Monte Basin. The El Monte Subbasin is situated in the relatively narrow river valley along the San Diego River upstream from the river's confluence with San Vicente Creek.

Hydrogeology and Water Use

Table 4-1 summarizes hydrogeologic parameters for the three subbasins that comprise the Santee-El Monte Alluvial Aquifer. As shown in the table, hydrogeologic conditions vary widely within the three subbasins. In general, however, groundwater storage coefficients, hydraulic conductivities, and well yields are higher in the upstream reaches of the basin.

Past studies have reported a wide range of estimates for the groundwater storage capacity of the overall basin. (These estimates range from approximately 50,000 acre-feet (AF) to 100,000 AF.) The best available information, however, indicates that overall combined storage in the three subbasins of the Santee-El Monte Alluvial Aquifer is on the order of 70,000 AF. Hydraulic conductivity values in the subbasins (as reported in past studies) range from approximately 25 feet per day to 125 feet per day.

4. Water Supply

Table 4-1
Summary of Hydrogeologic Characteristics
Santee-El Monte Alluvial Aquifer

Parameter	Santee Subbasin	Moreno Subbasin	El Monte Subbasin
Principal Surface Watercourse	San Diego River	San Vicente Creek	San Diego River
Location	Santee	Moreno Valley	Lakeside
Basin Length ¹	6 miles	2 miles	5 miles
Average Basin Width ¹	4,500 feet	2,000 feet	2,500 feet
Basin Elevation ¹	300 - 400 feet MSL ²	400-500 ft MSL ²	400 - 800 ft MSL ²
Primary Aquifer Type ³	Unconfined alluvium	Unconfined alluvium	Unconfined alluvium
Aquifer Composition ³	Medium to coarse grained sand, and gravel	Medium to coarse grained sand and gravel	Medium to coarse grained sand and gravel
TDS ⁴	800-2500 mg/L	500 - 800 mg/L	300 - 800 mg/L
Hydraulic Conductivity ⁴	25 - 100 ft/day 50 ft/day average	25-125 ft/day 75 ft/day average	50-125 ft/day 100 ft/day average
Specific Yield ⁴	5 percent-20 percent range 13 percent average	5 percent-22 percent range 13 percent average	10 percent-22 percent range 15 percent average
Average Basin Hydraulic Gradient ¹	0.003 ft/ft	0.009 ft/ft	0.015 ft/ft
Estimated Basin Storage ⁴	30,000-50,000 AF	5,000-8,000 AF	20,000-30,000 AF
Aquifer Thickness ⁴	200 feet maximum 100 feet average	150 feet maximum 100 feet average	200 feet maximum 100 feet average
Current Estimated Pumping ⁴	400 AFY ⁵	200 AFY ⁵	4,000 AFY ⁵
Approximate Well Pumping Capacity ^{4,6}	200 - 1000 gpm	200 - 1000 gpm	800 - 1600 gpm
Areas of Greatest Surface Infiltration ⁴	Along the San Diego river channel	Upper reaches of basin; along San Vicente Creek channel	Along San Diego River channel

1 Measured or estimated from USGS topographic maps for the El Cajon, San Vicente, and Alpine quads.

2 Elevations listed in feet above mean sea level (MSL).

3 From USGS (1985) and NBS/Lowry (1995).

4 Estimate based on information presented in State of California Department of Water Resources (1984), USGS (1985), SDCWA (1987), Luke-Dudek (1987), Clean Water Program for Greater San Diego (1990), NBS/Lowry (1995), and Welch & SDCWA (1997). In general, storage coefficients and hydraulic conductivity are higher in the upstream (El Monte and San Vicente) subbasins. Highest well yields occur in the El Monte Subbasin.

5 Estimate based on well surveys conducted by Clean Water Program for Greater San Diego (1990) and NBS/Lowry (1995).

6 Based on large-diameter irrigation wells. Maximum pumping rates from small diameter private domestic wells within the subbasins may be on the order of 100 (gallons per minute) gpm or less. (See NBS/Lowry (1995).

4. Water Supply

Streamflow infiltration comprises the dominant source of recharge within the Santee-El Monte Basin. Much of this streamflow infiltration recharge is believed to occur in the El Monte Subbasin. Because of limited groundwater pumping within the Moreno and Santee Subbasins, these subbasins typically remain filled or nearly filled with groundwater. Thus, while the potential for significant streamflow infiltration exists within the Moreno and Santee Subbasins, streamflow infiltration is typically limited by a lack of available groundwater basin capacity.

Infiltration from agricultural and urban surface runoff also is a key component of groundwater recharge within the overall Santee-El Monte Alluvial Aquifer. Infiltrating applied waters, infiltrating precipitation, septic tank discharges, and subsurface inflow also contribute to groundwater recharge within the Santee-El Monte Alluvial Aquifer.

The Clean Water Program for Greater San Diego (1990) and NBS/Lowry (1995) conducted detailed well surveys of the Santee-El Monte Basin. These surveys show that groundwater use within the Santee Subbasin has decreased substantially within the past several decades (probably due to water quality limitations). While more than 20 historic wells existed within the Santee Subbasin, only a few wells remain active. Current groundwater use within the Santee Subbasin is on the order of several hundred acre-feet per year. The surveys report that many wells (over 20) are still active within the Moreno subbasin. Total existing groundwater use within the Moreno subbasin was estimated to be on the order of approximately 200 AFY.

A significant majority of the overall groundwater use within the Santee-El Monte Basin, however, occurs within the El Monte Subbasin. A total of more than 50 active irrigation and domestic wells exist within this basin. Total pumping within the El Monte Basin is estimated at approximately 4,000 AFY (NBS/Lowry, 1995). Groundwater users include private landowners and public entities. The Riverview Water District operates wells that derive approximately 350 AFY of potable supply from the El Monte Subbasin, while the Lakeside Water District develops approximately 1,000 AFY of supply from the basin (Welch & SDCWA, 1997).

Basin Water Balance

Streamflow infiltration represents a key source of recharge to the Santee-El Monte Alluvial Aquifer. Infiltrating storm and urban runoff, percolating precipitation, percolating applied waters, septic tank discharges, and groundwater inflow from adjoining aquifers provide additional recharge to the aquifer. Once recharged to the basin, groundwater may exit the basin through groundwater pumping, withdrawal by phreatophytes (deep-rooted vegetation), surfacing groundwater, and subsurface outflow.

The quantity of basin recharge and discharge varies with hydrologic conditions, changes in land use, and changes in local water use. While depths to groundwater fluctuate in response to these factors, over a long period of time, overall basin recharge and discharge are balanced. The recharge and discharge terms of this balance offer insight to appropriate strategies for developing additional water supply within the basin. Overall water balance estimates for the Santee-El Monte Basin have been presented in several previous studies, including DMJM and Lowry & Associates (1978), USGS (1985), NBS/Lowry (1994) and Bundy/Huntley/SDSU (2001). Differences exist between the studies in the manner in which individual recharge/discharge terms are defined and estimated. Even taking these differences into account, however, water balances presented in previous studies demonstrate that excess recharge capacity exists within the Santee-El Monte basin. (That is to say, increased pumping within the basin results in increased streamflow infiltration.)

Using information from these past studies to develop a water balance, the District's IFP concluded that current long-term streamflow infiltration totals within the Santee-El Monte Basin are limited by the fact that the basins are typically too "full" to accept infiltrating streamflows. As a result, streamflow that would normally infiltrate into the basin flows out to the ocean.

4.1.3 Development of Desalinated Water

The District's wholesale water supplier, SDCWA, is working on developing a desalinated water supply. It is expected to provide 6 to 15 percent of the region's supply by the year 2020. Additional detail may be found in the Water Authority's 2005 UWMP.

4.2 Reliability of Water Supply

Since the District imports most of its potable water, water supply reliability issues are largely determined by the reliability of SDCWA and MWD supply systems. The supply reliability of SDCWA and MWD systems and the probable effect of a three-year dry period on the District's ability to meet demands are discussed in this Chapter.

4.2.1 SDCWA Supply Reliability

The SDCWA is working to diversify its supply and decrease its dependence on MWD over the next 20 years. SDCWA has also implemented an Emergency Storage Project (ESP), a system of reservoirs, interconnected pipelines and pumping stations designed to make water available to all communities in the San Diego region in the event of a disaster that would interrupt imported water deliveries. Some projects include increasing the height of San Vicente Dam and connecting San Vicente Lake to El Capitan Lake via pipes using El Capitan Lake for storage. The SDCWA plans to provide reliable supply in average, dry, and multiple dry year conditions.

4.2.2 District Supply Reliability

Single and multiple dry years do not lead to a reduction in local supplies. The SDCWA is planning on the use of dry year options and transfers to meet the shortage scenarios without impacting reliability. **Table 4-2** presents the projected supply and demand comparison in AFY. **Table 4-3** provides the District's estimated water supply projections associated for a single dry year and multiple dry years. Supply and demand comparisons using maximum day capacity to assess service reliability can be found in Chapter 5.

Table 4-2
Projected Supply and Demand Comparison (AFY)

Description	Water Supplies by Year (AFY)				
	2010	2015	2020	2025	2030
Imported Water Supply	3,968	4,003	4,038	4,074	4,110
Groundwater Wells	1,468	1,481	1,494	1,507	1,520
Supply Total	5,436	5,484	5,532	5,581	5,630

Description	Water Demand by Year (AFY)				
	2010	2015	2020	2025	2030
Projected Demand	5,436	5,484	5,532	5,581	5,630
Difference (Supply - Demand)	0	0	0	0	0
Ratio of Supply/Demand	100%	100%	100%	100%	100%

Table 4-3
District Supply Reliability (AFY)

Supply Source	Normal Year (2004) ¹	Single Dry (2004) ²	Multiple Dry Water Years (AFY)		
			2006	2007	2008
SDCWA Imported ³	4,414	4,634	3,966	4,094	4,226
Groundwater	1,044	1,096	1,424	1,470	1,517
Total Supply	5,457	5,730	5,390	5,564	5,743
Demand	5,457	5,730	5,390	5,564	5,743

¹ 2004 water supply and demand are shown because 2005 was an unusually wet year.

