Urban Water Management Plan • 2005

WESTERN MUNICIPAL WATER DISTRICT

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Readers of Western Municipal Water District's
2005 Urban Water Management Plan

Western Municipal Water District is pleased to publish its 2005 Urban Water Management Plan.

This plan provides significant information regarding Western's retail service area, specifically related to water demands and supplies, but also contains information on a regional basis related to demands and supplies within the 510 square mile area comprising Western's General District.

This plan has been prepared pursuant to procedures of California Water Code Sections 10640 through 10645 and is organized as recommended in the Guidebook to Assist Water Suppliers in the Preparation of a 2005 Urban Water Management Plan. It satisfies the requirements contained within the applicable code sections and provides information to aid in the evaluation of future water supplies in accordance with Senate Bill SB 610 and SB 221.

As this document is reviewed and used as an informative resource, should you have questions please contact us.

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Section 1
Introduction

Western Municipal Water District (Western) was formed by the voters in 1954 to bring supplemental water to growing western Riverside County. Today, the District serves more than 19,000 retail and nine wholesale customers with water from both the Colorado River and the State Water Project. Supplemental water is also received from the City of Riverside.

As a member agency of the Metropolitan Water District of Southern California (MWD), Western provides wholesale water to the cities of Corona, Norco, and Riverside and the water agencies of Elsinore Valley and Rancho California. Western serves customers in the unincorporated areas of El Sobrante, Eagle Valley, Temescal Creek, Woodcrest, Lake Mathews, and March Air Reserve Base.

Western operates and maintains domestic and industrial wastewater collection and conveyance systems for retail and contract services customers in Lake Hills, March Air Reserve Base, Home Gardens, and the City of Norco.

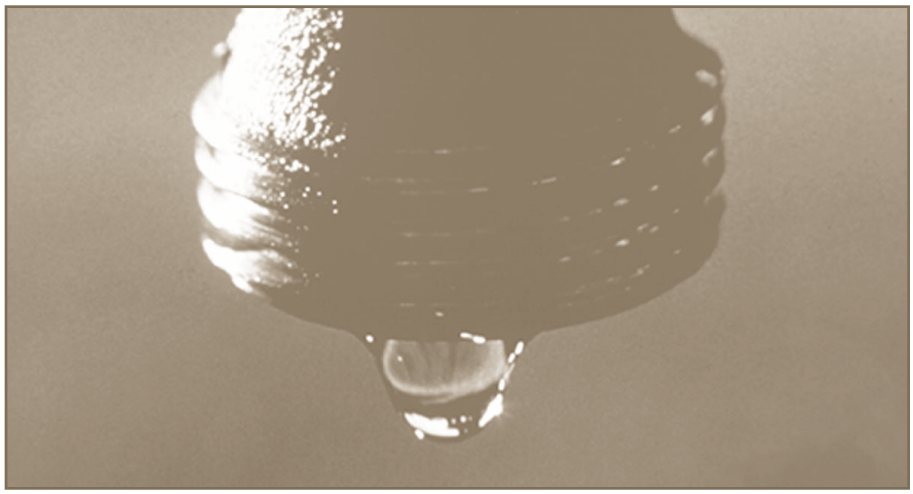
Western is one of five of the member agencies of the Santa Ana Watershed Project Authority (SAWPA), a regional water resources planning and project implementation organization. Western's general manager is a court-appointed Watermaster, responsible for reporting compliance with water quality and quantity provisions of court orders regarding water rights issues in the Santa Ana watershed.

Western's general district consists of a 510 square mile area of western Riverside County and a population of more than one-half million people. Western currently sells over 90,000 acre-feet (AF) of water annually. Improvement districts, the retail portion of Western's general district, covers about 73 square miles and Western's retail service provides water to an estimated population of 61,000, based on 3.2 persons per household for about 19,100 residential domestic services. The location of Western and its retail and wholesale areas are shown in Figure 1.

About sixty percent of the water Western sells is treated; the balance is untreated or raw water. About one-third of Western's water sales are for domestic purposes; the rest wholesale. Water sold by the District for agricultural purposes is used to irrigate crops such as citrus and avocados, and nurseries. Agricultural water use in the retail area has decreased in past years with increasing urbanization.

About one-quarter of the water Western purchases from the MWD comes from the Colorado River Aqueduct and about three-quarters from the State Water Project, which transports water from Northern California via the California Aqueduct. Western also imports a small quantity of groundwater from the Riverside/San Bernardino area. Western owns no wells for groundwater production.

The five member Board of Directors comprise the governing body of the District and are responsible to the members of the public of his or her division, and to the general public within the District, for proper conduct of District affairs. Board members are elected to four-year terms by the registered voters in five geographic divisions apportioned by population. Terms are staggered to ensure continuity, with public elections held in at least two divisions every two



years. The director must reside in the division from which he or she is elected.

This Urban Water Management Plan (UWMP) provides information regarding projected water use and supplies. This Plan is organized as recommended in the *Guidebook to Assist Water Suppliers in the Preparation of a 2005 Urban Water Management Plan* (January 18, 2005). For each discussion provided in the Plan, the regulatory citation is presented followed by the requested information.

Section 2
Agency Coordination

Western is a retail and wholesale water agency serving more than 3,000 customers and therefore, is submitting an UWMP. This UWMP provides information for our retail area only, unless specifically noted.

2.1 Law

Water Code Section 10620

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

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

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

(d) (1) An urban water supplier may satisfy the requirements of this part by participation in 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.

Water Code Section 10621

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

(b) Every urban water supplier required to prepare a plan pursuant to this part shall notify any city or county within which the supplier provides water supplies that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan. The urban water supplier may consult with, and obtain comments from, any city or county that receives notice pursuant to this subdivision.

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

Water Code Section 106110617. "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.

2.2 Coordination with Appropriate Agencies

This 2005 UWMP has been coordinated with a variety of agencies throughout the process. In the planning stages, Western coordinated with Metropolitan Water District of Southern California and our wholesale customers to determine potential demands and supplies. The draft UWMP was

Table 1. Coordination with Appropriate Agencies

Agency	Participated in UWMP Development	Commented on Draft	Attended Public Meeting	Contacted for Assistance	Received Copy of Draft	Sent Notice of Intention to Adopt
City of Riverside				X	X	10/5
City of Corona				X	X	10/5
City of Norco					X	10/5
County of Riverside					X	10/5
MWD of Southern California				X		10/5
Rancho California Water District				X	X	10/5
Box Spring Mutual Water Company				X	X	10/5
SAWPA					X	10/5
Rubidoux Community Services District					X	10/5
Jurupa Community Services District					X	10/5
Elsinore Valley Municipal Water District				X	X	10/5
Home Gardens County Water District					X	10/5
Lee Lake Water District				X	X	10/5

provided to local agencies for their comment. A summary of the coordination effort is provided in Table 1. A copy of the letter requesting information and inviting participation are provided in Appendix A.

2.3 Resource Maximization/ Import Minimization Plan

Western has used many tools and options to maximize resources and minimize the need to import water. These tools include, but are not limited to, regional planning; water efficiency programs; and water transfers and exchanges.

Through a variety of basin water management programs, Western is attempting to ensure that the regional water supply is being efficiently used and re-used. Western's commitment to cooperation as the avenue for solving regional problems dates back to the District's formation. Western has been involved in virtually every water rights adjudication in the region since then. For example, several decades of litigation among users in the Santa Ana River watershed culminated in settlement in 1969. The stipulated judgment contains a declaration of rights of the entities in the lower area of the Santa Ana River Basin downstream of Prado Dam against those in the upper area, and provides a physical solution to implement the provisions of the judgment. Western's general manager serves as a court-appointed watermaster for the judgment.

The Seven Oaks Dam Conservation Project is a long-term attempt to better utilize storm water runoff within its watershed. This regional program has the potential to greatly improve the management of local urban water supplies in the Santa Ana River watershed and increase the water available to such beneficiaries as Agua Mansa, Meeks and Daley Water Companies, and the city of Riverside. The impact on the entire District will be a reduced rate of demand growth for imported water as more local waters are conserved and reused.

During the past 15 years, Western has addressed the long-standing issues of liquefaction in the San Bernardino Basin area. These efforts were made to produce

groundwater in the pressure area in a manner in which liquefaction and associated earthquake-related damages would not occur. Additional safe yield is declared annually that benefits users. Western is currently working with San Bernardino Valley Municipal Water District and the city of Riverside on the Riverside-Corona Feeder, a major water storage and conveyance pipeline that will assist with liquefaction and provide a dry-year supply of water and provide other benefits to the San Bernardino Valley community.

Western has assumed responsibility for a cooperative well-measuring program in the basin. Twice yearly, a Well Measurement Report is distributed to purveyors within the District. The report includes data from 47 agencies for more than 1820 wells in the Santa Ana and San Jacinto watersheds.

Western also participates in regional planning through the Santa Ana Watershed Project Authority (SAWPA), a joint powers agency charged with basin planning and development of regional water and wastewater facilities. SAWPA is composed of the five major water districts that share the Santa Ana and San Jacinto rivers, including Western. Those agencies are committed to working collectively and have prepared a Basin Plan under contract to the California Regional Water Quality Control Board to protect the Santa Ana River basin. The Plan calls for extensive wastewater treatment facilities, changes in imported water supply, massive export of saline waters, and a brine line from the upper watershed to the ocean. Among the water quality improvement projects that Western has participated in through SAWPA to benefit the region, are:

Santa Ana Regional Interceptor – The SARI line is a water pipeline designed to convey 30 million gallons of non-reclaimed wastewater from the upper Santa Ana River basin to the ocean for disposal after treatment. An extension of the SARI line southerly from Corona through the Temescal Canyon to the Lake Elsinore area and the San Jacinto watershed has recently been completed.

Arlington Desalter – The Arlington Desalter extracts and treats impaired groundwater from the Arlington Basin in Riverside with delivery of high quality product water to Norco. Western provided local match for this project and serves as operator of the facility.

Lake Elsinore San Jacinto Watershed Authority (LESJWA) – LESJWA works to curtail the impacts of the flood and drought cycles that have plagued Lake Elsinore in the past. The project has restricted the boundaries of the Lake and provides a source of replenishment water to replace evaporative losses. Through SAWPA, Western has provided funding and participation on LESJWA.

Western Riverside County Regional Wastewater Treatment Facility – In 1992, a Joint Powers Authority was formed to pursue the construction and operation of a new regional wastewater treatment facility on a site located just northwest of Norco. The facilities include processes needed for reaching tertiary treatment levels that meet or exceed all California Regional Water Quality Control Board standards.

Rapid Infiltration/Extraction (RIX) Wastewater Treatment Project – This demonstration project was developed to evaluate the effectiveness of using an experimental wastewater tertiary treatment process.

With SAWPA, Western is also participating in the Integrated Water Resources Plan (IWRP) process for the Santa Ana River watershed that focuses on the following:

• Changes in terms of recent water districts' planning updates and funding status that warrant a fresh analysis of the watershed.

• Planning time horizons for 2010, 2025, and 2050 of water demands and supplies.

• Water resource plans by member districts.

• A breakdown of planned water resource projects into six major project categories.

• Balancing and integration of available resources, including projects that enhance the environment.

• Identification of regional problems, issues, and descriptions of long-term integrated solutions.

2.4 City and County Notification and Participation

Western has notified appropriate cities and counties regarding the UWMP update process. Draft Plans were provided to the agencies listed in Table 1 and copies of letters inviting participation are provided in Appendix A.

2.5 Review and Adoption of UWMP Changes

Western follows the procedures of Water Code sections 10640 through 10645 when reviewing and making changes or additions to the UWMP. This revision of the UWMP is provided for the year 2005, meeting the deadline for providing UWMPs by December 31 in years ending in "0" and "5". The plan was adopted by the Western Board of Directors on December 7th through Resolution No. 2388. A copy of Resolution No. 2388 is provided in Appendix B.