² Demand for a single dry year assumes a 5% increase in demand; multiple dry years assume increased demand due to growth but a 10% decrease resulting from water rationing.

³ The Water Authority's 2005 UWMP indicates that enough imported water will be available to meet multiple dry year demands.

4.2.3 Water Quality Impacts on Reliability

Since the SDCWA provides a majority of the District's water supply and SDCWA is providing treated water, any changes to water quality and resulting reliability over the next 20 years is overseen by SDCWA. Based on the SDCWA's UWMP, no changes to water supply reliability as a result of water quality are expected for the next 20 years.

Water quality is tested at the Lake Skinner Treatment Plant and Helix's Levy Treatment Plant, where water is treated before it is supplied to the District. Based on the District's 2005 Water Quality Report, all primary and secondary standards showed both ranges and averages for all tested parameters to be within the maximum contaminant levels (MCL) required by the U.S. EPA and California Department of Health Services.

The District's well fields are sensitive to drought conditions and contamination from local runoff, MTBE, nitrates, and total dissolved solids. Water quality is constantly tested and currently meets all primary and secondary standards for all tested parameters to be within the maximum contaminant levels (MCL) required by the U.S. EPA and California Department of Health Services.

4.3 Potential Projects to Increase Water Supply

The District is part of a project to improve or increase water supply referred to as the East County Regional Treated Water Improvement Program/Eastern Service Area (ESA) Secondary Supply Connection Project.

The East County Regional Treated Water Improvement Program is a comprehensive integrated program of capital improvements and usage guarantees involving the District, the SDCWA, Helix Water District, Padre Dam Municipal Water District, and Otay Water District. This program is intended to improve the regional treatment capacity in the East San Diego County, including the District's service area, by maximizing the use of the treatment capacity in Helix Water District's Levy Water Treatment Plant. Although it will not create a new supply, this program will reduce treated water demand from SDCWA and will provide a more reliable water supply to the District because the source of the raw water is locally stored imported water.

4.4 Recycled Water

The District looks to SDCWA and to the local sewer agencies to take the lead in developing and implementing waste water reclamation programs to make more water available to the entire region. Waste water collection, treatment and disposal or reclamation services within the District's boundaries are performed by completely separate and unrelated agencies.

5. Water Service Reliability

5.1 Projected Normal Year Supply and Demand

Table 5-1 presents the projected supply and demand comparison by capacity (MGD). This table indicates that in average precipitation years, the District has sufficient water to meet its customers' needs, through 2030. This is based on continued commitment to conservation programs and additional water supply. The district has added many ground water wells over its history. Adding new wells as olds ones become inefficient to maintain supply reliability. The district currently has three active wells off of Vine Street and four active wells of Highway 67.

**Table 5-1
Projected Supply and Demand Comparison (MGD)**

Description	Water Supplies by Year (MGD)				
	2010	2015	2020	2025	2030
Imported Water Supply	3.54	3.57	3.61	3.64	3.67
Groundwater Wells	1.31	1.32	1.33	1.35	1.36
Supply Total	4.85	4.90	4.94	4.98	5.03

Description	Water Demand by Year (MGD)				
	2010	2015	2020	2025	2030
Projected Demand	4.85	4.90	4.94	4.98	5.03
Difference (Supply - Demand)	0	0	0	0	0
Ratio of Supply/Demand	100%	100%	100%	100%	100%

5. Water Service Reliability

5.2 Projected Dry Year and Multiple Dry Year Supply and Demand

Table 5-2 presents a supply and demand comparison for a single dry year and multiple dry years from 2004 through 2008. 2004 was used as the normal water year instead of 2005 because 2005 was an unusually wet year. The District's ability to meet its customer demands in dry years is based on SDCWA's ability to provide a reliable water supply. SDCWA has documented its plans to provide a reliable water supply to the region, even in multiple dry years, in its 2003 Water Master Plan, 2004 Water Supply Report, and 2005 Urban Water Management Plan.

Table 5-2
Projected Dry Year and Multiple Dry Year Supply and Demand (2006-2009)

Supply Source	Normal Year (2004) ¹	Single Dry (2004) ²	Multiple Dry Water Years (AFY)		
			2006	2007	2008
SDCWA Imported ³	3.940	4.137	3.541	3.655	3.773
Groundwater	0.932	0.978	1.271	1.312	1.355
Total Supply	4.872	5.116	4.812	4.967	5.127
Demand	4.872	5.116	4.812	4.967	5.127

¹ 2004 water supply and demand are shown because 2005 was an unusually wet year.

² Demand for a single dry year assumes a 5% increase in demand; multiple dry years assume increased demand due to growth but a 10% decrease resulting from water rationing.

³ The Water Authority's 2005 UWMP indicates that enough imported water will be available to meet multiple dry year demands.

To prepare for potable water shortages due to natural disasters or drought, the District prepared and adopted a Water Shortage Contingency Plan in 1992 by Resolution 91-02 (see **Appendix E**). The elements of the 1992 Plan were fully coordinated with SDCWA, and appropriate state and federal assistance agencies. This section summarizes the key features of the existing contingency plan. The SDCWA and its member agencies are developing a new Drought Management Plan that is scheduled for completion in 2006.

6.1 Emergency Storage

As previously described, the District is dependent on both the SDCWA and the Helix Water District facilities to supply its potable water needs. The SDCWA adopted Ordinance No. 91-6 on June 25, 1991, which "...establishes rules, regulations, and restrictions so that available water supplies are allocated among member agencies for the greatest public interest and benefit." Included in this ordinance is a list of water use restrictions that can be imposed upon all retailers within the SDCWA's service area in the event of an emergency or long-term supply reduction.

The following sections present a synopsis of the emergency storage infrastructure in the region operated by MWD, SDCWA, and the District.

6.1.1 SDCWA Emergency Storage Project

The SDCWA currently does not have sufficient emergency water storage to supply its member agencies during an extended period. Although several member agencies of the SDCWA own and operate their own emergency reservoirs; in general, these reservoirs can only service specific isolated areas.

The SDCWA has initiated an Emergency Storage Project (ESP) for catastrophic failure of the aqueduct system. The intent of the ESP is to provide additional storage within the county and construct facilities that will convey emergency storage water to member agencies. Considering both local storage within member agencies and additional ESP storage, it is anticipated that upon completion of ESP facilities, 75 percent of the average day demands during the summer can be supplied for a two-month period.

6.1.2 District Emergency Storage

As mentioned previously, the District does not have natural reservoirs and hence, is mostly reliant on SDCWA Connections. In the event that the treated water supply was interrupted, the District would have to rely on the operational storage contained in its 10 potable water reservoirs. The wells can currently supply less than one-third of the normal day demands.

If the District were to have supplies reduced by 50 percent for a lengthy duration, as might result from a severe drought, compensatory reductions in potable water consumption would need to occur. Therefore, a 50 percent reduction in the District's supply would be matched by a 50 percent reduction in consumption throughout the District.

The current combined total potable emergency water storage of 12.6 MG available in District reservoirs can provide approximately three to four days use under existing maximum day demand and three days under year 2020 maximum day demands. With a 50 percent reduction in customer maximum day demand and outdoor use banned this reserve could last for 10 days.

6.2 Remedial Actions by District and Other Responsible Entities

During an emergency water shortage event that results in a 50 percent reduction in supply, the District and its suppliers intend to take the following actions.

6.2.1 Supply And Demand Monitoring

The District, in consultation with those agencies providing water to the District, monitors supply and demand conditions to determine when water management regulations are required to be put into practice. During water shortages the District implements water management strategies to preserve water for the highest priority uses: human consumption, public health, safety or welfare. If needed, further restrictions, including those on residential usage, may be imposed to further preserve water supplies.

After assessing the severity of the water supply situation, the General Manager or designee for the District may take all steps appropriate and necessary to inform the public of any restrictions on current water use and the prognosis of future availability of water. The General Manager or designee may declare a “Water Supply Management Condition” which imposes restrictions in varying degrees in the following areas:

- Issuance of new permanent meters
- Issuance of temporary meters (including construction meters)
- Interruption of service to certain classification of users, and
- The issuance of facility availability and commitment forms.

These restrictions have been incorporated in the District's Rules and Regulations.

6.2.2 Discontinuance/Interruption of Service

Under existing policies, during times of severe water shortages, the General Manager of the District has the authority to discontinue or interrupt service to meters that are not providing water for human consumption, public health, safety or welfare. This measure has been incorporated into the District's Rules and Regulations.

6.2.3 Authority to Take Necessary Steps to Conserve Water Supplies

District Rules and Regulations authorize the General Manager or designee to take any appropriate actions necessary to achieve the water conservation goals set for the District in cases of supply shortages or emergencies.

6.2.4 Implementation of District's Water Conservation Plan

California Water Code Sections 350 et seq. and Sections 71640 et seq. “... permit the governing body of a distributor of a public water supply to declare a Water Shortage Emergency Condition to prevail within the area served by such distributor, whenever it finds and determines there is an emergency caused by drought, a threatened or existing water shortage, or that the ordinary demands and requirements of water consumers cannot be satisfied without depleting the water supply of the distributor to the extent that there would be insufficient water for human consumption, sanitation, and fire protection.”

To this extent, the General Manager of the District has the option to declare a Water Shortage Emergency Condition and the elements contained in the “Water Conservation Plan” (included in **Appendix E**) to be in effect. At the next regular meeting of the Board of Directors, it would ratify, modify or rescind the declaration of a Water Shortage Emergency Condition.

6.2.5 SDCWA Ordinance 91-6

In the event that SDCWA declares that supplies to the region are cut back to a 50 percent level, it may require that its member agencies enact water use restrictions to achieve this level of reduction. The District may be subject to penalties levied by SDCWA and/or MWD for not achieving these percentage reductions. As noted previously, the SDCWA and its member agencies are developing a new Drought Management Plan that is scheduled for completion in 2006.

6.2.6 MWD "Incremental Interruption and Conservation Program"

The level of conservation required for the southern California region is set by the MWD. MWD has established an “Incremental Interruption and Conservation Program” (IICP), which was adopted on December 11, 1990 as a means of allocating water to its member agencies during drought conditions. The SDCWA is obliged to comply with reductions and restrictions enacted by the MWD and to pass them on to its member agencies.

On January 22, 1991, the District adopted Resolution 91-8 authorizing implementation of the IICP to its retail districts and passing on any water use and supply restrictions and financial incentives and disincentives to those districts.

6.2.7 Authorization of Greywater Use by County Department of Health Services

The San Diego County Board of Supervisors has the authority to proclaim the existence of a local water emergency due to a drought and/or dramatic reductions in water supplies for the residents of the county. As such, the County Department of Health Services has a process for approving the appropriate use and/or distribution of household greywater for the duration of the emergency. Only approved uses and distribution systems that have been inspected by the Department of Health Services and approved by local health officers are allowed.

6.3 Provisions to Reduce Water Use

6.3.1 Use Restrictions

The District has adopted the “Water Conservation Plan” (Conservation Plan) in 1992 which contains water use restrictions for its customers and was developed collaboratively with five neighboring water districts. The Conservation Plan has been incorporated into the District’s Rules and Regulations. The Conservation Plan contains “Water Use Restrictions” and “Enforcement Measures” to be in effect during times of water supply shortages.

Normal water use restrictions include:

- At no time shall water be wasted or used unreasonably.
- Water shall not be allowed to leave the customer’s property by drainage onto adjacent properties or public or private roadways or streets, due to irrigation or neglect.

- Customers shall be required to repair all water leaks within forty-eight (48) hours of knowledge that a leak exists.
- Water shall not be used to wash down sidewalks, driveways, parking areas, tennis courts, patios, or other paved areas except to alleviate immediate safety, sanitation, or health hazards. Such hazards are those defined by the regulatory health and safety agency having jurisdiction in the area.
- The use of a hand-held hose, without an automatic shut-off nozzle, for spraying, lawn watering, vehicle washing, or structure washing is prohibited.
- Lawn watering or irrigation, other than by hand or by drip methods, is prohibited, EXCEPT between the hours of 4:00 p.m. and 9:00 a.m. the following morning.
- Restaurants shall not serve water to their customers except when specifically requested.

The Conservation Plan also contains a section entitled "Emergency Conditions," with additional measures and strengthens the restrictions in the first part. The restrictions in this part are to be used in times of severe cutbacks from SDCWA or in times of a temporary disruption of supply, storage, distribution or other facilities. The language and extent of the restrictions were developed by SDCWA and adopted by the District and many other member agencies of SDCWA.

Emergency water use restrictions include guidelines for:

- Turf irrigation
- Ground cover irrigation
- Trees, shrubs, and agricultural areas irrigation
- Irrigation hours
- Hosing or spraying of outdoor paved or hard surfaces
- Water run-off due to outdoor water use or leaks
- Filling or draining of pools and spas
- Recreational or ornamental lakes and ponds,
- Golf course irrigation
- Restaurants serving water
- Ornamental fountains
- Washing vehicles
- New service connections

6.3.2 Conservation Rate Structure

The District established an inclining block rate structure to encourage decreased water use during times of supply shortages. There are two tiered levels of water usage; Life Line Rate, which is the lowest rate, and Standard Rate, which is the highest rate. The more water that is used by the customer the higher the rate is charged to that customer encouraging water conservation.

The District does not use historical comparisons for use reductions and does not use a per capita allocation for billing determinations. The block rate structure has been successful in reducing customer demands to the level required by the SDCWA.

6.3.3 Penalties for Excessive Use

The District's inclining block rate structure contains two different prices for water used in different quantities. The highest rate is called "Standard" and is priced to discourage water used in quantities subject to these rates.

Contained within the District's Rules and Regulations are penalties or charges for violations of the water use restrictions during normal and water shortage conditions. An increasing level of fines is levied for up to four violations at the same address. Any subsequent violations at the same address will result in appropriate limitation of service by use of a flow restrictor or discontinuance of service.

6.4 Fiscal Impact Analysis

The following sections present an estimate of the financial impact that a reduction in water supply will have on the District.

6.4.1 Estimates of Decreased Revenues at 75 Percent Level of Service

An earthquake that severely damages the aqueducts bringing water from MWD is the most catastrophic event that could threaten the SDCWA's water supply. SCDWA has initiated the ESP to enhance supplies to its member agencies during that event. Once completed, the ESP will provide member agencies with 75 percent of normal demand for a two-month period if the aqueducts are severed completely. Alternatively, ESP would provide 75 percent of normal demand for a six-month period assuming that it is available through the aqueducts from MWD. During both emergency events, member agencies are expected to enact the same percent water use restrictions on their customers and utilize emergency and local supplies, including local storage and groundwater. Hence, under the ESP scenarios, the greatest shortage in supply would be six months with 75 percent level of service.

In fiscal year 2005-2006, the District's revenue from retail commodity sales was \$5.14 million. A 75 percent level of service results in a 25 percent reduction in revenue; therefore, the District's losses over a six-month emergency period would be approximately \$642,500.

6.4.2 Expenditures/Measures to Overcome This Impact

In the event that revenues are decreased from water sales would also be accompanied by decreased expenses for imported water and pumping costs.

6.5 Monitoring of Actual Use Reductions

It will be of critical importance for the District to determine if water use reduction goals are being met during the water shortage events. Penalties may be incurred from the SDCWA or MWD if the District cannot meet water consumption reduction goals. Careful monitoring of water imported into the system and metered user records will enable the District to check water use.

6.5.1 Meter-Reading Schedule

During normal supply conditions, construction meters and agricultural accounts are read once every 30 days. All other retail meters are read every 60 days.

During times when supplies have been cut back, this schedule has remained unchanged. However, the largest accounts can be monitored on a weekly or bi-weekly basis. Using historical water use data for these largest accounts, it is possible to determine their impact during severe supply shortages and the need to discontinue service at any time, if needed. Service would not be discontinued on accounts supplying water for human consumption, health, safety or welfare purposes.

During water shortages, water use totals are monitored daily and provided in a written report to the appropriate members of the management team. These totals compare current water use with any target goals for the same period set by the SDCWA. If target reduction goals are not met, the General Manager can take corrective action as needed.

6.5.2 Reservoir Level Monitoring

The District has a 24-hour telemetry system, installed in 1988 and updated to utilize current technology, which monitors the water flows in the distribution system, pump stations, and reservoirs, as well as control valve settings on the turnouts. If any difficulties or questions of accuracy develop in the telemetry monitoring of the District's facilities, due to power outages, etc., crews will be dispatched at least twice a day to take manual readings. During emergencies, or 50 percent supply cutbacks, the reservoir levels will be reported to the General Manager on a daily basis.

6.5.3 Metering Water through the SDCWA Connection

During normal supply times, District and SDCWA personnel read the meter located at the SDCWA Connection on a daily basis in addition to the telemetry monitoring. This is the only direct source of water into the District from the SDCWA infrastructure. Meter readings are not performed if no water is available through the connection.

6.6 Plan Implementation

The District adopted "Conservation Water Rates" which established normal and conservation rates, an inclining block rate structure, and use allowances to appropriately allocate diminished water supplies. Yearly updates of the normal rates and conservation rates are adopted. Current normal and conservation water rates were adopted in Resolutions 99-13, 00-05, 01-07, 02-09, 03-11, 04-11, 05-08, 06-10.

Appendix A

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

AB 2552, Bates, 2000

SB 553, Kelley, 2000

SB 610, Costa, 2001

AB 901, Daucher, 2001

SB 672, Machado, 2001

SB 1348, Brulte, 2002

SB 1384, Costa, 2002

SB 1518, Torlakson, 2002

AB 105, Wiggins, 2004

SB 318, Alpert, 2004

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

CHAPTER 1. GENERAL DECLARATION AND POLICY

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

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

- (1) The waters of the state are a limited and renewable resource subject to ever-increasing demands.
- (2) The conservation and efficient use of urban water supplies are of statewide concern; however, the planning for that use and the implementation of those plans can best be accomplished at the local level.
- (3) A long-term, reliable supply of water is essential to protect the productivity of California's businesses and economic climate.
- (4) As part of its long-range planning activities, every urban water supplier should make every effort to ensure the appropriate level of reliability in

its water service sufficient to meet the needs of its various categories of customers during normal, dry, and multiple dry water years.

- (5) Public health issues have been raised over a number of contaminants that have been identified in certain local and imported water supplies.
- (6) Implementing effective water management strategies, including groundwater storage projects and recycled water projects, may require specific water quality and salinity targets for meeting groundwater basins water quality objectives and promoting beneficial use of recycled water.
- (7) Water quality regulations are becoming an increasingly important factor in water agencies' selection of raw water sources, treatment alternatives, and modifications to existing treatment facilities.
- (8) Changes in drinking water quality standards may also impact the usefulness of water supplies and may ultimately impact supply reliability.
- (9) The quality of source supplies can have a significant impact on water management strategies and supply reliability.

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

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

- (a) The management of urban water demands and efficient use of water shall be actively pursued to protect both the people of the state and their water resources.
- (b) The management of urban water demands and efficient use of urban water supplies shall be a guiding criterion in public decisions.
- (c) Urban water suppliers shall be required to develop water management plans to actively pursue the efficient use of available supplies.