Section 3
UWMP Planning Steps

3.1 Appropriate Level of Planning

3.1.1 Law

Water Code Section 10630

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

3.1.2 Contents of Plan

Western supplies water to both retail and wholesale customers. This UWMP focuses on retail services and provides all elements required by the Urban Water Management Planning Act. The retail service information is provided to a level of detail appropriate for planning for the current customer base. As available, historic information is provided.

Western supplies wholesale water to the cities of Corona, Norco and Riverside and the water agencies and companies of Elsinore Valley, Rancho California, Box Springs, Eagle Valley, and Lee Lake. Information regarding our wholesale customers is provided in Section 3.11.

3.2 Service Area Information With 20 Year Projections

3.2.1 Law

Water Code Section 10631(a)

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.

3.2.2 Service Area Information

Demographic factors that may affect water use include current and projected population, climate, population density, and customer type.

Western's retail service area is within the County of Riverside. The County of Riverside is one of the most rapidly growing areas of the State of California. Between 1994 and 1999, the population of Riverside County increased at an overall growth rate of 7% (David Taussing & Associates, Inc. 2003). In western Riverside County, the overall growth rate between 1994 and 1999 was 6% with population growth in cities and unincorporated areas at 7.9% and 1.1%, respectively. The 2000 Census indicated that Riverside County had a residential population of

over 1.5 million and approximately 585,000 dwelling units (David Taussing & Associates, Inc. 2003). The Southern California Association of Governments (SCAG) estimates that by 2020 the population in Riverside County will nearly double to approximately 2.8 million people with about 918,000 dwelling units (David Taussing & Associates, Inc. 2003). A separate study by the California Department of Finance estimates that the County population will be 3.5 million by 2030 (David Taussing & Associates, Inc. 2003). SCAG estimates that population in Riverside County will grow at an annual rate of 3.4% (Southern California Association of Governments [SCAG], 2004). The population in western Riverside County, which includes Western's retail service area, is projected to increase at an annual rate of 3.3% and the number of households is expected to show an average annual growth rate of 3.9% (SCAG, 2004).

Based on the total number of domestic customers, Western experienced growth of about 4% for the period from 2002 to 2004. This exceeds the growth rate estimated by SCAG for western Riverside County. Western's accelerated growth rate is influenced by the amount of undeveloped area in the retail service area compared to historically urban areas. This growth rate is expected to continue for several years then slow to the annual rate for western Riverside County (3.3%). Based on these assumptions, the estimated current and projected population for the Western retail service area is presented in Table 2.

Table 2. Estimated Population – Current and Projected

	2005	2010	2015	2020	2025	2030
Retail Service Area Population	16,000	72,700	85,500	100,600	118,400	139,200

Note: Population is estimated based on served residential customers.

Table 3. Climate Characteristics

	Jan	Feb	Mar	Apr	May	Jun	
Standard Monthly Average ETo (Inches)	2.49	2.91	4.16	5.27	5.94	6.56	
Average Rainfall (Inches)	2.16	2.15	1.75	0.81	0.23	0.07	
Average Temperature (Fahrenheit)	54.0	55.5	57.5	61.4	65.9	71.3	
	Jul	Aug	Sept	Oct	Nov	Dec	Annual
Standard Monthly Average ETo (Inches)	7.22	6.92	5.35	4.05	2.94	2.56	56.37
Standard Monthly Average ETo (Inches)	0.04	0.12	0.26	0.32	0.93	1.21	10.04
Standard Monthly Average ETo (Inches)	77.0	77.7	74.4	67.3	59.1	54.3	64.6

Western is located in the Inland Valley approximately 50 miles east of Los Angeles where the warm dry climate is generally considered Mediterranean in characteristics (WMWD, 2004a). The climate typically exhibits hot, dry summers and mild, wet winters. Annual precipitation totals vary substantially from year to year. Most rainfall occurs during the months of November through April. Onshore airflow occurs during most of the year producing southwesterly winds. "Santa Ana" conditions occur occasionally producing warm, dry, northeast winds that can reach high velocities. Average temperatures are 64.6° F. Table 3 provides average climatic data for a weather station near the Western retail service area.

Note: Evapotranspiration (ETo) data from station at University of Riverside as provided on the CIMIS website database at www.cimis.water.ca.gov for the period of record from June 1985. Rainfall and temperature data from station at the Riverside Citrus Experiment Station as provided on the NOAA Western Regional Climate Center website database at www.wrcc.dri.edu for the period of record from July 1948. Copies of the downloaded data are provided in Appendix C.

Other demographic factors may also influence water usage. Residential development within Western's retail area ranges from homes on large lots to small mobile home parks and apartments. Businesses are generally neighborhood shopping centers and commercial strips along major streets, such as Van Buren Boule-

vard. The industrial base is growing and includes a Pepsi Bottling Plant and Ralph's Grocery Dairy Unit. One large industrial/commercial park, the Meridian Business Center, is in construction and other industrial/commercial units are planned.

The Riverside County General Plan provides information about the Lake Mathews/Woodcrest Area (Figure 2). This area encompasses most of Western's retail service area, but it does not include the commercial/industrial area immediately west of Interstate 215. The General Plan describes the Lake Mathews/Woodcrest Area as generally rural in characteristics with a strong equestrian presence (County of Riverside, 2003). Thirty percent of the land in this area is designated as open space. Planned housing density ranges from 8 dwelling units per acre to a minimum 10-acre lot size. Over 60% of the area is planned as residential with a lot size of greater than 0.5 acres. Less than 4% of the area is planned as residential with a lot size of less than 0.5 acres. Less than 1% of the area is planned as commercial, retail or light industrial and no heavy industry areas are planned. Minimum ten-acre agricultural areas are specified for 66 acres. It is estimated that the total population for this area will be 30,887 based on 3.1 persons per dwelling unit (County of Riverside, 2003). The total estimated employment for Lake Mathews/Woodcrest Area is 5,162 (County of Riverside, 2003).

The Western retail area is partially within the boundary of the City of Riverside with the remainder in the County of Riverside. The respective municipal and county authorities perform master planning within their jurisdictions. Master Planning is controlled by other agencies, with limited input by Western. Therefore, Western does not have the independent authority to approve new development in its service area.

3.3 Water Sources

3.3.1 Law

Water Code Section 10631(b)

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

(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.

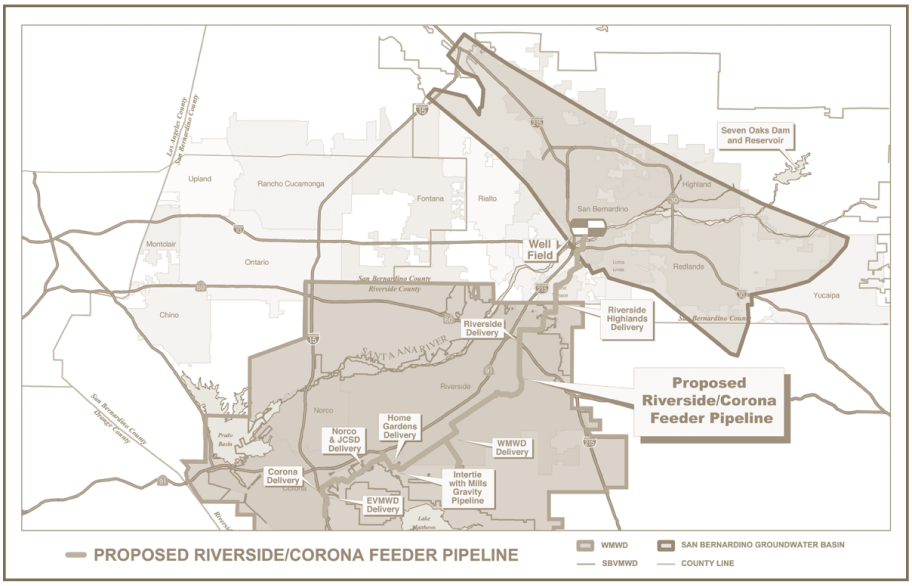
(4) A detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the urban water supplier. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

3.3.2 Current and Planned Water Supplies

Western provides both potable and non-potable water in the retail service area from various sources.

Potable sources include Metropolitan Water District of Southern California State Water Project water and supplemental water from the City of Riverside. Western became a member agency of MWD in November 1954 and has a purchase agreement for an initial base demand of 65,298.5 AF with an initial Tier 1 annual maximum of 58,768.7 AF (Appendix D). Supplemental water may be purchased from the City of Riverside (Appendix D). The City of Riverside operates a well water supply system of over 40 domestic quality wells. When surplus water is available from the City of Riverside and required by Western, an intertie and portable chloramination station allows Western to take up to approximately 4,900 gallons per minute. Water is purchased from Riverside on an emergency or off-season basis.

Non-potable water is used for irrigation purposes at various locations throughout the retail area. The irrigation distribution system distributes non-potable irrigation water through a large area of the retail service area. The main sources of non-potable water are the Colorado River Aqueduct (CRA) and groundwater from the San Bernardino/Riverside Area. Western does not treat this surface water supply, and, therefore, it is not considered a potable water source for Western. An intertie with a local irrigation system provides access to up to 6,000 acre-feet per year (AF/YR) of non-potable water for irrigation purposes. This water is pumped from wells in the San Bernardino/Riverside area and wheeled through canals and pipelines under an agreement with Elsinore Valley Municipal Water District. Western has the right to purchase up to 9.0 cfs of groundwater and transport the water through the Riverside Canal or Gage Canal to turnouts connecting to Western's non-potable irrigation system. The use of this high Total Dissolved Solids and nitrate groundwater can make high quality imported water available for domestic purposes.



The Riverside/Corona Feeder project will make Western less dependent on the direct delivery of water from MWD (WMWD, 2005a). The proposed project will provide the infrastructure to allow Western to purchase SWP water from MWD when available and store this water in the San Bernardino Basin Area. This water would then be extracted as needed, and transported to Western's customers and other water purveyors within Western's boundaries for use during dry years. The surplus water could be derived from not only the State Water Project, but also local runoff from regulated releases from the Army Corps of Engineers Seven Oaks Reservoir and other local water sources with surplus water during wet periods.

Water derived from the Seven Oaks Reservoir will be distributed based on priorities. The highest priority would be direct delivery within the Western and San Bernardino Valley Municipal Water District's areas (WMWD, 2004b), mainly to water treatment plants replacing water that would otherwise be met by imported water or groundwater. The second priority would be direct groundwater recharge of basins within the San Bernardino area to provide for future recovery of stored surplus water. The third priority would be recharge of groundwater basins outside the San Bernardino area, but within the Western and San

Bernardino Valley Municipal Water District areas. The fourth and last priority would be delivery of water to agencies outside the Western and San Bernardino Valley Municipal Water District areas as part of an exchange.

Non-potable water from the March Wastewater Reclamation Facility (WWRF) also is used for irrigation purposes in the Western retail area. Currently, all treated wastewater is used to irrigate the Riverside National Cemetery and the Archie J. Old Golf Course. In 2004, a total of 138.7 million gallons [(MG), 425.5 AF] were provided to the National Cemetery and the Golf Course. In January through March 2005, a total of 21.4 MG (65.8 AF) were provided to the National Cemetery and the Golf Course. During the summer months, the reclaimed wastewater must be supplemented with CRA water to meet the demand. In the winter months when precipitation reduces demand, treated wastewater can be stored in open reservoirs until demand increases. As the flow to the March WWRF increases with corresponding increased volumes of treated wastewater, the plant will be upgraded to tertiary treatment and the treated effluent will be pumped into the non-potable irrigation distribution system for delivery to additional non-potable customers. It is anticipated that treated wastewater volumes available for irrigation will increase to 6,130 AF/YR by 2030 as shown in Table 4. These volumes were derived by projections of estimated domestic and industrial discharges based on projects known to Western then application of growth factors of 3.3% per year.

Western does not directly extract groundwater for potable or non-potable purposes in its retail area. The retail area generally is underlain by an area characterized by the Regional Water Quality Control Board as not within a designated groundwater basin (California Regional Water Quality Control Board, Santa Ana Region, 1995, Figure 4-1). Therefore, Tables 6 and 7 as referenced in the Guidebook are not included.