CHAPTER 2. DEFINITIONS

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

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

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

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

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

10615. "Plan" means an urban water management plan prepared pursuant to this part. A plan shall describe and evaluate sources of supply, reasonable and practical efficient uses, reclamation and demand management activities. The components of the plan may vary according to an individual community or area's characteristics and its capabilities to efficiently use and conserve water. The plan shall address measures for residential, commercial, governmental, and industrial water demand management as set forth in Article 2 (commencing with Section 10630) of Chapter 3. In addition, a strategy and time schedule for implementation shall be included in the plan.

10616. "Public agency" means any board, commission, county, city and county, city, regional agency, district, or other public entity.

10616.5. "Recycled water" means the reclamation and reuse of wastewater for beneficial use.

10617. "Urban water supplier" means a supplier, either publicly or privately owned, providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually. An urban water supplier includes a supplier or contractor for water, regardless of the basis of right, which distributes or sells for ultimate resale to customers. This part applies only to water supplied from public water systems subject to Chapter 4 (commencing with Section 116275) of Part 12 of Division 104 of the Health and Safety Code.

CHAPTER 3. URBAN WATER MANAGEMENT PLANS

Article 1. General Provisions

10620.

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

- (b) Every person that becomes an urban water supplier shall adopt an urban water management plan within one year after it has become an urban water supplier.
- (c) An urban water supplier indirectly providing water shall not include planning elements in its water management plan as provided in Article 2 (commencing with Section 10630) that would be applicable to urban water suppliers or public agencies directly providing water, or to their customers, without the consent of those suppliers or public agencies.
- (d)
 - (1) An urban water supplier may satisfy the requirements of this part by participation in areawide, regional, watershed, or basinwide urban water management planning where those plans will reduce preparation costs and contribute to the achievement of conservation and efficient water use.
 - (2) Each urban water supplier shall coordinate the preparation of its plan with other appropriate agencies in the area, including other water suppliers that share a common source, water management agencies, and relevant public agencies, to the extent practicable.
- (e) The urban water supplier may prepare the plan with its own staff, by contract, or in cooperation with other governmental agencies.
- (f) An urban water supplier shall describe in the plan water management tools and options used by that entity that will maximize resources and minimize the need to import water from other regions.

10621.

- (a) Each urban water supplier shall update its plan at least once every five years on or before December 31, in years ending in five and zero.
- (b) Every urban water supplier required to prepare a plan pursuant to this part shall notify any city or county within which the supplier provides water supplies that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan. The urban water supplier may consult with, and obtain comments from, any city or county that receives notice pursuant to this subdivision.
- (c) The amendments to, or changes in, the plan shall be adopted and filed in the manner set forth in Article 3 (commencing with Section 10640).

Article 2. Contents of Plans

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

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

- (a) Describe the service area of the supplier, including current and projected population, climate, and other demographic factors affecting the supplier's water management planning. The projected population estimates shall be based upon data from the state, regional, or local service agency population projections within the service area of the urban water supplier and shall be in five-year increments to 20 years or as far as data is available.
- (b) Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five-year increments described in subdivision (a). If groundwater is identified as an existing or planned source of water available to the supplier, all of the following information shall be included in the plan:
 - (1) A copy of any groundwater management plan adopted by the urban water supplier, including plans adopted pursuant to Part 2.75 (commencing with Section 10750), or any other specific authorization for groundwater management.
 - (2) A description of any groundwater basin or basins from which the urban water supplier pumps groundwater. For those basins for which a court or the board has adjudicated the rights to pump groundwater, a copy of the order or decree adopted by the court or the board and a description of the amount of groundwater the urban water supplier has the legal right to pump under the order or decree.

For basins that have not been adjudicated, information as to whether the department has identified the basin or basins as overdrafted or has projected that the basin will become overdrafted if present management conditions continue, in the most current official departmental bulletin that characterizes the condition of the groundwater basin, and a detailed description of the efforts being undertaken by the urban water supplier to eliminate the long-term overdraft condition.

- (3) A detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

- (4) A detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the urban water supplier. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.
- (c) Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage, to the extent practicable, and provide data for each of the following:
 - (1) An average water year.
 - (2) A single dry water year.
 - (3) Multiple dry water years.

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

- (d) Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.
- (e)
 - (1) Quantify, to the extent records are available, past and current water use, over the same five-year increments described in subdivision (a), and projected water use, identifying the uses among water use sectors including, but not necessarily limited to, all of the following uses:
 - (A) Single-family residential.
 - (B) Multifamily.
 - (C) Commercial.
 - (D) Industrial.
 - (E) Institutional and governmental.
 - (F) Landscape.
 - (G) Sales to other agencies.
 - (H) Saline water intrusion barriers, groundwater recharge, or conjunctive use, or any combination thereof.
 - (I) Agricultural.
 - (2) The water use projections shall be in the same five-year increments described in subdivision (a).

- (f) Provide a description of the supplier's water demand management measures. This description shall include all of the following:
- (1) A description of each water demand management measure that is currently being implemented, or scheduled for implementation, including the steps necessary to implement any proposed measures, including, but not limited to, all of the following:
 - (A) Water survey programs for single-family residential and multifamily residential customers.
 - (B) Residential plumbing retrofit.
 - (C) System water audits, leak detection, and repair.
 - (D) Metering with commodity rates for all new connections and retrofit of existing connections.
 - (E) Large landscape conservation programs and incentives.
 - (F) High-efficiency washing machine rebate programs.
 - (G) Public information programs.
 - (H) School education programs.
 - (I) Conservation programs for commercial, industrial, and institutional accounts.
 - (J) Wholesale agency programs.
 - (K) Conservation pricing.
 - (L) Water conservation coordinator.
 - (M) Water waste prohibition.
 - (N) Residential ultra-low-flush toilet replacement programs.
 - (2) A schedule of implementation for all water demand management measures proposed or described in the plan.
 - (3) A description of the methods, if any, that the supplier will use to evaluate the effectiveness of water demand management measures implemented or described under the plan.

- (4) An estimate, if available, of existing conservation savings on water use within the supplier's service area, and the effect of the savings on the supplier's ability to further reduce demand.
- (g) An evaluation of each water demand management measure listed in paragraph (1) of subdivision (f) that is not currently being implemented or scheduled for implementation. In the course of the evaluation, first consideration shall be given to water demand management measures, or combination of measures, that offer lower incremental costs than expanded or additional water supplies. This evaluation shall do all of the following:
- (1) Take into account economic and noneconomic factors, including environmental, social, health, customer impact, and technological factors.
 - (2) Include a cost-benefit analysis, identifying total benefits and total costs.
 - (3) Include a description of funding available to implement any planned water supply project that would provide water at a higher unit cost.
 - (4) Include a description of the water supplier's legal authority to implement the measure and efforts to work with other relevant agencies to ensure the implementation of the measure and to share the cost of implementation.
- (h) Include a description of all water supply projects and water supply programs that may be undertaken by the urban water supplier to meet the total projected water use as established pursuant to subdivision (a) of Section 10635. The urban water supplier shall include a detailed description of expected future projects and programs, other than the demand management programs identified pursuant to paragraph (1) of subdivision (f), that the urban water supplier may implement to increase the amount of the water supply available to the urban water supplier in average, single-dry, and multiple-dry water years. The description shall identify specific projects and include a description of the increase in water supply that is expected to be available from each project. The description shall include an estimate with regard to the implementation timeline for each project or program.
- (i) Describe the opportunities for development of desalinated water, including, but not limited to, ocean water, brackish water, and groundwater, as a long-term supply.
- (j) Urban water suppliers that are members of the California Urban Water Conservation Council and submit annual reports to that council

in accordance with the “Memorandum of Understanding Regarding Urban Water Conservation in California,” dated September 1991, may submit the annual reports identifying water demand management measures currently being implemented, or scheduled for implementation, to satisfy the requirements of subdivisions (f) and (g).

- (k) Urban water suppliers that rely upon a wholesale agency for a source of water, shall provide the wholesale agency with water use projections from that agency for that source of water in five-year increments to 20 years or as far as data is available. The wholesale agency shall provide information to the urban water supplier for inclusion in the urban water supplier’s plan that identifies and quantifies, to the extent practicable, the existing and planned sources of water as required by subdivision (b), available from the wholesale agency to the urban water supplier over the same five-year increments, and during various water-year types in accordance with subdivision (c). An urban water supplier may rely upon water supply information provided by the wholesale agency in fulfilling the plan informational requirements of subdivisions (b) and (c), including, but not limited to, ocean water, brackish water, and groundwater, as a long-term supply.

10631.5. The department shall take into consideration whether the urban water supplier is implementing or scheduled for implementation, the water demand management activities that the urban water supplier identified in its urban water management plan, pursuant to Section 10631, in evaluating applications for grants and loans made available pursuant to Section 79163. The urban water supplier may submit to the department copies of its annual reports and other relevant documents to assist the department in determining whether the urban water supplier is implementing or scheduling the implementation of water demand management activities.

10632. The plan shall provide an urban water shortage contingency analysis 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. The preparation of the plan shall be coordinated with local water, wastewater, groundwater, and planning agencies that operate within the supplier's service area, and shall include all of the following:

- (a) A description of the wastewater collection and treatment systems in the supplier's service area, including a quantification of the amount of wastewater collected and treated and the methods of wastewater disposal.
- (b) A description of the recycled water currently being used in the supplier's service area, including, but not limited to, the type, place, and quantity of use.
- (c) A description and quantification of the potential uses of recycled water, including, but not limited to, agricultural irrigation, landscape irrigation, wildlife habitat enhancement, wetlands, industrial reuse, groundwater recharge, and other appropriate uses, and a determination with regard to the technical and economic feasibility of serving those uses.