A summary of the water sources is provided in Table 4. A further discussion of MWD supplied water is provided in Sections 3.4 and 3.11.

3.4 Reliability of Supply

3.4.1 Law

Water Code Section 10631(c)

(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.

3.4.2 Normal and Drought Supply Years

A normal supply year is a year in the historical sequence that most closely represents median runoff levels and patterns. Normal is defined by evaluating a minimum of 30 years of historical records for rainfall and runoff. From the basis of a normal year, years of surplus and drought can be defined. MWD developed a computer model named IRPSIM that uses 70 years of historical hydrology (from 1922 to 1991) to develop estimates of water surplus and shortage over a

Table 4. Current and Projected Water Supplies

Water Supply Sources	2005	2010	2015	2020	2025	2030
MWD- Retail Service Area	26,688	31,007	35,726	41,278	47,809	55,491
MWD – Western Wholesale Service	78,024	88,902	101,146	111,837	123,784	134,028
Riverside/Corona Feeder (Potential as needed source)			10,000	40,000	40,000	40,000
Agricultural Water Purchase	3,000	6,000	6,000	6,000	6,000	6,000
Recycled Water-March WWRF	450	2,680	3,850	4,430	5,210	6,130

Quantities in Acre-Feet per Year
MWD – Metropolitan Water District of Southern California
SWP –State Water Project
CRA – Colorado River Aqueduct
WWRF – Wastewater Reclamation Facility

Table 8. Supply Reliability

			Multiple Dry Water Years		
	Normal Water Year (AF Year)	Single Dry Water Year (% of Normal)	Year 1(% of Normal)	Year 2(% of Normal)	Year 3(% of Normal)
MWD Supplies	Varies (see Table 4)	100	100	100	100
Non-potable groundwater	6,000	100	100	100	100
Recycled water	Varies (see Table 33)	100	100	100	100

Table 9. Basis of Water Year Data

Water Source	Water year Type	Base Year(s)	Historic Sequence
MWD Supplies			
	Normal Water Year	NA-Modeled by IRPSIM	
	Single - Dry Year	1977	1922-1991
	Multiple - Dry Years (3)	1990-1992	1922-1991

Ref: MWD, 2005

20-year period (MWD, 2005). The model is used to analyze the extent to which a particular supply option can add to the region's supply reliability and determine the need for additional supplies and aid in determining the appropriate supply targets.

Core water supplies provide a base quantity of water each year, regardless of whether surplus supplies already exist (MWD, 2005), such as recycled water projects, safe yield groundwater production, and CRA base supplies. They provide a reliable source, but if developed to meet demands of infrequent dry years can result in redundancy in wet years and higher costs. Flexible water supplies provide supply only when needed (such as a dry year) and do not result in increased amounts of surplus water during years of plentiful supply, such as voluntary water transfers and storage. Flexible supplies tend to be more cost-effective, but are less reliable.

The IRPSIM model studies tested the supply reliability of a mix of core and flexible supplies (MWD, 2005). The IRPSIM modeled MWD's ability to respond in future years under a repeat of the 1977 and 1990-92 drought cycles, that is, in the case of worst single year and multiple dry year droughts. The IRPSIM analyses of the IRP Update report show that MWD can maintain reliable supplies under the conditions that have existed in past dry periods throughout the period 2005 through 2030.

Supplies associated with the Riverside/Corona Feeder are expected to be reliable sources during drought period. These supplies will be derived from excess SWP stored in the San Bernardino area and local groundwater. Santa Ana Water diversions may also be stored for future extraction.

Western's local non-potable supplies will also be reliable sources. Recycled water has little dependency on drought conditions and the supply of non-potable water from a nearby groundwater basin that is imported by canals and pipelines also will not be impacted by drought. The groundwater to be purchased from Elsinore Valley Municipal Water District is based on water rights Elsinore Valley Municipal Water District holds in the Meeks and Daley Water Company.

A summary of estimated water supply during a normal and drought years is shown in Table 8. The modeled drought years are summarized in Table 9.

3.4.3 Factors in Inconsistency of Supply

Historical water deliveries provide us with an indication, but not a certainty, as to the reliability of future water supplies. Significant changes over time may impact water delivery including changes in water storage and delivery facilities, regulatory constraints on the use of facilities, water quality issues, long-term climatic changes, and legal re-allocation of supply. However, MWD has identified a resource management plan that should result in reliability for non-discounted non-interruptible demands through 2030 (MWD, 2005). This plan relies on a multi-faceted approach using local resources, various storage programs, and transfer agreements.

Water quality issues and implementation risks were identified as concerns to future supply reliability by MWD (MWD, 2005). Water

quality concerns may occur through contamination of supplies or more stringent water quality standards. These factors may cause a loss of water supply or a reduced usefulness because of the need to blend supplies to meet standards. Implementation concerns include the competitive approach to securing new local supplies or a failure to acquire the supply within the expected schedule. Imported water supplies may also not perform as expected. Environmental issues may also impact imported supplies for concerns such as endangered species requiring a minimum water flow limiting quantities that can be exported from the source.

Drought conditions always pose a threat to water supplies, but especially in low rainfall areas such as southern California. Drought conditions in the water supply areas such as the Colorado River system and northern California have been shown to impact supplies available to the SWP and CRA. Plans continue to reduce potential shortfalls with the development of storage and new supplies.

The non-potable supplies, including groundwater and recycled water, are expected to be consistent. These supplies are not expected to be affected by legal issues since the water rights are held by EVMWD for the non-potable groundwater and the recycled water is controlled by Western and distribution facilities generally are in place. Endangered species are also not a concern since these supplies are not a source used by endangered species. Since the supplies are not used for domestic purposes, water quality issues are of lesser importance. They also are not impacted by drought.

A summary of factors that may cause an inconsistency of supply is provided in Table 10.

Table 10. Factors Potentially Resulting in Supply Inconsistency

Name of Supply	Legal	Environmental	Water Quality	Climatic
MWD	Competition for new supplies	Endangered species	Contamination of Supply More Stringent Water Quality Standards	Drought Condition

3.5 Transfer and Exchange Opportunities

3.5.1 Law

Water Code Section 10631(d)

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

3.5.2 Transfers and Exchanges for Western's Retail Area

Western's primary source of potable water is the SWP from MWD. MWD has established various transfer and storage programs (MWD, 2005). MWD believes it currently has in place transfer and storage programs to supplement deliveries from the SWP with 300,000 AF of water. The MWD transfer and storage program includes the following agreements:

- Semitropic;
- Arvin-Edison;
- San Bernardino Valley Municipal Water District (one current and one under development);
- Kern Delta Water District;
- Desert Water Agency/Coachella Valley Water District;
- Mojave Storage Program;
- North Kern Storage Program; and
- Kern Water Bank (under development).

In any given year, actual yields may vary from the expected values, but MWD models indicate that in the aggregate, the resource targets can be met under a wide range of hydrologic conditions. Additional details on these and other programs can be found in the Regional Urban Water Management Plan (MWD, 2005).

MWD also expects to use spot markets and option contracts to provide water to meet dry-year demands (MWD, 2005). The quantities obtained from these will vary significantly from year to year. For example, in 2003, MWD secured options to purchase approximately 145,000 AF of water from the Sacramento Valley during the irrigation season. These options protect against potential shortages that might arise from a decrease in Colorado River supply or as a result of drier-than-expected hydrologic conditions.

Table 11. Transfer and Exchange Opportunities

Source Transfer Agency	Tansfer or Exchange	Short Term	Proposed Quantities	Long Term	Proposed Quantities
NA					

Western also participates both directly and indirectly in many regional water exchanges, acting as a direct participant or as the Santa Ana watershed's Watermaster. However, Western has no specific transfer or exchange agreements specifically for its retail area. Therefore, no specific transfers or exchanges are identified in Table 11.

3.6 Water Use by Customer-type – Past, Current and Future

3.6.1 Law

Water Code Section 10631(e)

(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

Table 12. Past, Current, and Projected Water Deliveries

		Water Use Sectors	Single family	Multi-family	Com-mercial	Indus-trial	Institu-tional/gog	Land-scape	Agri-culture	Other	Total
2000	metered	# of accounts	13,747	2	136	5	174	175	231		14,470
		Deliveries AF/YR	12,406		756	407	543	1,032	8,049	768	23,959
	unmetered	# of accounts	0	0	0	0	0	0	0	0	0
		Deliveries AF/YR	NA	NA	NA	NA	NA	NA	NA	NA	NA
2005	metered	# of accounts	19,725	1	300	5	300	250	198		20,779
		Deliveries AF/YR	17,338	180	1890	720	578	1472	4,227	283	26,688
	unmetered	# of accounts	0	0	0	0	0	0	0	0	0
		Deliveries AF/YR	NA	NA	NA	NA	NA	NA	NA	NA	NA
2010	metered	# of accounts	23,500	1	360	6	360	300	198		24,725
		Deliveries AF/YR	20,672	215	2,254	858	689	1,755	4,227	337	31,007
	unmetered	# of accounts	0	0	0	0	0	0	0	0	0
		Deliveries AF/YR	NA	NA	NA	NA	NA	NA	NA	NA	NA
2015	metered	# of accounts	27,700	2	420	7	420	360	198		29,107
		Deliveries AF/YR	24,315	253	2,651	1,009	810	2,065	4,227	396	35,726
	unmetered	# of accounts	0	0	0	0	0	0	0	0	0
		Deliveries AF/YR	NA	NA	NA	NA	NA	NA	NA	NA	NA
2020	metered	# of accounts	32,500	2	490	8	500	420	198		34,118
		Deliveries AF/YR	28,601	297	3,118	1,187	953	2,429	4,227	466	41,278
	unmetered	# of accounts	0	0	0	0	0	0	0	0	0
		Deliveries AF/YR	NA	NA	NA	NA	NA	NA	NA	NA	NA
2025	metered	# of accounts	38,300	3	580	10	590	490	198		40,171
		Deliveries AF/YR	33,642	350	3,668	1,396	1,121	2,857	4,227	548	47,809
	unmetered	# of accounts	0	0	0	0	0	0	0	0	0
		Deliveries AF/YR	NA	NA	NA	NA	NA	NA	NA	NA	NA
2030	metered	# of accounts	45,000	3	680	11	690	580	198		47,162
		Deliveries AF/YR	39,571	412	4,314	1,643	1,319	3,360	4,227	645	55,491
	unmetered	# of accounts	0	0	0	0	0	0	0	0	0
		Deliveries AF/YR	NA	NA	NA	NA	NA	NA	NA	NA	NA

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).

3.6.2 Western's Customers

Western tracks retail water usage by customer types including residential, commercial, industrial, institutional, and agricultural accounts. Tracking is done by user code and reports can be generated to determine the number of accounts and quantities.

The number of future residential and commercial/industrial customers is expected to increase at the same rate as the estimated population growth. Based on 4 percent growth per year for 2006 and 2007 and subsequent 3.3 percent growth to 2030, Western will have nearly 39,500 residential, 600 commercial, and 605 governmental/institutional customers by 2030. Landscape irrigation customers are also expected to grow at the same rate. The number of agricultural users is not expected to increase, but rather may decrease with urbanization. However, to be conservative in demand estimations, the number of agricultural customers was kept at the 2005 level. A summary of the expected accounts by category is provided in Table 12. Water delivery projections are also based on increases at the same rate as the estimated population growth. The projected water deliveries are summarized in Table 12.

Western also provides wholesale water sales to various agencies within the District boundaries. These agencies provided an estimate of potential water demands through 2030. The projected wholesale demands include both domestic and non-domestic water uses such as commercial/industrial and landscape and agricultural irrigation. Some of these demands may be interruptible during water shortages. These projected demands are summarized in Table 13.

Western does not use water for saline barriers, groundwater recharge or conjunctive use within its retail area. However, our distribution system does have unaccounted for water losses. These water losses are summarized in Table 14.

A summary of total water demand is provided in Table 15.

3.7 Demand Management Measures

3.7.1 Law

Water Code Section 10631(f)

(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.