- (d) The projected use of recycled water within the supplier's service area at the end of 5, 10, 15, and 20 years, and a description of the actual use of recycled water in comparison to uses previously projected pursuant to this subdivision.
- (e) A description of actions, including financial incentives, which may be taken to encourage the use of recycled water, and the projected results of these actions in terms of acre-feet of recycled water used per year.
- (f) A plan for optimizing the use of recycled water in the supplier's service area, including actions to facilitate the installation of dual distribution systems, to promote recirculating uses, to facilitate the increased use of treated wastewater that meets recycled water standards, and to overcome any obstacles to achieving that increased use.
- (g) A plan for optimizing the use of recycled water in the supplier's service area, including actions to facilitate the installation of dual distribution systems, to promote recirculating uses, to facilitate the increased use of treated wastewater that meets recycled water standards, and to overcome any obstacles to achieving that increased use.

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

Article 2.5 Water Service Reliability

10635.

- (a) Every urban water supplier shall include, as part of its urban water management plan, an assessment of the reliability of its water service to its customers during normal, dry, and multiple dry water years. This water supply and demand assessment shall compare the total water supply sources available to the water supplier with the total projected water use over the next 20 years, in five-year increments, for a normal water year, a single dry water year, and multiple dry water years. The water service reliability assessment shall be based upon the information compiled pursuant to Section 10631, including available data from state, regional, or local agency population projections within the service area of the urban water supplier.
- (b) The urban water supplier shall provide that portion of its urban water management plan prepared pursuant to this article to any city or county within which it provides water supplies no later than 60 days after the submission of its urban water management plan.

- (c) Nothing in this article is intended to create a right or entitlement to water service or any specific level of water service.
- (d) Nothing in this article is intended to change existing law concerning an urban water supplier's obligation to provide water service to its existing customers or to any potential future customers.

Articl 3. Adoption and Implementation of Plans

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

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

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

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

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

10644.

- (a) An urban water supplier shall file with the department and any city or county within which the supplier provides water supplies a copy of its plan no later than 30 days after adoption. Copies of amendments or changes to the plans shall be filed with the department and any city or county within which the supplier provides water supplies within 30 days after adoption.
- (b) The department shall prepare and submit to the Legislature, on or before December 31, in the years ending in six and one, a report summarizing the

status of the plans adopted pursuant to this part. The report prepared by the department shall identify the outstanding elements of the individual plans. The department shall provide a copy of the report to each urban water supplier that has filed its plan with the department. The department shall also prepare reports and provide data for any legislative hearings designed to consider the effectiveness of plans submitted pursuant to this part.

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

CHAPTER 4. MISCELLANEOUS PROVISIONS

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

- (a) An action or proceeding alleging failure to adopt a plan shall be commenced within 18 months after that adoption is required by this part.
- (b) Any action or proceeding alleging that a plan, or action taken pursuant to the plan, does not comply with this part shall be commenced within 90 days after filing of the plan or amendment thereto pursuant to Section 10644 or the taking of that action.

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

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

10653. The adoption of a plan shall satisfy any requirements of state law, regulation, or order, including those of the State Water Resources Control Board and the Public Utilities Commission, for the preparation of water management plans or conservation plans; provided, that if the State Water Resources Control Board or the Public Utilities

Commission requires additional information concerning water conservation to implement its existing authority, nothing in this part shall be deemed to limit the board or the commission in obtaining that information. The requirements of this part shall be satisfied by any urban water demand management plan prepared to meet federal laws or regulations after the effective date of this part, and which substantially meets the requirements of this part, or by any existing urban water management plan which includes the contents of a plan required under this part.

10654. An urban water supplier may recover in its rates the costs incurred in preparing its plan and implementing the reasonable water conservation measures included in the plan. Any best water management practice that is included in the plan that is identified in the "Memorandum of Understanding Regarding Urban Water Conservation in California" is deemed to be reasonable for the purposes of this section.

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

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

10657.

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

Appendix B
DWR Check List

2005 Urban Water Management Plan "Review for Completeness" Form
For DWR Review Staff Use

Coordination with Appropriate Agencies (Water Code § 10620 (d)(1)(2))

- Yes
 Participated in area, regional, watershed or basin wide plan _____ Reference & Page Number
 Name of plan _____ Lead Agency _____
 _____ Reference & Page Number
 Describe the coordination of the plan preparation and anticipated benefits. Sect 1.2 Reference & Page Number

Table 1 Coordination with Appropriate Agencies							
Check at least one box on each row	Participated in developing the plan	Commented on the draft	Attended public meetings	Was contacted for assistance	Was sent a copy of the draft plan	Was sent a notice of intention to adopt	Not Involved / No Information
Other water suppliers							
Water management agencies							
Relevant public agencies							
Other							
Other							

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

- Describe how water management tools / options maximize resources & minimize need to import water _____ Reference & Page Number
Sect. 4.2.2

Plan Updated in Years Ending in Five and Zero (Water Code § 10621(a))

- Date updated and adopted plan received _____ (enter date) Sect. 1.2 Reference & Page Number

City and County Notification and Participation (Water Code § 10621(b))

- Notify any city or county within service area of UWMP of plan review & revision Sect. 1.2 Reference & Page Number
 Consult and obtain comments from cities and counties within service area _____ Reference & Page Number

Service Area Information Water Code § 10631 (a))

- Include current and projected population Sect. 1.4.3 Reference & Page Number
 Population projections were based on data from state, regional or local agency Sect. 1.4.3 Reference & Page Number

Table 2 Population - Current and Projected						
	2005	2010	2015	2020	2025	2030 - opt
Service Area Population						

- Describe climate characteristics that affect water management Sect. 1.4.2 Reference & Page Number
- Describe other demographic factors affecting water management Sect. 2.1.2 Reference & Page Number

Table 3 Climate						
	January	February	March	April	May	June
Standard Average ETo						
Average Rainfall						
Average Temperature						

Table 3 (continued) Climate							
	July	August	September	October	November	December	Annual
Average ETo							0
Average Rainfall							0
Average Temperature							0

Water Sources (Water Code § 10631 (b))

- Identify existing and planned water supply sour Ch. 4 Reference & Page Number
- Provide current water supply quantities Table 4-1 Reference & Page Number
- Provide planned water supply quantities Table 4-1 Reference & Page Number

Table 4 Current and Planned Water Supplies - AFY						
Water Supply Sources	2005	2010	2015	2020	2025	2030 - opt
Water purchased from:						
U.S. Bureau of Reclamation						
Department of Water Resources						
Arcade Water District						
Calleguas Municipal Water District						
Castaic Lake Water Agency						
Central Basin Municipal Water District						

Chino Basin Municipal Water District						
Coastal Municipal Water District						
Contra Costa Water District						
Eastern Municipal Water District						
Foothill Municipal Water District						
Humboldt Bay Municipal Water District						
Inland Empire Utilities Agency						
Joint Regional Water Supply System						
Kern County Water Agency						
Metropolitan Water District of Southern Ca						
Municipal Water District of Orange County						
North of The River Municipal Water Distric						
Placer County Water Agency						
Sacramento County Water Management Di						
San Diego County Water Authority						
San Francisco City of						
San Juan Water District						
San Luis Obispo County						
Santa Clara Valley Water District						
Solano County Water Agency						
Sonoma County Water Agency						
Stockton East Water District						
Tehachapi-Cummings County Water Distri						
Three Valleys Municipal Utility District						
Upper San Gabriel Valley Municipal Water						
Water Facilities Authority						
West Basin Municipal Water District						
Western Municipal Water Dist of Riverside						
Zone 7						
Other Wholesaler 1 (enter agency name)						
Other Wholesaler 2 (enter agency name)						
Other Wholesaler 3 (enter agency name)						
Supplier produced groundwater						
Supplier surface diversions						
Transfers in or out						
Exchanges In or out						
Recycled Water (projected use)						
Desalination						
Other						
Other						
Total	0	0	0	0	0	0

If Groundwater identified as existing or planned source (Water Code §10631 (b)(1-4))

- Has management plan Sect 4.1.2 Reference & Page Number
- Attached management plan (b)(1) _____ Reference & Page Number
- Description of basin(s) (b)(2) Sect 4.1.2 Reference & Page Number
- Basin is adjudicated _____ Reference & Page Number
- If adjudicated, attached order or decree (b)(2) _____ Reference & Page Number
- Quantified amount of legal pumping right (b)(2) Sect 4.1.2 Reference & Page Number

Table 5 Groundwater Pumping Rights - AF Year	
Basin Name	Pumping Right - AFY
Total	0

- DWR identified, or projected to be, in overdraft (b)(2) _____ Reference & Page Number
- Plan to eliminate overdraft (b)(2) _____ Reference & Page Number
- Analysis of location, amount & sufficiency, last five years (b)(3) Sect 4.1.2 Reference & Page Number
- Analysis of location & amount projected, 20 years (b)(4) Sect 4.1.2 Reference & Page Number

Table 6 Amount of Groundwater pumped - AFY					
Basin Name (s)	2000	2001	2002	2003	2004
	0	0	0	0	0
% of Total Water Supply					

Table 7 Amount of Groundwater projected to be pumped - AFY					
Basin Name(s)	2010	2015	2020	2025	2030 - opt
	0	0	0	0	0
% of Total Water Supply	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

Reliability of Supply (Water Code §10631 (c) (1-3))

- Describes the reliability of the water supply and vulnerability to seasonal or climatic shortage Sect 4.2 Reference & Page Number & Ch. 5

Table 8 Supply Reliability - AF Year					
Average / Normal Water Year	Single Dry Water Year	Multiple Dry Water Years			
		Year 1	Year 2	Year 3	Year 4
% of Normal	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

Table 9

Basis of Water Year Data			
Water Year Type	Source name	Source name	Source name
Average Water Year			
Single-Dry Water Year			
Multiple-Dry Water Years			

_____ Reference & Page Number
 _____ Reference & Page Number
 _____ Reference & Page Number

Water Sources Not Available on a Consistent Basis (Water Code §10631 (c))

- Describe the reliability of the water supply due to seasonal or climatic shortages _____ Reference & Page Number
- Describe the vulnerability of the water supply to seasonal or climatic shortages _____ Reference & Page Number
- No unreliable sources Sect 4.2 Reference & Page Number & Ch. 5