Table 13. Sales to Other Agencies- AF/YR

Water Distributed	2000	2005	2010	2015	2020	2025	2030
Box Springs Mutual Water Company	121	132	448	448	448	448	448
City of Corona	25,056	22,948	21,302	23,519	25,967	28,670	28,670
City of Riverside	400	2,300	3,800	5,300	6,800	8,300	9,800
Elsinore Valley Municipal Water District	12,900	15,023	22,715	29,515	35,015	41,515	49,015
Lee Lake Water District	945	3,980	5,753	6,236	6,236	6,236	6,236
Rancho California Water District	32,698	33,641	34,884	36,128	37,371	38,615	39,859
Total	**72,120**	**78,024**	**88,902**	**101,146**	**111,837**	**123,784**	**134,028**

Note: Includes both domestic, commercial/industrial and interruptible uses such as landscape and agricultural irrigation.

Table 14. Additional Water Uses and Losses - AF/YR

Water Distributed	2000	2005	2010	2015	2020	2025	2030
Saline Barriers	0	0	0	0	0	0	0
Groundwater recharge	0	0	0	0	0	0	0
Conjunctive use	0	0	0	0	0	0	0
Raw water	0	0	0	0	0	0	0
Recycled (Golf Course/Cemetery)	386	450	500	500	500	500	500
Unaccounted - for system losses	6	1,415	1,690	1,980	2,330	2,750	3,230
Total	**492**	**1,865**	**2,190**	**2,480**	**2,830**	**3,250**	**3,730**

Notes: Raw and recycled water, except as noted, were included in Table 12 and therefore not included in Table 14.

Values for 2010 include 4% increase for 2 years then 3.3% for 3 years to match projected population growth. Subsequent years are increased 3.3% per year.

System losses for 2000 were unusually low.

System losses for 2005 were based on 2001 to 2004 average quantity escalated by 4%.

Table 15. Total Water Use – AF/YR

Water Use	2000	2005	2010	2015	2020	2025	2030
Total of Tables 12, 13, 14	96,571	106,577	122,099	139,352	155,945	174,843	193,249

(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.

3.7.2 California Urban Water Conservation Council Reporting

Western is a signatory to the California Urban Water Conservation Council and submits annual reports in accordance with the "Memorandum of Understanding Regarding Urban Water Conservation in California." Copies of our Best Management Practices (BMP) Reports are provided in Appendix E to meet the information requirements for Demand Management Measures (DMMs).

In summary, Western's regional water education, public information and water conservation programs continue to expand with the surge in population.

Water Education

Western has been a leader in the field of water education support for area schools since 1982. There are seven school districts with more than 225 public and private schools in Western's service area. Western's School Program is designed to encourage and assist educators as they teach students about water supply, distribution, reclamation, conservation and the future of water supplies. The material and services offered meet the requirements of the California Science Framework Addendum and are provided at no charge to participating teachers, schools and students, public and private, within Western's 510 square mile District. Western offers materials including student workbooks, teachers' guides, videos, speakers and field trips. Complete class water education units are also distributed along with needed in-servicing.

Public Information

Western provides extensive public outreach to the communities it serves by participating in local events such as the Community Water Festival, a one-day festival celebrating water that attracts hundreds of people including children held in Temecula in the spring. Through its Water Talk program, Western staff makes a direct connection by presenting water information to local service groups and chambers of commerce within its service area. In the calendar year ended December 31, 2004, Western's public affairs staff conducted more than 25 presentations.

Water Conservation

Western and its wholesale customers participate in a Metropolitan Water District managed water conservation incentive program for commercial, industrial and institutional water customers. The program, called *Save Water – Save A Buck*, is administered by a Metropolitan contracted vendor. The vendor maintains a toll-free number and processes rebates throughout Southern California. Rebates range from $60 for the installation of a commercial ULFT, $100 for a high pressure water broom, $500 for a cooling tower conductivity controller, to $2,000 for a hospital X-ray film processing water re-circulation system. Four-color informational brochures are regularly distributed at local chamber of commerce meetings and in business newsletters.

Businesses in Western's general service area have received more than $115,000 in incentive funds. The installation of water conserving fixtures and appliances and the implementation of new water saving technologies resulting from this incentive program represent an annual savings of 72 acre-feet per year.

Western has been working with Riverside County Planning Office and developers to enforce the County's water-efficient landscaping ordinance by providing area developers with educational materials. This new program is still in its infancy, but in addition to the water conservation education materials that are being given to new home developers for their customers, Western has met with County Planning staff to encourage the enforcement of the County's landscape ordinance.

Western's staff conducts landscape plan reviews and inspections of all new commercial, industrial and institutional landscapes within Western's retail service area to ensure compliance with either the City or County of Riverside's water efficient landscape ordinance resulting from AB 325.

Western cosponsors an Irrigation Water Management Laboratory (CIMIS Mobile Lab) with the Riverside-Corona Resource Conservation District and the City of Riverside. This service offers those with large (one-acre or larger) parcels of land a free irrigation evaluation by the Conservation District staff. Each irrigator is given a detailed report on where and how to improve the irrigation system's efficiency and instructions on how to set their timers. The Conservation District will also visit residential homeowners within Western's general service area, conduct a landscape inspection and leave a helpful checklist of recommendations to improve landscape water-use efficiency.

Western opened the gates to its *Landscapes Southern California Style℠* June 24, 1989. Through *Landscapes Southern California Style℠*, Western reaches the community with its outdoor water conservation message. During the months of September through May, seminars are conducted for the general public, addressing such topics as landscape design, irrigation methods, drip irrigation systems and many other subjects that impact the water-efficiency of a homeowner's landscape. Western reaches roughly 300 residents annually with these water-efficient landscaping messages. Local schoolchildren participate in special activities within the garden that contribute toward making them lifelong conscientious water users. For example, up to 100 students attend the annual Earth Day celebration where they learn about water conservation measures during this fun and engaging event. Staff members work continuously to make water-efficient landscaping techniques even easier to understand and incorporate into the everyday environment. To date, more than 150,000 people have walked the trails in this unique one-acre, water conservation education center.

In the last five years, more than 8,800 (data through 12/31/2004) non-conserving toilets were replaced with ultra-low-flow toilets (ULFT) in single and multi-family residences within Western's general service area. Western and its wholesale customers provide incentives ranging from $50 to $75 per non-conserving unit replaced. The installation of these ULFTs represents an annual water savings of more than 235 acre-feet of water. Since the inception of the High Efficiency Clothes Washer (HECW) incentive program in 2002, more than 3,850 (data through 12/31/2004) HECW rebates were distributed for the installation of qualified washers in single family homes. The HECW incentive is $100 per unit. To date the program has saved an estimated 90 acre-feet of water. A summary of Western's water conservation program history is included in Appendix E.

3.8 Evaluation of Demand Management Measures Not Implemented

3.8.1 Law

Water Code Section 10631(g)

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

(1) Take into account economic and noneconomic factors, including environmental, social, health, customer impact, and technological factors.

(2) Include a cost-benefit analysis, identifying total benefits and total costs.

(3) Include a description of funding available to implement any planned water supply project that would provide water at a higher unit cost.

(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.

3.8.2 Unimplemented DMMs

Western has implemented all DMMS except System Water Audits, Leak Detection & Repair. Although all identified leaks are repaired in a timely manner, Western does not have a formal leak detection program. Water loss for Fiscal Year 2003-2004 (latest data available) is estimated (Western MWD Construction & Operations Report 2004) to be 100.4 acre-feet or 0.36% of all water delivered through the system.

Western has determined the cost-effectiveness of the unimplemented DMMs using the California Urban Water Conservation Council cost-benefit formula. The cost-effectiveness evaluation identifies all relevant costs and benefits from the perspective of society/supplier/customer, as appropriate; addresses program cost-sharing with other project beneficiaries; and discusses all major assumptions and data used to measure, value and discount program costs and benefits with a sensitivity analysis.

3.9 Planned Water Supply Projects and Programs

3.9.1 Law

Water Code Section 10631(h)

(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.

3.9.2 Expected Future Water Supply Projects and Programs

Western has several projects and programs planned to meet the demands. Some of these projects were previously discussed in Section 3.3.2.

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 ($)
System Water Audits, Leak Detection & Repair	$2054.28

Cost Effectiveness Summary for System Water Audits, Leak Detection and Repair

Total Costs	$206,250 ($750 per mile)
Total Benefits	$52,610 ($524 per AF)
Discount Rate	4.0
Time Horizon	1 year
Cost of Water ($ per AF)	$524 (Tier 2 Water)
Water Savings (AF/Yr)	100.4

Table 17. Future Water Supply Projects

Project Name	Projected Start Date	Project Comple-tion Date	Normal-year AF to Agency	Single-Dry AF/Year to Agency	Mutliple-Dry AF/ Years to gency		
					Year 1 AF	Year 2 AF	Year 3 AF
Riversid/ Corona/Feeder/ Santa Ana Water Divisions	2010	2015	0	40,000	40,000	40,000	40,000

Note: Multiple dry years are as described in Section 3.4. Planned Water Supply Projects and Programs.

Potable demand will be supplemented through the Riverside/ Corona Feeder Project. This project will allow the capture and storing of new water sources, especially in wet years. The water would be stored in the San Bernardino Basin area, most likely the Bunker Hill Basin, which has a safe yield of 5,000,000 AF. Water from the SWP and local runoff, including releases from Seven Oaks Reservoir, could be stored until needed then pumped out for delivery to western Riverside County. This would reduce the cost of water and reliability of supply, especially during drought years. The project would provide better water table control in the City of San Bernardino's high groundwater area and improve water quality in the San Bernardino area.

San Bernardino Municipal Water District and Western have jointly filed two applications with the State Water Resource Control Board to appropriate water from the Santa Ana River (WMWD, 2004b). The applications seek the right to divert up to 200,000 AF-YR of local water to help meet anticipated demands. Over the long-term, the average annual diversions could be as high as 27,000 AF. This project would allow increased capture of storm flows otherwise lost.

A summary of the future projects and programs is provided in Table 17.

3.10 Development of Desalinated Water

3.10.1 Law

Water Code Section 10631(i)

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

3.10.2 Desalination Project Potential in the Western Retail Area

As discussed in Section 3.3, Western does not extract groundwater for retail supply. The retail area generally is underlain by an area characterized by the Regional Water Quality Control Board as not within a designated groundwater basin (California Regional Water Quality Control Board, Santa Ana Region, 1995, Figure 4-1), nor is Western near an ocean water supply. Therefore, Western has no opportunity to provide desalinated water for its retail customers except from wells outside its retail area or by purchase from or exchanges with other agencies. Because no desalination projects are proposed Table 18 as provided in the guidebook is not included in this Plan.

The Arlington Desalter Facility extracts and treats water from the Arlington Groundwater Basin to the north of Western's retail area. The Desalter is owned by SAWPA, and lies outside the Western retail area. The Desalter supplied the City of Norco with 4,594 AF during 2004. The treated groundwater from the Desalter can be pumped into Western's retail area as an emergency supply. However, pumping costs are high and economics limit the usefulness as a normal supply source.

3.11 Current or Projected Supply Includes Wholesale Water

3.11.1 Law

Water Code Section 10631(k)

(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).

3.11.2 Wholesale Water Supply

Western currently receives all non-emergency potable water for its retail service area from Metropolitan Water District of Southern California. This supply is supplemented as needed on an emergency basis with water from the City of Riverside. Western provided demand projections to MWD for the period from 2005 to 2030 (Table 19) and MWD has provided information on the planned sources and quantities in their Regional Urban Water Management Plan (MWD, 2005). MWD's average supply capability for all its member agencies is summarized in Table 20. These supplies exceed the estimated demand (MWD, 2005). A summary of MWD projected total demands and demands for Western's service area is provided in Appendix F.

As previously discussed in Section 3.4.2, MWD's IRPSIM analyses of the IRP Update report shows that Metropolitan can maintain reliable supplies under the conditions that have existed in past dry periods throughout the period 2005 through 2030 (MWD, 2005). Table 21 summarizes MWD expected reliability for drought periods. Potential inconsistencies in MWD supplies were discussed in Section 3.4.3 and summarized below in Table 22.