Table 10 Factors resulting in inconsistency of supply				
Name of supply	Legal	Environmental	Water Quality	Climatic

- Describe plans to supplement or replace inconsistent sources with alternative sources or DMMs _____ Reference & Page Number
- No inconsistent sources Sect 4.2 Reference & Page Number & Ch. 5

Transfer or Exchange Opportunities (Water Code §10631 (d))

- Describe short term and long term exchange or transfer opportunities _____ Reference & Page Number
- No transfer opportunities _____ Reference & Page Number

Table11 Transfer and Exchange Opportunities - AF Year					
Transfer Agency	Transfer or Exchange	Short term	Proposed Quantities	Long term	Proposed Quantities
Total			0		0

Water Use Provisions

(Water Code §10631 (e)(1)(2))

- Quantify past water use by sector
- Quantify current water use by sector
- Project future water use by sector

Table 2-1 Reference & Page Number
 Table 2-1 Reference & Page Number
 Table 2-1 Reference & Page Number

TABLE 12 - Past, Current and Projected Water Deliveries								
Water Use Sectors	2000				2005			
	metered		unmetered		metered		unmetered	
	# of accounts	Deliveries AFY	# of accounts	Deliveries AFY	# of accounts	Deliveries AFY	# of accounts	Deliveries AFY
Single family								
Multi-family								
Commercial								
Industrial								
Institutional/gov								
Landscape								
Agriculture								
other								
Total	0	0	0	0	0	0	0	0

TABLE12 (continued) - Past, Current and Project								
Water Use Sectors	2015				2020			
	metered		unmetered		metered		unmetered	
	# of accounts	Deliveries AFY	# of accounts	Deliveries AFY	# of accounts	Deliveries AFY	# of accounts	Deliveries AFY
Single family								
Multi-family								
Commercial								
Industrial								
Institutional/gov								
Landscape								
Agriculture								
other								
Total	0	0	0	0	0	0	0	0

- Identify and quantify sales to other agencies
- No sales to other agencies

_____ Reference & Page Number
 _____ Reference & Page Number

Table 13 Sales to Other Agencies - AF Year							
Water Distributed	2000	2005	2010	2015	2020	2025	2030 - opt
La Cumbre	0	0	0	0	0	0	0
name of agency							
name of agency							
Total	0	0	0	0	0	0	0

- Identify and quantify additional water uses

Ch. 2 _____ Reference & Page Number

Table 14 Additional Water Uses and Losses - AF Year							
Water Use	2000	2005	2010	2015	2020	2025	2030 - opt
Saline barriers							
Groundwater recharge							
Conjunctive use							
raw water							
recycled							
other (define)							
Unaccounted-for system losses							
Total	0	0	0	0	0	0	0

Table 15 Total Water Use - AF Year							
Water Use	2000	2005	2010	2015	2020	2025	2030 - opt
Total of Tables 12, 13, 14	0	0	0	0	0	0	0

2005 Urban Water Management Plan "Review of DMMs for Completeness" Form (Water Code §10631 (f))
 (Water Code §10631 (f) & (g), the 2005 Urban Water Management Plan "Review of DMMs for Completeness" Form is found on Sheet 2)

Planned Water Supply Projects and Programs, including non-implemented DMMs (Water Code §10631 (g))

- No non-implemented / not scheduled DMMs Ch. 3 & _____ Reference & Page Number
- Cost-Benefit includes economic and non-economic factors (environmental, social, health, customer impact, and technological factors) Sect. 4.3 _____ Reference & Page Number
- Cost-Benefit analysis includes total benefits and total costs _____ Reference & Page Number
- Identifies funding available for Projects with higher per-unit-cost than DMMs _____ Reference & Page Number
- Identifies suppliers' legal authority to implement DMMs, efforts to implement the measures and efforts to identify cost share partners _____ Reference & Page Number

Table 16 Evaluation of unit cost of water resulting from non-implemented / non-scheduled DMMs and planned water supply project and programs	
Non-implemented & Not Scheduled DMM / Planned Water Supply Projects (Name)	Per-AF Cost (\$)

Planned Water Supply Projects and Programs (Water Code §10631 (h))

- No future water supply projects or programs
- Detailed description of expected future supply projects & programs Sect. 4.3 Reference & Page Number
- Timeline for each proposed project Sect. 4.3 Reference & Page Number
- Quantification of each projects normal yield (AFY) Sect. 4.3 Reference & Page Number
- Quantification of each projects single dry-year yield (AFY) Reference & Page Number
- Quantification of each projects multiple dry-year yield (AFY) Reference & Page Number

Table 17 Future Water Supply Projects							
Project Name	Projected Start Date	Projected Completion Date	Normal-year AF to agency	Single-dry year yield AF	Multiple-Dry-Year 1 AF	Multiple-Dry-Year 2 AF	Multiple-Dry-Year 3 AF

Opportunities for development of desalinated water (Water Code §10631 (i))

- Describes opportunities for development of desalinated water, including, but not limited to, ocean water, brackish water, and groundwater, as a long-term strategy
- No opportunities for development of desalinated water Sect. 4.1.3

Table 18 Opportunities for desalinated water	
Sources of Water	Check if yes
Ocean Water	
Brackish ocean water	
Brackish groundwater	
other	
other	

District is a CUWCC signatory

(Water Code § 10631 (j))

Urban suppliers that are California Urban Water Conservation Council members 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).

The supplier's CUWCC Best Management Practices Report should be attached to the UWMP.

- Agency is a CUWCC member Ch. 3 _____ Reference & Page Number
- 2003-04 annual updates are attached to plan Ch. 3 _____ Reference & Page Number
- Both annual updates are considered completed by CUWCC website Ch. 3 _____ Reference & Page Number

If Supplier receives or projects receiving water from a wholesale supplier

(Water Code §10631 (k))

- Yes
- Agency receives, or projects receiving, wholesale water Ch. 4 _____ Reference & Page Number
 - Agency provided written demand projections to wholesaler, 20 years _____ Reference & Page Number

Table 19 Agency demand projections provided to wholesale suppliers - AFY					
Wholesaler	2010	2015	2020	2025	2030 - opt
(name 1)					
(name 2)					
(name 3)					

- Wholesaler provided written water availability projections, by source, to agency, 20 years _____ Reference & Page Number
(if agency served by more than one wholesaler, duplicate this table and provide the source availability for each wholesaler)

Table 20 Wholesaler identified & quantified the existing and planned sources of water- AFY					
Wholesaler sources	2010	2015	2020	2025	2030 - opt
(source 1)					
(source 2)					
(source 3)					

- Reliability of wholesale supply provided in writing by wholesale agency _____ Sect. 4.2.2 Reference & Page Number
(if agency served by more than one wholesaler, duplicate this table and provide the source availability for each wholesaler)

Table 21 Wholesale Supply Reliability - % of normal AFY					
Wholesaler sources	Multiple Dry Water Years				
	Single Dry	Year 1	Year 2	Year 3	Year 4
(source 1)					
(source 2)					
(source 3)					

Table 22 Factors resulting in inconsistency of wholesaler's supply				
Name of supply	Legal	Environment	Water Quality	Climatic

Water Shortage Contingency Plan Section

(Water Code § 10632)

Stages of Action

(Water Code § 10632 (a))

- Provide stages of action Ch. 6 /App E Reference & Page Number
- Provide the water supply conditions for each stage Ch. 6 /App E Reference & Page Number
- Includes plan for 50 percent supply shortage Ch. 6 /App E Reference & Page Number

Table 23 Water Supply Shortage Stages and Conditions RATIONING STAGES		
Stage No.	Water Supply Conditions	% Shortage

Three-Year Minimum Water Supply

(Water Code §10632 (b))

- Identifies driest 3-year period Reference & Page Number
- Minimum water supply available by source for the next three years Sect 4.2.3 Reference & Page Number & Ch. 5

Table 24 Three-Year Estimated Minimum Water Supply - AF Year				
source**	Normal	Year 1	Year 2	Year 3
Total	0	0	0	0

*Note: If reporting after 2005, please change the column headers (Year 1, 2, & 3) to the appropriate years

Preparation for catastrophic water supply interruption

(Water Code §10632 (c))

- Provided catastrophic supply interruption plan Ch. 6 /App E Reference & Page Number

Table 25 Preparation Actions for a Catastrophe	
Possible Catastrophe	Check if Discussed
Regional power outage	
Earthquake	
Other (name event)	
Other (name event)	

Prohibitions**(Water Code § 10632 (d))**
 List the mandatory prohibitions against specific water use practices during water shortages Ch. 6 /App E Reference & Page Number

Table 26 Mandatory Prohibitions	
Examples of Prohibitions	Stage When Prohibition Becomes Mandatory
Using potable water for street washing	
Other (name prohibition)	
Other (name prohibition)	
Other (name prohibition)	
Other (name prohibition)	
Other (name prohibition)	
Other (name prohibition)	

Consumption Reduction Methods**(Water Code § 10632 (e))**
 List the consumption reduction methods the water supplier will use to reduce water use in the most restrictive stages with up to a 50% reduction. Ch. 6 /App E Reference & Page Number

Table 27 Consumption Reduction Methods		
Consumption Reduction Methods	Stage When Method Takes Effect	Projected Reduction (%)
name method	2	25
name method	3	35
name method	4	50
name method	2, 3, 4	?
name method	3, 4	?
name method		

Penalties**(Water Code § 10632 (f))**
 List excessive use penalties or charges for excessive use Ch. 6 /App E Reference & Page Number

Table 28 Penalties and Charges	
Penalties or Charges	Stage When Penalty Takes Effect
Penalty for excess use	
Charge for excess use	
Other (name penalties or charges)	
Other (name penalties or charges)	
Other (name penalties or charges)	