Table 19. Agency Demand Projections Provided to Wholesale Supplier – AF/YR

Wholesaler	2010	2015	2020	2025	2030
MWD					
Estimated Retail Demand	33,197	38,206	44,108	51,059	59,221
Estimated Wholesale Demand	88,902	101,146	111,837	123,784	134,028

Note: Retail Demand includes water loss.

Table 20. Wholesaler Identified and Quantified Existing and Planned Sources of Water – AF/YR

Wholesaler sources	2010	2015	2020	2025	2030
MWD					
Current Supplies					
Colorado River	711,000	678,000	677,000	677,000	677,000
California Aqueduct	1,772,000	1,772,000	1,772,000	1,772,000	1,772,000
In-Basin Storage	0	0	0	0	0
Supplies Under Development					
Colorado River	0	0	0	0	0
California Aqueduct	185,000	185,000	240,000	240,000	240,000
Transfers to other agencies	0	0	0	0	0
Maximum Supply Capability (1)	2,688,000	2,600,000	2,654,000	2,654,000	2,654,000

Notes: 1 — Represents expected supply capability for resource programs for all of MWD. Source: MWD, 2005

Table 21. Wholesale Supply Reliability - % of Normal Supply

		Multiple Dry Years		
Wholesaler sources	**Single Dry**	**Year 1**	**Year 2**	**Year 3**
MWD	100	100	100	100

Table 22. Factors Resulting in Inconsistency of Wholesaler's Supply

Name of Supply	Legal	Environment	Water Quality	Cimatic
MWD	Competition for new supplies	Endangered species	Contamination of Supply More strigent Water Quality Standards	Drought Conditions

Table 23. Water Supply Shortage Stage and Conditions

Stages No.	Water Supply Conditions (1)	% Reduction in Deliveries
I	Severe Shortage	10% (goal) for firm deliveries, voluntary conservation for non-firm deliveries
II	Extreme Shortage	5% for firm deliveries, 20% for non-firm deliveries
III	Extreme Shortage	10% for firm deliveries, 30% for non-firm deliveries
IV	Extreme Shortage	15% for firm deliveries, 40% for non-firm deliveries
V	Extreme Shortage	20% for firm deliveries, 50% for non-firm deliveries
VI	Extreme Shortage	30% for firm deliveries, 90% for non-firm deliveries

Note: (1) Terminology of Water Surplus and Drought Management Plan (MWD, 2005)

Section 4
Determination of DMM Implementation

4.1 Law

Water Code Section 10631.5

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

4.2 Implemented DMMs

Western is a signatory to the CUWCC MOU regarding Urban Water Conservation in California and has provided the 2004 Best Management Practices Report in Appendix E to show DMM implementation.

Section 5
Water Shortage Contingency plan

Western has prepared a Water Shortage Contingency Plan to respond to water shortages within its retail service area.

5.1 Stages of Action

5.1.1 Law

Water Code Section 10632 (a)

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.

5.1.2 Water Shortage Stages

Supply shortage triggering levels are set by MWD for their supplies of SWP and CRA (MWD, 2005). Under most shortages, MWD believes it will be able to meet demands for water by withdrawals from storage. Should mandatory import water allocations become necessary for a severe long-term drought, allocation will be calculated on the basis of need, rather than historical purchases. The following would be considered for equitable allocation of imported water:

- Impact on retail consumers and regional economy;
- Investments in local resources including recycling and conservation;
- Population growth;
- Changes in local supplies;
- Participation in MWD interruptible programs; and
- Investment in MWD facilities.

Under a severe water shortage, MWD would enforce allocations using rate surcharges of up to 3 times the full-service rate for deliveries exceeding 102% of the allocation.

During a previous drought period, Western developed a Drought Contingency Plan (WMWD, 1992). The plan identified stages of action with required reductions in water use. These stages of action were enforced with mandatory water use restrictions which could also be enforced during future severe water shortages. Water use restrictions included:

- Street/sidewalk Cleaning;
- Washing Cars;
- Watering Lawn/Landscapes;
- Uncorrected Plumbing Leaks;
- Gutter Flooding;
- Restricted Outdoor Watering (watering per schedule only);
- Non-permanent Agriculture;
- Restriction on Construction Water Use; and
- Restrictions on New Landscaping.

5.2 Estimation of Minimum Supply for the Next Three Years

5.2.1 Law

Water Code Section 10632 (b)

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

5.2.2 Supply for 2006 to 2008

The minimum water supply for the next three years has been estimated for the Western retail service area. Based on a three-year drought sequence, both SWP and Colorado River sources could be reduced. However, MWD has identified a resource management plan that should result in 100 percent reliability for non-discounted non-interruptible demands through 2030 (MWD, 2005). A summary of the estimated minimum water supply is provided in Table 24.

5.3 Catastrophic Supply Interruption Plan

5.3.1 Law

Water Code Section 10632 (c)

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

5.3.2 Plan for Water Supply During Catastrophes

For non-drought events, interruption in supplies may occur. Such events may include sudden unexpected occurrences such as fires, floods, earthquakes, accident or sabotage. These types of events could interrupt power supplies or cause damage to facilities. Western participated in the Multi-Jurisdictional Local Hazard Mitigation Plan (LHMP) for the Riverside Operational Area (County of Riverside, 2004) to identify and plan for local hazards. Identified hazards include earthquakes, flooding, hazardous material incidents, power losses, extreme weather, and terrorism as summarized below. Some facilities modification identified in the LHMP may help limit the severity of potential impacts should a catastrophe occur. This would lessen the potential for impact to the water supply.

Table 24. Three-Year Estimated Minimum Water Supply – AF/YR

Source	Normal	2006	2007	2008
MWD-Retail Service Area	26,688	27,755	28,866	29,818
Total	26,688	27,755	28,866	29,818

Notes: Multiple dry years are as described in Section 3.4. Planned Water Supply Projects and Programs
Values include 4% increase for 2006 and 2007, then 3.3% for 2008 to match projected population growth. Normal year is assumed to be 2005.

Western Municipal Water District Critical Facilities Assessed July 2003 Hazard Assessment			
Hazard	**Probability of occurrence**	**2006**	**2007**
Step 1	**Step 2**	**Step 3**	**Step 4**
Natural Events			
Earthquake	3	3	9
Import Failure	2	3	6
Severe Storm	2	2	4
High Winds (70+)	2	2	4
Landslide	0	3	0
Flood	1	2	2
Drought	2	1	2
Man-Made Events			
Waterborne Disease	2	2	4
Fire/Arson	1	3	3
Loss of Key Staff	1	2	2
Full Shortage	1	1	1
Terrorism	1	3	3
Technological Events			
Power Outage	3	3	9
HVAC Failure	2	2	4
SCADA Failure	2	2	4
Computer Virus	3	3	9

Step 2:

0 = Not Applicable
1 = Low
2 = Medium
3 = High

Step 3:

3 = No Early Warning
2 = Short Duration Early Warning
1 = Long Early Warning

Step 4:

Probability X Reaction
The higher the rating, the greater the potential

Table 25. Preparation Actions for a Catastrophe

Possible Catastrophe	Summary of Actions
Regional power outage	Assess facility/systems; Repair or reactivate as appropriate; Work with MWD and local agencies to provide potable water; Perform appropriate community outreach
Earthquake	Assess facility/systems; Repair or reactivate as appropriate; Work with MWD and local agencies to provide potable water; Perform appropriate community outreach; MWD to release from Emergency Storage as required.
Extreme Weather	Assess facility/systems; Repair or reactivate as appropriate; Work with MWD and local agencies to provide potable water; Perform appropriate community outreach
Terrorism/Sabotage (includung computer	Check for signs of contamination; Assess facility/systems; Repair or reactivate as appropriate; Work with MWD and local agencies to provide potable water; Perform appropriate community outreach
Water Borne Disease	Check for signs of contamination; Assess facility/systems; Repair or reactivate as appropriate; Work with MWD and local agencies to provide potable water; Perform appropriate community outreach
System Failure (HVAC and SCADA)	Assess facility/systems; Repair or reactivate as appropriate; Work with MWD and local agencies to provide potable water; Perform appropriate community outreach

To respond to catastrophes, Western has prepared an Emergency Response and Recovery Plan (WMWD, 2005b). This document is designed to prepare Western for a planned response to emergency situations associated with natural disasters, technological incidents, and national security emergencies in, or affecting, a water/ wastewater utility facility and its service area. This plan describes the following:

- Western's emergency management organization required to assist in mitigating any significant emergency or disaster.
- Authorities, policies, responsibilities, and procedures required to protect the health and safety of customers, personnel, and facility property.
- Operational concepts and procedures associated with field response to emergencies, Emergency Operations Center (EOC) activities, and the recovery process.
- Implementation of the Standardized Emergency Management System (SEMS) for use within Riverside County operational area, regional, and state systems.
- Multi-agency and multi-jurisdictional coordination, particularly between Western and local, state, and federal agencies during emergency operations.
- Pre-event emergency planning as well as emergency operations procedures.

This plan has been designed for conformance with SEMS (Government Code Section 8607) and should be used in conjunction with the State Emergency Plan and local emergency plans.

To manage water supply concerns during catastrophes, Western will isolate areas that will take the longest to restore to service and work with local government and MWD to provide alternate water supplies. The Office of Emergency Services has developed a guidance document entitled *Multi-Agency Emergency Response Procedures for Potable Water Procurement and Distribution* to assist water utilities and local governments in meeting the requirement to provide water to the public, and Western will work with this Agency to provide the public with potable water.

In general to manage catastrophes, Western will:

- Set priorities on repair work.
- Plan to restore service area by area.
- Get input from the emergency operations center on essential uses.
- Consider feeder lines.
- Keep in mind the need for firefighting water.
- Request mutual aid/assistance if the needed repairs exceed Western's ability to complete repairs in a timely manner.

The public will be kept informed through activating Western's Water Service Emergency Notification Plan.

MWD has also prepared plans to safeguard from a catastrophic loss of water supply by developing emergency storage (MWD, 2005). MWD emergency storage require-

ments have been based on the potential for a major earthquake damaging aqueducts and causing supply interruptions through the aqueducts for six months. In this scenario, MWD would suspend interruptible service deliveries and firm supplies would be limited to 75% of normal-year demand levels. With only a few exceptions, the emergency supplies would be deliverable through gravity, reducing dependence on power sources.

5.4 Prohibitions, Penalties and Consumption Reduction Methods

5.4.1 Law

Water Code Section 10632 (d-f)

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

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

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

5.4.2 Prohibitions During Water Shortages

Previously, Western has adopted Ordinances to restrict water usage and apply penalties for excess usage using water shortages. Copies of these Ordinances are provided in Appendix G. Although ordinances were rescinded after the water shortage, these restrictions will serve as a model for future needs. A summary of the prohibi-

Table 26. Mandatory Prohibitions

Examples of Prohibitions	Stage When Prohibition Becomes Mandatory
Street/sidewalk Cleaning	May Vary
Washing Vars	May Vary
Watering Lanw/Landscapes	May Vary
Non-permanent Agriculture	May Vary
Uncorrected Plumbing Leaks	May Vary
Gutter Flooding	May Vary
Restricted Outdoor Watering (watering per schedule only)	May Vary
Restriction on Construction Water Use	May Vary
Restriction on New Landscaping	May Vary

Table 27. Consumption Reduction Methods

Consumption Reduction Methods	Stage When Method Takes Effect	Project Reduction (%)
Demand Reduction Program	May Vary	Varies with Stage
Voluntary Rationing	May Vary	10% (Total)
Education Program	May Vary	10% (Total)
Plumbing Fixture Replacement	May Vary	10% (Total)
Mandatory Rationing	May Vary	Up to 50% (Total)
Flow Restriction	May Vary	Up to 50% (Total)
Use Prohibitions	May Vary	Up to 50% (Total)
Water Shortage Pricing	May Vary	Up to 50% (Total)
Per Capita Allotment by Customer Type	May Vary	Up to 50% (Total)
Percentage Reduction by Customer Type	May Vary	Up to 50% (Total)

Table 28. Penalties and Charges

Penalties or Charges	Stages When Penalty Takes Effect
Charge for Excess Use	May Vary
Charge per Unit over Allotment	May Vary

tions is provided in Table 26 and consumption reduction methods in Table 27. Penalties that have been imposed are summarized in Table 28. The stage at which prohibitions become mandatory and consumption reduction methods are imposed could be staggered such that sufficient reductions in demand are achieved. Additional penalties also could be required such as citations for violations of outdoor watering, such as were imposed during the February 2005 water shortage (See Ordinance 358 in Appendix G).