Revenue and Expenditure Impacts**(Water Code § 10632 (g))**

- Describe how actions and conditions impact revenues Ch. 6 Reference & Page Number
- Describe how actions and conditions impact expenditures Ch. 6 Reference & Page Number
- Describe measures to overcome the revenue and expenditure impacts Ch. 6 Reference & Page Number

Table 29 Proposed measures to overcome revenue impacts	
Names of measures	Check if Discussed
Rate adjustment	
Development of reserves	
name of measure	
name of measure	

Table 30 Proposed measures to overcome expenditure impacts	
Names of measures	Check if Discussed
name of measure	
name of measure	
name of measure	
name of measure	

Water Shortage Contingency Ordinance/Resolution**(Water Code § 10632 (h))**

- Attach a copy of the draft water shortage contingency resolution or ordinance. App. E Reference & Page Number

Reduction Measuring Mechanism**(Water Code § 10632 (i))**

- Provided mechanisms for determining actual reductions Ch. 6 Reference & Page Number

Table 31 Water Use Monitoring Mechanisms	
Mechanisms for determining actual reductions	Type data expected (pop-up?)
Name mechanism	
Name mechanism	
Name mechanism	

Recycling Plan Agency Coordination**Water Code § 10633**

- Describe the coordination of the recycling plan preparation information to the extent available Sect 4.3 Reference & Page Number

Table 32 Participating agencies	
	participated
Water agencies	
Wastewater agencies	
Groundwater agencies	
Planning Agencies	

Wastewater System Description (Water Code § 10633 (a))

- Describe the wastewater collection and treatment systems in the supplier's service area Sect. 4.4 Reference & Page Number
- Quantify the volume of wastewater collected and treated Sect. 4.4 Reference & Page Number

Table 33 Wastewater Collection and Treatment - AF Year							
Type of Wastewater	2000	2005	2010	2015	2020	2025	2030 - opt
Wastewater collected & treated in service area	6,796						
Volume that meets recycled water standard	1,030						

Wastewater Disposal and Recycled Water Uses (Water Code § 10633 (a - d))

- Describes methods of wastewater disposal Reference & Page Number
- Describe the current type, place and use of recycled water Sect. 4.4 Reference & Page Number
- None Reference & Page Number
- Describe and quantify potential uses of recycled water Sect. 4.4 Reference & Page Number

Table 34 Disposal of wastewater (non-recycled) AF Year							
Method of disposal	Treatment Level	2005	2010	2015	2020	2025	2030 - opt
Name of method							
Name of method							
Name of method							
Name of method							
Total		0	0	0	0	0	0

Table 35 Recycled Water Uses - Actual and Potential (AFY)							
User type	Treatment Level	2005	2010	2015	2020	2025	2030 - opt
Agriculture							
Landscape							
Wildlife Habitat							
Wetlands							
Industrial							
Groundwater Recharge							
Other (user type)							
Other (user type)							
Total		0	0	0	0	0	0

Determination of technical and economic feasibility of serving the potential uses Sect. 4.4 Reference & Page Number

Projected Uses of Recycled Water (Water Code § 10633 (e))

Projected use of recycled water, 20 years Sect. 4.4 Reference & Page Number

Table 36 Projected Future Use of Recycled Water in Service Area - AF Year					
	2010	2015	2020	2025	2030 - opt
Projected use of Recycled Water					

Compare UWMP 2000 projections with UWMP 2005 actual (§ 10633 (e)) Sect. 4.4 Reference & Page Number
 None Reference & Page Number

Table 37 Recycled Water Uses - 2000 Projection compared with 2005 actual - AFY		
User type	2000 Projection for 2005	2005 actual use
Agriculture		
Landscape		
Wildlife Habitat		
Wetlands		
Industrial		
Groundwater Recharge		
Other (user type)		
Other (user type)		
Total	0	0

Plan to Optimize Use of Recycled Water (Water Code § 10633 (f))

Describe actions that might be taken to encourage recycled water uses Reference & Page Number
 Describe projected results of these actions in terms of acre-feet of recycled water used per year Reference & Page Number

Table 38 Methods to Encourage Recycled Water Use					
Actions	AF of use projected to result from this action				
	2010	2015	2020	2025	2030 - opt
Financial incentives					
name of action					
name of action					
name of action					
name of action					
name of action					
name of action					
name of action					
Total	0	0	0	0	0

Provide a recycled water use optimization plan which includes actions to facilitate the use of Reference & Page Number recycled water (dual distribution systems, promote recirculating uses)

Water quality impacts on availability of supply

(Water Code §10634)

- Discusses water quality impacts (by source) upon water management strategies and supply reliability Reference & Page Number
- No water quality impacts projected Sect. 4.2.3

Table 39 Current & projected water supply changes due to water quality - percentage						
water source	2005	2010	2015	2020	2025	2030 - opt

Supply and Demand Comparison to 20 Years

(Water Code § 10635 (a))

- Compare the projected normal water supply to projected normal water use over the next 20 years, in 5-year increments. Ch. 5 Reference & Page Number

Table 40 Projected Normal Water Supply - AF Year					
(from table 4)	2010	2015	2020	2025	2030 - opt
Supply	0	0	0	0	0
% of year 2005	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

Table 41 Projected Normal Water Demand - AF Year					
(from table 15)	2010	2015	2020	2025	2030 - opt
Demand	0	0	0	0	0
% of year 2005	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

Table 42 Projected Supply and Demand Comparison - AF Year					
	2010	2015	2020	2025	2030 - opt
Supply totals	-	-	-	-	-
Demand totals	-	-	-	-	-
Difference	0	0	0	0	0
Difference as % of Supply	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Difference as % of Demand	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

Supply and Demand Comparison: Single-dry Year Scenario

(Water Code § 10635 (a))

Compare the projected single-dry year water supply to projected single-dry year water use over the next 20 years, in 5-year increments. Ch. 5 Reference & Page Number

Table 43 Projected single dry year Water Supply - AF Year					
	2010	2015	2020	2025	2030 - opt
Supply					
% of projected normal					

Table 44 Projected single dry year Water Demand - AF Year					
	2010	2015	2020	2025	2030 - opt
Demand					
% of projected normal					

Table 45 Projected single dry year Supply and Demand Comparison - AF Year					
	2010	2015	2020	2025	2030 - opt
Supply totals	0	0	0	0	0
Demand totals	0	0	0	0	0
Difference	0	0	0	0	0
Difference as % of Supply					
Difference as % of Demand					

Supply and Demand Comparison: Multiple-dry Year Scenario (Water Code § 10635 (a))

Project a multiple-dry year period (as identified in Table 9) occurring between 2006-2010 and compare projected supply and demand during those years Ch. 5 Reference & Page Number

Table 46 Projected supply during multiple dry year period ending in 2010 - AF Year					
	2006	2007	2008	2009	2010
Supply					
% of projected normal					

Table 47 Projected demand multiple dry year period ending in 2010 - AFY					
	2006	2007	2008	2009	2010
Demand					
% of projected normal	0.0%	0.0%	0.0%	0.0%	0.0%

Table 48 Projected Supply and Demand Comparison during multiple dry year period ending in 2010- AF Year					
	2006	2007	2008	2009	2010
Supply totals	0	0	0	0	0
Demand totals	0	0	0	0	0
Difference	0	0	0	0	0
Difference as % of Supply					
Difference as % of Demand					

Project a multiple-dry year period (as identified in Table 9) occurring between 2011-2015 and compare projected supply and demand during those years Ch. 5 Reference & Page Number

Table 49 Projected supply during multiple dry year period ending in 2015 - AF Year					
	2011	2012	2013	2014	2015
Supply					
% of projected normal					

Table 50 Projected demand multiple dry year period ending in 2015 - AFY					
	2011	2012	2013	2014	2015
Demand					
% of projected normal					

Table 51					
Projected Supply and Demand Comparison during multiple dry year period ending in 2015- AF Year					
	2011	2012	2013	2014	2015
Supply totals	0	0	0	0	0
Demand totals	0	0	0	0	0
Difference	0	0	0	0	0
Difference as % of Supply					
Difference as % of Demand					

Project a multiple-dry year period (as identified in Table 9) occurring between 2016-2020 _____ Reference & Page Number and compare projected supply and demand during those years

Table 52					
Projected supply during multiple dry year period ending in 2020 - AF Year					
	2016	2017	2018	2019	2020
Supply					
% of projected normal					

Table 53					
Projected demand multiple dry year period ending in 2020 - AFY					
	2016	2017	2018	2019	2020
Demand					
% of projected normal					

Table 54					
Projected Supply and Demand Comparison during multiple dry year period ending in 2020- AF Year					
	2016	2017	2018	2019	2020
Supply totals	0	0	0	0	0
Demand totals	0	0	0	0	0
Difference	0	0	0	0	0
Difference as % of Supply					
Difference as % of Demand					

Project a multiple-dry year period (as identified in Table 9) occurring between 2021-2025 _____ Reference & Page Number and compare projected supply and demand during those years

Table 55					
Projected supply during multiple dry year period ending in 2025 - AF Year					
	2021	2022	2023	2024	2025
Supply					
% of projected normal					

Table 56					
Projected demand multiple dry year period ending in 2025 - AFY					
	2021	2022	2023	2024	2025
Demand					
% of projected normal					

Table 57 Projected Supply and Demand Comparison during multiple dry year period ending in 2025- AF Year					
	2021	2022	2023	2024	2025
Supply totals	0	0	0	0	0
Demand totals	0	0	0	0	0
Difference	0	0	0	0	0
Difference as % of Supply					
Difference as % of Demand					

Provision of Water Service Reliability section to cities/counties within service area (Water Code § 10635(b))

Provided Water Service Reliability section of UWMP to cities and counties within which it provides water supplies within 60 days of UWMP submission to DWR Sect. 1.2 Reference & Page Number

Does the Plan Include Public Participation and Plan Adoption (Water Code § 10642)