5.5 Analysis of Revenue Impacts of Reduced Sales During Shortages

5.5.1 Law

Water Code Section 10632 (g)

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

5.5.2 Impact to Revenues from Consumption Reduction

Consumption reduction will impact revenues by decreasing the amount of water sold to customers. Historically, the penalties for excess water use have encouraged conservation, thereby, reducing revenues from water sales. Generally, penalties provide only a very small amount of revenues. If the water shortage is deemed temporary, a rate increase may not be required. However, for long-term shortages, immediate rate increases would be considered. A consequence of rate increases may be further conservation by customers. Fixed domestic monthly service charges would not be expected to significantly change due to a water shortage. These charges would provide revenue for operational expenditures.

Water shortages may also impact construction activities. A reduction in construction activities will reduce fees collected by Western such as water service connection fees, engineering services fees such as plan checking, and annexation fees.

A summary of actions and conditions that impact revenues is provided below.

As consumption decreases, some expenditures are expected to increase. Staff costs for community education, enforcement of ordinances, monitoring and evaluation of water use, drought planning, and dealing with customer questions and complaints are expected to rise. If construction is drastically reduced, staff may not be required for certain functions, but it is expected that the increased work load to deal with water shortage issues will more than offset the reduced work load for construction support. Operations and maintenance costs may also increase because of the need to identify and quickly repair all water losses. Power costs may also increase if supplies from temporary sources such as the Arlington Desalter must be used. MWD has adopted a policy expected to stabilize rates during water shortages (MWD, 2005). Therefore, water supply costs from MWD are not expected to increase because of water shortages.

A summary of actions and conditions that impact expenditures is provided below.

Western has developed reserve funds to sustain the revenue and expendi-

Actions and Conditions that Impact Revenues

Type	Anticipated Revenue Reduction
Reduced Sales	Proportional to the decrease in water sales and are expected to range from 10to 30%.
Reduced Construction	Reduction in fees collected during planning and construction activities.

Actions and Conditions that Impact Expenditures

Category	Anticipated cost
Increase Staff Cost	Estimated at 5 to 15%
Increase O&M Cost	Estimated at 5 to 15%
Increase Cost of Supply	Temporary supplies at increase cost. MWD supply cost expected to be stable

ture impacts of a short-term water shortage. Reserve funds could be withdrawn for a 1 to 2 year period to cover the increased costs and reduced revenue. If the water shortage is long-term, rate increases are expected to be considered to mitigate the increased expenditures. Long-term water shortages may also require reducing capital expenditures by delaying projects for major facilities construction, upgrade or replacement, limiting new connections to decrease operational expenditures, and evaluating methods to reduce overhead. Summaries of measures to overcome revenue and expenditure impacts are provided in Table 29 and 30.

Table 29. Proposed Measures to Overcome Revenue Impacts

Names of measures	Summary of Effects
Rate Sales	Proportion to the rate increase and amount of water sold. Increased rates may also decrease water usage.
Reserves	Use of reserves may provide short-term rate stabilization, but require delays in capital expenditures and rebuilding of reserves after the water shortage.

Table 30. Proposed Measures to Overcome Expenditure Impacts

Names of measures	Summary of Effects
Decrease Capital Expenditurs	Delay major construction projects for facilities as well as upgrades and replacements.
Reduce Overhead	If staff reductions required, may impact operations and customer response.

5.6 Draft Ordinance and Use Monitoring Procedure

5.6.1 Law

Water Code Section 10632 (h&i)

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

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

5.6.2 Draft Water Shortage Ordinance

Western has previously adopted several ordinances for water shortages. These ordinances have dealt with drought conditions and water shortage emergencies.

Ordinances passed in 1991 outlined Western's mandatory water use restrictions to deal with water supply cutbacks caused by drought. Conservation measures included:

- Prohibitions on hosing of driveways and sidewalks, and washing of vehicles;
- Timing of landscape watering;
- Serving of water in restaurants and other public places serving food only on request;
- Operation of irrigation systems to avoid overspray, runoff, and waste;
- Prohibition of water use for certain construction uses; and
- Prohibition of new connections unless water efficient landscaping approved by Western was installed.

Customers were recommended to install spa and pool covers, check for indoor leaks, use water saving devices, and incorporate low water demand landscaping in new construction. Surcharges were imposed for excess water consumption.

Copies of the 1991 drought ordinances are provided in Appendix G.

In February 2005, a 5-day shutdown of the MWD treatment plant supplying potable water to Western required mandatory water conservation under a water shortage emergency. Ordinance 358 (provided in Appendix G) restricted all non-essential indoor and outdoor water use to maintain water supply levels necessary for human consumption, sanitation and fire protec-

tion. This water shortage emergency required prohibition of use of potable water for:

- Irrigation of lawns and landscapes, parks, school grounds, golf courses, medians, agriculture, groves and other outdoor planted areas;
- Hosing down of driveways, sidewalks, patios, building walls or other paved areas excepted as required by health and safety codes;
- Washing of cars, trucks, vans, campers, trailers, or other vehicles without using solely a hose with an automatic shutoff nozzle other than at a commercial car wash or service station using reclaimed or recycled water; and
- Construction purposes such as dust control, site cleanup, compaction or street washing.

Additionally, Western could, at any time during the Water Shortage Emergency period, discontinue wholesale water deliveries.

Similar ordinances would be passed in the event of a future water shortage.

5.6.3 Use Monitoring Procedures

Western monitors sales and deliveries on a monthly and daily basis. All Western's water sales are metered and all connections are read monthly. Water orders are scheduled on a daily basis with water deliveries recorded daily. Water deliveries and transfers at booster stations can be monitored through Western's SCADA system to determine usage in various portions of the retail area.

Table 31 summarizes the water use monitoring mechanisms.

Table 31. Water Use Monitoring Mechanisms

Mechanisms for determining actual reductions	Type and Quality of Data Expected
Normalized/Average Water Use Baseline Used to Determine Reduction	Quantity Comparisons of Previous Water Use, expected to be within approximately 10% if weather conditions are similar and other user conditions have not changed.

Section 6
Recycled Water Plan

6.1 Law

Water Code Section 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:

6.2 Introduction

Western Municipal Water District is responsible for the collection and treatment of wastewater at the March Wastewater Reclamation Facility (WWRF). The wastewater collection and treatment system originally served an Air Force installation. This installation has been realigned from an active military base to an Air Reserves Base with the on-going conversion of a large portion of the former facility to non-military uses. Additionally, the wastewater collection and treatment area is expanding to include an area of former agricultural lands that is rapidly changing into residential and commercial developments. The portion of the Western retail service area that is served by the March WWRF is shown in Figure 3. Wastewater in the remainder of the retail service area is collected and treated by the City of Riverside or the West Riverside County Regional Wastewater Treatment Plant or individual septic treatment systems. The City of Riverside sewer collection system area is shown in Figure 4. The West Riverside County Regional Wastewater Treatment Plant

services the Lake Hills area in the extreme northwest portion of Western's retail area.

Many private septic systems serve residences in the less-densely developed area of Western's retail service area. Prior to 1988 all homes and business in the retail service area were on septic systems and the majority of those units remain on septic systems, as well as additional homes in outlying areas not near a location with a sewage collection system. After 1988, some areas were annexed into the City of Riverside and installation of sewers began.

6.3 Coordination

Western has coordinated the development of the plan with the appropriate agencies. Western owns and operates the water delivery system through its retail area with minor exceptions that are served by the City of Riverside. Western also operates the March WWRF and the West Riverside County Regional Wastewater Treatment Plant. Only a small portion of the retail area is serviced by a wastewater collection system operated by the City of Riverside. The City of Riverside has been provided a copy of the draft UWMP for review. The City and County of Riverside are the planning agencies with jurisdiction in the Western retail area, and they have also been provided with a copy of the draft UWMP for review.

6.4 Wastewater Quantity, Quality and Current Uses

6.4.1 Law

Water Code Section 10633 (a-c)

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

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

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

Table 32. Participating Agencies

	Role in Plan Development
Water agencies	Provided for review
Wastewater agencies	Provided for review
Groundwater agencies	NA
Planning agencies	Provided for review

6.4.2 Wastewater Collection and Treatment in the Retail Service Area

The March Wastewater Reclamation Facility (WWRF) currently treats to secondary standards approximately 0.3 million gallons per day (MGD) collected from the area shown in Figure 3. An ongoing upgrade of the facility will allow the plant to treat up to 1.0 MGD. It is predicted that the increased residential and commercial load to the facility will require expansion to treat up to 5 MGD within the next 25 years.

The treated wastewater is currently reclaimed for irrigation at a public golf course and the Riverside National Cemetery. These two irrigators use, on average, 0.75 MGD for seven months of the year. When wastewater flow exceeds irrigation demands (during the winter months), the treated wastewater is stored in an existing 40 million gallon pond until demand increases. The existing distribution system for the reclaimed water from the March WWRF consists of storage ponds and piping to deliver water only to the public golf course and the Riverside National Cemetery north of the treatment plant. Treated wastewater is stored in a pond at the treatment plant and pumped out to the users on demand. When irrigation demand exceeds the treatment plant supply, untreated imported water from the Colorado River Aqueduct purchased from MWD is pumped and gravity fed through an existing non-potable irrigation distribution system to a holding pond southwest of the golf course. This water then can be delivered from the holding pond to the public golf course and the Riverside National Cemetery.

Currently treated wastewater cannot be fed into the existing non-potable irrigation distribution system.

The existing non-potable distribution system consists of an interconnected series of pipelines, reservoirs and pump stations designed to distribute non-potable water through a large area of the District. The water in this system can be derived from two sources - imported water from Metropolitan Water District of Southern California (MWD) or non-potable groundwater pumped from a nearby groundwater basin and delivered via a canal and pump station to the system. Not including the facilities delivering non-potable groundwater, the non-potable irrigation distribution system has approximately 180,000 feet of main pipelines ranging from 42 inches to 8 inches in diameter. Pump stations and gravity feed from reservoirs move water to the extremes of the distribution system. There is available storage capacity of approximately 19 million gallons in nine tanks, not including holding ponds for irrigation of the public golf course and the Riverside National Cemetery. The main system has 23 pumps in 6 pump stations with a combined rating of 4285 horsepower.

With the expansion of the March WWRF, additional recycled water will be available in excess of that used by the public golf course and the National Cemetery. This will require integration of the system distributing treated wastewater to the golf course and the National Cemetery with the existing non-potable distribution system. A study is currently underway to provide the required information for conversion of the system for use of recycled water.

Wastewater volumes treated at the March WWRF are expected to increase. Commercial and residential wastewater volumes are expected to be 2250 AF in 2010 based on currently anticipated growth. Using a growth factor of 3.3% per year from 2010 to 2030, volumes treated at the March WWRF will reach 3780 AF in 2030. A summary of estimated wastewater volumes to March WWRF is provided in Table 33. All treated wastewater from the March WWRF is expected to be recycled for irrigation or industrial purposes. As shown in Table 34, no recycled water is expected to be disposed of by methods other than beneficial use. Table 35a provides the amount of recycled water sent to the golf course and cemetery in 2005.