- Attach a copy of adoption resolution App. C Reference & Page Number
- Encourage involvement of social, cultural & economic community groups Sect. 1.2 Reference & Page Number
- Plan available for public inspection Sect. 1.2 Reference & Page Number
- Provide proof of public hearing App. D Reference & Page Number
- Provided meeting notice to local governments Reference & Page Number

Review of implementation of 2000 UWMP (Water Code § 10643)

- Reviewed implementation plan and schedule of 2000 UWMP Sect. 1.2 Reference & Page Number
- Implemented in accordance with the schedule set forth in plan Sect. 1.2 Reference & Page Number
- 2000 UWMP not required Reference & Page Number

Provision of 2005 UWMP to local governments (Water Code § 10644 (a))

Provide 2005 UWMP to DWR, and cities and counties within 30 days of adoption Reference & Page Number

Does the plan or correspondence accompanying it show where it is available for public review (Water Code § 10645)

Does UWMP or correspondence accompanying it show where it is available for public review Reference & Page Number on web site www.lakesidewaterdistrict.com

Appendix C
Board Resolution

RESOLUTION NO. 07-3

**RESOLUTION OF THE BOARD OF DIRECTORS OF THE
LAKESIDE WATER DISTRICT ADOPTING THE
URBAN WATER MANAGEMENT PLAN**

WHEREAS, The Urban Water Management Planning Act (Water Code Section 10610 et. seq.) requires every urban water supplier, as defined in the act, to prepare and adopt an urban management plan; and

WHEREAS, the Lakeside Water District is an urban water supplier within the meaning of the act; and

WHEREAS, in cooperation with the San Diego County Water Authority, the District has drafted such a plan, a public hearing thereon following publication within the jurisdiction of the District of a notice of the time and place of the hearing pursuant to section 6066 of the Government Code; and

WHEREAS, it is in the interest of the District to adopt an urban water management plan;

NOW, THEREFORE, IT IS HEREBY RESOLVED, DETERMINED AND ORDERED by the Board of Directors of the Lakeside Water District as follows:

1. That the URBAN WATER MANAGEMENT PLAN FOR THE LAKESIDE WATER DISTRICT, 2006, be and is approved and adopted as the plan is required by the Urban Water Management Planning Act.
2. That the District shall implement its plan in accordance with the schedule set forth in the plan.
3. That the Secretary of the District be and is authorized and directed to file with the Department of Water Resources of the State of California a copy of the District's plan no later than 30 days after its adoption.

PASSED AND ADOPTED by the Board of Directors of the Lakeside Water District at a regular adjourned meeting thereof held on January 2, 2006, by the following vote:

AYES:

NOES:

ABSENT:

PRESIDENT

SECRETARY

Appendix D
Public Hearing

NOTICE OF PUBLIC HEARING OF THE BOARD OF DIRECTORS OF THE LAKESIDE WATER DISTRICT TO CONSIDER ADOPTION OF THE URBAN WATER MANAGEMENT PLAN

In accordance with Section 10642 of the Urban Water Management Planning Act of the California Water Code, notice is hereby given that Lakeside Water District will hold a Public Hearing on its Urban Water Management Plan. The purpose of the Hearing will be to receive public comment on the Plan, prior to its adoption.

Copies of the Plan are available for public review at the District Administration Building, 10375 Vine Street, Lakeside, California.

The Public Hearing will be held at 5:00 p.m. on Tuesday, January 2, 2006, in the District's Board Room.

For further information concerning the Plan or the Public Hearing, contact Robert Cook, General Manager of the Lakeside Water District or call 619-443-3805. Written comments will be received at the above address until 5:00 p.m. on, January 2, 2006.

To The East County Californian 12/19/06

Appendix E

Water Conservation Plan

10.1 WATER CONSERVATION PLAN

10.1-1 Declaration of Policy

California Water Code Sections 375 et seq. Permit public entities which supply water at retail to adopt and enforce a water conservation program to reduce the quantity of water used by the people therein for the purpose of conserving the water supplies of such public entity. The Board of Directors of Lakeside Water District hereby establishes a comprehensive water conservation program pursuant to California Water Code Section 365 et seq., based upon the need to conserve water supplies within the District, and to avoid or minimize the effects of any future water supply shortages.

10.1-2 Findings

The Board of Directors of Lakeside Water District finds and determines that the conditions prevailing in San Diego County and within the District require that available water resources be put to a maximum beneficial use, and that a water shortage could exist based upon one or more of the following conditions:

- A. A general water supply shortage occurs or may occur, due to increased demands on limited supplies.
- B. The distribution or storage facilities of the Metropolitan Water District of Southern California, the San Diego County Water Authority, the District or other agencies become temporarily or permanently inadequate.
- C. In November, 1990, the Metropolitan Water District of Southern California, supplier of the district, adopted an Incremental Interruption and Conservation Plan (IICP) to promote conservation planning during times of drought. This plan was further implemented by the San Diego County Water Authority, and requires immediate water reductions or the payment of substantial penalties.

10.1-3 CEQA Exemption

The District finds that this plan and actions taken hereafter pursuant to this plan are exempt from the California Environmental Quality Act as specific actions necessary to prevent or mitigate an emergency pursuant to Public Resources Code Section 21080 (b)

(4) and the California Environmental Quality Act Guidelines Section 15269 (c).

10.1-4 **Application**

The provisions of this resolution shall apply to all water served to persons, customers and property by the District.

10.1-5 **Enforcement**

The following enforcement measures will be taken upon violation of the water use restrictions contained in this resolution by any customer of the District:

- A. Any violation of the water use restrictions contained herein and reported to the District, will result in a letter notifying the customer of the violation, with a record being kept of the offense and noted on the customer's account.

- B. A second reported violation at the same address, observed by the District employee, will result in the mailing of a registered or certified letter that includes a bill assessing a penalty of \$50. Collection of that bill will follow the district's normal collection procedures.

- C. A third reported violation at the same address, observed by a District employee, will result in the mailing of a registered or certified letter that includes a bill assessing a penalty of \$100. Collection of that bill will follow the district's normal collection procedures.

- D. A fourth reported violation at the same address, observed by a District employee, will result in the mailing of a registered or certified letter that includes a bill assessing a penalty of \$200. Collection of that bill will follow the District's normal procedures.

In addition to these enforcement measures, any violation of the provisions contained in this resolution is a misdemeanor, as provided in Section 377 of the Water code. Upon conviction thereof, such person shall be punished by imprisonment in the county jail for not more than 30 days, or by fine not exceeding \$1,000, or both.

10.1-6 **Authorization**

The General Manager or designated representative, is hereby authorized and directed to implement the provisions of the District's Water Conservation Plan, as contained in this resolution. Additionally, the General Manager or a designated representative shall take appropriate actions necessary to achieve the water conservation goals.

The water conservation goals for the district shall be expressed as a percentage reduction of prior water usage, as determined either by the District's Water Conservation Plan, as contained in this resolution. Additionally, the General Manager or a designated representative shall take appropriate actions necessary to achieve the water conservation goals.

The effective date for each new level of percentage reduction for the Districts shall be the date established by the General Manager which shall be the date established by the General Manager which shall be the date established by the San Diego County Water Authority as soon thereafter as is practical for the implementation of each level. The setting of each new percentage reduction shall be effective without further action by the Board of Directors.

In addition to the water use restrictions contained in this section the District has adopted a water rate structure that encourages conservation by establishing an inclining rate structure that charges higher prices for larger quantities of water used, based upon a percentage reduction of usage in the 1989-90 base year established by the Metropolitan Water District of Southern California and the San Diego County Water Authority. This water rate structure also provides for decreases or increases upon the percentage reduction goals set for the district by its supplier.

The General Manager shall implement the conservation rate structure and decrease or increase the water use allowances, in accordance with the level of water use reduction goals, without further action by the Board of Directors.

10.1-7

Water Use Restrictions

No person shall knowingly use water or permit the use of water supplied by the District for residential, commercial, industrial, agricultural, governmental or any other purpose in a manner contrary to any provision of the Water Conservation Plan.

The following measures shall apply during emergencies, except where reclaimed water or private well water is used, and will be enforced by the measures state herein:

- A. At no time shall water be wasted or used unreasonably.
- B. Water shall not be allowed to leave the customer's property by drainage onto adjacent properties or public or private roadways or streets due to irrigation or neglect.
- C. Customers shall be required to repair all leaks within 48 hours of knowledge that a leak exists.

- D. Water shall not be used to wash down sidewalks, driveways, parking areas, except to alleviate immediate safety, sanitation, or health hazards. These hazards are those as defined by the regulatory health and safety agencies having jurisdiction in the area.
- E. The use of a hand-held hose for spraying, lawn watering, vehicle washing, or structure washing is prohibited without the use of an automatic shut-off nozzle.
- F. Lawn watering or irrigation, other than by hand or by drip methods, is prohibited except between the hours of 4:00 p.m. and 9:00 a.m. the following morning.
- G. Restaurants shall not serve water to their customers except when specifically requested.

10.1-8 Emergencies

A water shortage emergency condition may be declared by the General Manager or the Board of Directors.

Upon declaration of a water shortage emergency condition by the General Manager, he is hereby authorized to establish immediate restrictions upon the delivery and use of water, which may include restrictions or prohibitions on irrigation, the time and method of watering, the filling and use of pools, spas, lakes, and ponds, washing of vehicles, the issuance of new meters and the execution of agreements to supply water service. At the next regular meeting of the Board of Directors, it shall ratify, modify or rescind the declaration and restrictions adopted by the General Manager. Upon the declaration of a water shortage emergency condition by the Board of Directors, it shall establish restrictions or prohibitions upon the delivery and use of water which it determines are necessary or appropriate in light of the extent and anticipated length of the emergency.

10.1-9 Supersedure

All resolutions, rules and regulations of the District contrary to or inconsistent with this resolution are hereby repealed.