Wastewater is collected in the areas within the City of Riverside shown on Figure 4 by the City of Riverside for treatment at the Riverside Regional Water Quality Control Plant. Minor amounts are reclaimed for irrigation use and the remainder is discharged to the Santa Ana River for downstream and in-stream uses. A majority of the discharge flow is required to meet downstream water right obligations (Orange County Water District vs. City of Chino et. al., Case #117628). The City of Riverside has conceptual plans to expand recycling (Personal communication, Rod Cruze, City of Riverside, March 2005).

Wastewater from the Lake Hills area in the extreme northwestern portion of Western's retail service area flows to the Western Riverside County Wastewater Treatment Plant. This plant also receives flows from the City of Norco and unincorporated areas of Riverside County. Treated wastewater from this facility is currently discharged to the Santa Ana River. However, diversion of some of the flows to the City of Norco for landscape

Table 33. Wastewater Collected and Treated – AF/YR

Water Distributed	2000	2005	2010	2015	2020	2025	2030
Wastewater collected & treated in service area	386	450	2680	3850	4430	5210	6130
Volume that meets recycled water standard	386	450	2680	3850	4430	5210	6130

Table 34. Disposal of Wastewater (non-recycled) - AF/YR

Water Distributed	Treatment Level	2005	2010	2015	2020	2025	2030
	Total	0	0	0	0	0	0

Note: All wastewater from the March WWRF is and will be recycled. Depending on rainfall, some storm water may require disposal, on an emergency basis.

irrigation will be initiated in mid-2005. It is estimated that up to 3 MGD of treated wastewater may be supplied to the City of Norco for parkway irrigation and supply of Lake Norcoian.

In areas of Western's retail area not serviced by the systems described above, septic systems are still in use.

Table 35a. Recycled Water Uses – Actual AF/YR

User type	Treatment Level	2005
Agriculture		0
Landscape	Secondary	450
Wildlife Habitat		0
Wetlands		0
Industrial		0
Groundwater Recharge		0
	Total	0

Note: Actual volumes through mid- 2005. Remainder of year is estimated based on historic demand.

6.5 Potential and Projected Use, Optimization Plan with Incentives

6.5.1 Law

Water Code Section 10633 (d-g)

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

(e) The projected use of recycled water within the supplier's service area at the end of 5, 10, 15, and 20 years, and a description of the actual use of recycled water in comparison to uses previously projected pursuant to this subdivision.

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

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

Table 35b. Recycled Water Uses – Potential AF/YR

User type	Treatment Level	2010	2015	2020	2025	2030
Agriculture/Landscape	Tertiary	2,100	2,970	3,910	4,920	6,020
Landscape	Secondary	1,100	1,150	1,210	1,270	1,340
Wildlife Habitat		0	0	0	0	0
Wetlands		0	0	0	0	0
Industrial		0	0	0	0	0
Groundwater Recharge		0	0	0	0	0
	Total	3,200	4,120	5,120	6,190	7,360

Note: This table provides information for the March WWRF. Assumes 3% increase in usage of tertiary treated wastewater per 5 year increment. Additional wastewater from Western's retail area may be recycled at the Western Riverside County Wastewater Treatment Facility and the Riverside Regional Water Quality Control Plant. Flows from Western will be a small percentage of the total flows to these plants, and, therefore, a small percentage of the wastewater recycled from these plants.

6.5.2 Future Recycled Water Uses in Retail Service Area

As previously discussed, recycled water from the March WWRF will be available for additional uses with the upgrade to tertiary treatment. The amount of available recycled water is anticipated to increase within the next 5 to 10 years as the flows to the March WWRF increase with the rapid expansion of residential and commercial development in the District. As flows exceed the demands of the golf course and the Riverside National Cemetery, the excess reclaimed water must be either reused, discharged, or allowed to percolate. With construction of the tertiary treatment facilities and associated interconnection to the distribution system, it is expected that all recycled wastewater generated can be used at various locations. Current agricultural users, including nurseries, could then be supplied tertiary treated reclaimed water through the existing non-potable distribution

Table 36. Projected Future Use of Recycled Water in Service Area – AF/YR

User type	Treatment Level	2010	2015	2020	2025	2030
Agriculture/Landscape	Secondary	1,100	1,150	1,210	1,270	1,340
Landscape	Tertiary	1,580	2,700	3,220	3,940	4,790
Wildlife Habitat		0	0	0	0	0
Wetlands		0	0	0	0	0
Industrial		0	0	0	0	0
Groundwater Recharge		0	0	0	0	0
	Total	2,680	3,850	4,430	5,210	6,130

system. The existing distribution system can supply up to 7,200 gallons per minute to potential users. Table 35b provides a summary of the potential for use of recycled water. These projections are based on historic use of non-potable water within Western's retail service area, including the golf course and national cemetery. Additional landscape users such as new golf course, school playgrounds and parks are expected. Table 36 shows the expected available recycled water for these potential users.

In the 2000 Urban Water Management Plan, recycled water use was expected to increase rapidly. It was also anticipated that the interconnection to the treatment plant would be completed. However, actual usage is less than estimated 5 years ago as summarized in Table 37. One major factor has been the decreased agricultural uses. Additionally, other sources of non-potable water such as the importation of groundwater from a nearby basin have reduced the urgency to expend the funds for treatment plant upgrades and pipeline interconnection as long as all treated wastewater is being recycled at the golf-course and cemetery.

Table 37. Recycled Water Uses – 2000 Projection Compared with 2005 Actual – AF/YR

User type	2000 Projection for 2005	2005 use
Agriculture/Landscape	6,000	0
Landscape	5,500	450
Wildlife Habitat		
Wetlands		
Industrial		
Groundwater Recharge		
Total	11,500	450

Table 38. Methods to Encourage Recycled Water Use

User type	AF of use projected to result from this action				
Agriculture/Landscape	2010	2015	2020	2025	2030
Landscape	X	X	X	X	X
Wildlife Habitat	X	X	X	X	X
Wetlands	X	X	X	X	X
Total	3	3	3	3	3

Methods are being pursued to encourage use of recycled water. It is expected that recycled water will be available to customers at rates below that of potable water. It is also expected that recycled water use will be mandated by ordinance at sites where recycled water is available and can be properly used. Additionally, industrial/commercial developers near non-potable distribution pipelines are required to plan for the future use of recycled water. This includes installation of proper piping and facilities to minimize economic impacts when recycled water becomes available at the use site. This is being implemented through the plan checking process, with plans not approved until required recycled water facilities are designed. Western also launched a public outreach campaign in 2005 to inform the general public about the benefits of use of recycled water. A summary of the methods to encourage use of recycled water is provided in Table 38.

Section 7
Water Quality Impacts on Reliability

7.1 Law

Water Code Section 10634

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

Table 39. Wastewater Collected and Treated – AF/YR

Water Source	2005	2010	2015	2020	2025	2030
Potable: SWP	0	0	0	0	0	0
Non-potable: CRA, Recycled and Groundwater	0	0	0	0	0	0

7.2 Water Quality Effects to Water Management Strategies and Reliability

For potable water, Western relies almost entirely on SWP. The salinity of SWP delivered to Western is generally less than 300 mg/L and not a significant concern. In drought periods this may rise and was up to 430 mg/L in the 1977 drought (MWD, 2005). Other water quality issues to SWP include total organic carbon, bromide, pathogenic microbes and other unknown contaminants. The Delta Improvement Package including the Franks Tract levee modification is a series of projects designed to increase water supply reliability, improved water quality, environmental protection and ecosystem restoration, protection of the Delta Levee system, and improved real-time and long-term management. Supply reliability would also be enhanced. Recent modeling has shown that bromide concentrations could be significant reduced by modifications of the Franks Tract levee. Currently there are no significant constraints due to water quality. If projects continue as planned no reduction in supply due to water quality are projected.

Non-potable water may be supplied by CRA, recycled water, or purchased imported groundwater. Because this is used for non-potable purposes such as landscape irrigation, there is no expected reduction in water supply due to water quality.

Table 39 summarized the current and projected water supply changes due to water quality.

Section 8
Water Service Reliability

8.1 Law

Water Code Section 10635

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

(b) The urban water supplier shall provide that portion of its urban water management plan prepared pursuant to this article to any city or county within which it provides water supplies no later than 60 days after the submission of its urban water management plan.

(c) Nothing in this article is intended to create a right or entitlement to water service or any specific level of water service.

(d) Nothing in this article is intended to change existing law concerning an urban water supplier's obligation to provide water service to its existing customers or to any potential future customers.

8.2 Projected Normal Water Year Supply and Demand

The projected normal water year supply includes both potable water from the SWP for various uses and untreated non-potable water from the CRA for agricultural and landscape irrigation. Wholesale water sales also comprise a portion of the supply Western receives from MWD. MWD has projected that sufficient supplies exist to meet demands for their agencies (MWD, 2005). Therefore, supplies will equal demands since MWD will deliver the needed quantities of water while placing supplies not required on a yearly basis into storage for use in droughts or emergency conditions. Table 40 summarizes the projected supply for the Western retail and wholesale transactions. These supplies will be used to meet the demand summarized in Table 41. A comparison of the supply and demand is provided in Table 42.

Table 40. Projected Normal Water Year Supply – AF/YR

Water Source	2010	2015	2020	2025	2030
Supply					
Retail Service Area	33,197	38,206	44,108	51,059	59,221
Wholesale Water Sales	88,902	101,146	111,837	123,784	134,028
% of Normal year	100	100	100	100	100

Note: Normal Year supply will vary as MWD brings on additional supplies.

Table 41. Projected Normal Water Year Demand – AF/YR

	2010	2015	2020	2025	2030
Demand					
Retail Service Area	33,197	38,206	44,108	51,059	59,221
% of Year 2005	116%	134%	154%	179%	207%
Wholesale Water Sales	88,902	101,146	111,837	123,784	134,028
% of Year 2005	114%	130%	143%	159%	172%

Note: See Table 12, 13, 14 and 15 for further details.

Table 42. Projected Normal Year Supply and Demand Comparison – AF/YR

	2010	2015	2020	2025	2030
Retail Service Area					
Supply Totals	33,197	38,206	44,108	51,059	59,221
Demand Totals	33,197	38,206	44,108	51,059	59,221
Difference (Supply Minus D Demand)	0	0	0	0	0
Difference as % of Supply	0	0	0	0	0
Difference as % of Demand	0	0	0	0	0
Wholesale Water Sales					
Supply Totals	88,902	101,146	111,837	123,784	134,028
Demand Totals	88,902	101,146	111,837	123,784	134,028
Difference (Supply Minus D Demand)	0	0	0	0	0
Difference as % of Supply	0	0	0	0	0
Difference as % of Demand	0	0	0	0	0

Table 43. Projected Single Dry Year Supply – AF/YR

Water Source	2010	2015	2020	2025	2030
Supply					
Retail Service Area	33,197	38,206	44,108	51,059	59,221
Wholesale Water Sales	91,174	104,098	115,339	127,936	138,930
% of Projected Normal	101%	102%	102%	102%	102%

Note: Normal as defined on Table 40.

Table 44. Projected Single Dry Year Demand – AF/YR

Water Source	2010	2015	2020	2025	2030
Demand					
Retail Service Area	33,197	38,206	44,108	51,059	59,221
Wholesale Water Sales	91,174	104,098	115,339	127,936	138,930
% of Projected Normal	104%	104%	104%	104%	104%

Note: Normal as defined on Table 41.

Table 45. Projected Single Dry Year Supply and Demand Comparison – AF/YR

	2010	2015	2020	2025	2030
Retail Service Area					
Supply Totals	33,197	38,206	44,108	51,059	59,221
Demand Totals	33,197	38,206	44,108	51,059	59,221
Difference (Supply Minus D Demand)	0	0	0	0	0
Difference as % of Supply	0	0	0	0	0
Difference as % of Demand	0	0	0	0	0
Wholesale Water Sales					
Supply Totals	91,174	104,098	115,339	127,936	138,930
Demand Totals	91,174	104,098	115,339	127,936	138,930
Difference (Supply Minus D Demand)	0	0	0	0	0
Difference as % of Supply	0	0	0	0	0
Difference as % of Demand	0	0	0	0	0

8.3 Projected Single Dry Year Supply and Demand Comparison

MWD has predicted that sufficient supply exists to meet demands for single dry year requirements. As required, droughts may prompt additional water conservation measures to ensure sufficient supply is maintained. However, normal demands are used to provide conservative estimations of demand. MWD has projected that sufficient supplies exist to meet demands during dry years for their agencies (MWD, 2005). Therefore, supplies will equal demands since MWD will deliver only the needed quantities of water. Supplies during years of excess water that are not required for normal demands will be placed into storage for use in droughts or emergency conditions. A summary of projected single dry year supply is summarized in Table 43, single dry year demand in Table 44, and a comparison in Table 45.

8.4 Projected Multiple Dry Year Supply and Demand Comparison

MWD has predicted that sufficient supply exists to meet demands for multiple dry year requirements. As required, droughts may prompt additional water conservation measures to ensure sufficient supply is maintained. However, normal demands are used to provide conservative estimations of demand. MWD has projected that sufficient supplies exist to meet demands during dry years for

Table 46. Projected Supply During Multiple Dry Year Period Ending in 2010 – AF/YR

Water Source	2006	2007	2008	2009	2010
Supply					
Retail Service Area	29,557	30,715	31,403	32,286	33,197
Wholesale Water Sales	81,856	84,185	86,515	88,844	91,174
% of Projected Normal	102%	102%	102%	102%	103%

Note: Normal as defined on Table 40. Multiple Dry Year Period is based on Table 8.

Table 47. Projected Demand During Multiple Dry Year Period Ending in 2010 – AF/YR

Water Source	2006	2007	2008	2009	2010
Demand					
Retail Service Area	29,557	30,715	31,403	32,286	33,197
Wholesale Water Sales	81,856	84,185	86,515	88,844	91,174
% of Projected Normal	102%	102%	102%	102%	103%

Note: Normal as defined on Table 41. Multiple Dry Year Period is based on Table 8.

Table 48. Projected Supply and Demand Comparison During Multiple Dry Year Period Ending in 2010– AF/YR

	2006	2007	2008	2009	2010
Retail Service Area					
Supply Totals	29,557	30,715	31,403	32,286	33,197
Demand Totals	29,557	30,715	31,403	32,286	33,197
Difference (Supply Minus D Demand)	0	0	0	0	0
	0	0	0	0	0
Difference as % of Demand	0	0	0	0	0
Wholesale Water Sales					
Supply Totals	81,856	84,185	86,515	88,844	91,174
Demand Totals	81,856	84,185	86,515	88,844	91,174
Difference (Supply Minus D Demand)	0	0	0	0	0
Difference as % of Supply	0	0	0	0	0
Difference as % of Demand	0	0	0	0	0

their agencies (MWD, 2005). Therefore, supplies will equal demands since MWD will deliver only the needed quantities of water. Supplies during years of excess water not required for normal demands will be placed into storage for use in droughts or emergency conditions. A summary of projected multiple year supply is summarized in Table 46, multiple dry year demand in Table 47, and a comparison in Table 48 for the period ending 2010. A summary of projected multiple year supply is summarized in Table 49, multiple dry year demand in Table 50, and a comparison in Table 51 for the period ending 2015. A summary of projected multiple year supply is summarized in Table 52, multiple dry year demand in Table 53, and a comparison in Table 54 for the period ending 2020. A summary of projected multiple year supply is summarized in Table 55, multiple dry year demand in Table 56, and a comparison in Table 57 for the period ending 2025. A summary of projected multiple year supply is summarized in Table 58, multiple dry year demand in Table 59, and a comparison in Table 60 for the period ending 2030.

Table 49. Projected Supply During Multiple Dry Year Period Ending in 2015 – AF/YR

Water Source	2011	2012	2013	2014	2015
Supply					
Retail Service Area	34,138	35,109	36,110	37,142	38,207
Wholesale Water Sales	93,758	96,343	98,928	101,513	104,098
% of Projected Normal	102%	102%	102%	102%	103%

Note: Normal as defined on Table 41. Multiple Dry Year Period is based on Table 8.

Table 50. Projected Demand During Multiple Dry Year Period Ending in 2015 – AF/YR

Water Source	2011	2012	2013	2014	2015
Demand					
Retail Service Area	34,138	35,109	36,110	37,142	38,207
Wholesale Water Sales	93,758	96,343	98,928	101,513	104,098
% of Projected Normal	102%	102%	102%	102%	103%

Note: Normal as defined on Table 41. Multiple Dry Year Period is based on Table 8.

Table 51. Projected Supply and Demand Comparison During Multiple Dry Year Period Ending in 2015– AF/YR

	2011	2012	2013	2014	2015
Retail Service Area					
Supply Totals	34,138	35,109	36,110	37,142	38,207
Demand Totals	34,138	35,109	36,110	37,142	38,207
Difference (Supply Minus D Demand)	0	0	0	0	0
Difference as % of Supply	0	0	0	0	0
Difference as % of Demand	0	0	0	0	0
Wholesale Water Sales					
Supply Totals	93,758	96,343	98,928	101,513	104,098
Demand Totals	93,758	96,343	98,928	101,513	104,098
Difference (Supply Minus D Demand)	0	0	0	0	0
Difference as % of Supply	0	0	0	0	0
Difference as % of Demand	0	0	0	0	0

Table 52. Projected Supply During Multiple Dry Year Period Ending in 2020 – AF/YR

Water Source	2016	2017	2018	2019	2020
Supply					
Retail Service Area	39,316	40,460	41,639	42,855	44,109
Wholesale Water Sales	106,346	108,594	110,842	113,090	115,339
% of Projected Normal	103%	103%	103%	103%	103%

Note: Normal as defined on Table 40. Multiple Dry Year Period is based on Table 8.

Table 53. Projected Demand During Multiple Dry Year Period Ending in 2020 – AF/YR

Water Source	2011	2012	2013	2014	2015
Demand					
Retail Service Area	39,316	40,460	41,639	42,855	44,109
Wholesale Water Sales	106,346	108,594	110,842	113,090	115,339
% of Projected Normal	103%	103%	103%	103%	103%

Note: Normal as defined on Table 41. Multiple Dry Year Period is based on Table 8.

Table 54. Projected Supply and Demand Comparison During Multiple Dry Year Period Ending in 2020 – AF/YR

	2016	2017	2018	2019	2020
Retail Service Area					
Supply Totals	39,316	40,460	41,639	42,855	44,109
Demand Totals	39,316	40,460	41,639	42,855	44,109
Difference (Supply Minus D Demand)	0	0	0	0	0
Difference as % of Supply	0	0	0	0	0
Difference as % of Demand	0	0	0	0	0
Wholesale Water Sales					
Supply Totals	106,346	108,594	110,842	113,090	115,339
Demand Totals	106,346	108,594	110,842	113,090	115,339
Difference (Supply Minus D Demand)	0	0	0	0	0
Difference as % of Supply	0	0	0	0	0
Difference as % of Demand	0	0	0	0	0

Table 55. Projected Supply During Multiple Dry Year Period Ending in 2025 – AF/YR

Water Source	2021	2022	2023	2024	2025
Supply					
Retail Service Area	45,415	46,762	48,151	49,583	51,059
Wholesale Water Sales	117,858	120,377	122,897	125,416	127,936
% of Projected Normal	103%	103%	103%	103%	103%

Note: Normal as defined on Table 40. Multiple Dry Year Period is based on Table 8.

Table 56. Projected Demand During Multiple Dry Year Period Ending in 2025 – AF/YR

Water Source	2021	2022	2023	2024	2025
Demand					
Retail Service Area	45,415	46,762	48,151	49,583	51,059
Wholesale Water Sales	117,858	120,377	122,897	125,416	127,936
% of Projected Normal	103%	103%	103%	103%	103%

Note: Normal as defined on Table 41. Multiple Dry Year Period is based on Table 8.

Table 57. Projected Supply and Demand Comparison During Multiple Dry Year Period Ending in 2025 – AF/YR

	2021	2022	2023	2024	2025
Retail Service Area					
Supply Totals	45,415	46,762	48,151	49,583	51,059
Demand Totals	45,415	46,762	48,151	49,583	51,059
Difference (Supply Minus D Demand)	0	0	0	0	0
Difference as % of Supply	0	0	0	0	0
Difference as % of Demand	0	0	0	0	0
Wholesale Water Sales					
Supply Totals	117,858	120,377	122,897	125,416	127,936
Demand Totals	117,858	120,377	122,897	125,416	127,936
Difference (Supply Minus D Demand)	0	0	0	0	0
Difference as % of Supply	0	0	0	0	0
Difference as % of Demand	0	0	0	0	0

Table 58. Projected Supply During Multiple Dry Year Period Ending in 2030 – AF/YR

Water Source	2026	2027	2028	2029	2030
Supply					
Retail Service Area	52,593	54,175	55,806	57,487	59,221
Wholesale Water Sales	130,134	132,333	134,532	136,731	138,930
% of Projected Normal	103%	103%	103%	103%	104%

Note: Normal as defined on Table 40. Multiple Dry Year Period is based on Table 8.

As shown, supplies are expected to meet demands for all multiple dry year scenarios.

Section 9
Adoption and Implementation of UWMP

9.1 Law

Water Code Section 10640-10645

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

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

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

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

10644. (a) An urban water supplier shall submit to the department, the California State Library,

Table 59. Projected Demand During Multiple Dry Year Period Ending in 2030 – AF/YR

Water Source	2026	2027	2028	2029	2030
Demand					
Retail Service Area	52,593	54,175	55,806	57,487	59,221
Wholesale Water Sales	130,134	132,333	134,532	136,731	138,930
% of Projected Normal	103%	103%	103%	103%	104%

Note: Normal as defined on Table 41. Multiple Dry Year Period is based on Table 8.

Table 60. Projected Supply and Demand Comparison During Multiple Dry Year Period Ending in 2030– AF/YR

	2026	2027	2028	2029	2030
Retail Service Area					
Supply Totals	52,593	54,175	55,806	57,487	59,221
Demand Totals	52,593	54,175	55,806	57,487	59,221
Difference (Supply Minus D Demand)	0	0	0	0	0
Difference as % of Supply	0	0	0	0	0
Difference as % of Demand	0	0	0	0	0
Wholesale Water Sales					
Supply Totals	132,333	134,532	136,731	138,930	132,333
Demand Totals	132,333	134,532	136,731	138,930	132,333
Difference (Supply Minus D Demand)	0	0	0	0	0
Difference as % of Supply	0	0	0	0	0
Difference as % of Demand	0	0	0	0	0

and any city or county within which the supplier provides water supplies a copy of its plan no later than 30 days after adoption. Copies of amendments or changes to the plans shall be submitted to the department, the California State Library, and any city or county within which the supplier provides water supplies within 30 days after adoption.

(b) The department shall prepare and submit to the Legislature, on or before December 31, in the years ending in six and one, a report summarizing the status of the plans adopted pursuant to this part. The report prepared by the department shall identify the outstanding elements of the individual plans. The department shall provide a copy of the report to each urban water supplier that has submitted its plan to the department. The department shall also prepare reports and provide data for any legislative hearings designed to consider the effectiveness of plans submitted pursuant to this part.

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

9.2 Adoption Resolution

Western has adopted the 2005 Urban Water Management Plan with Resolution No. 2388. A copy of the resolution is provided in Appendix B.

9.3 DMM Implementation

At its regular meeting held on January 12, 1994, Western's Board of Directors authorized signing the Memorandum of Understanding regarding Urban Water Conservation in California. Since signing the MOU, Western has worked to implement the California Urban Water Conservation Council's Best Management Practices (BMPs) throughout its service area. A copy of the Minutes of the meeting is provided in Appendix E along with the BMP reports.

9.4 Public Review of 2005 UWMP

Public review of the 2005 Urban Water Management Plan included a public meeting conducted on December 7th. Documentation of

the announcement of the public meeting is provided in Appendix H. The draft Plan was made available prior to the public meeting to provide opportunity for review prior to the meeting. Comments received on the Plan at the public meeting include:

No comments received during public review period.

All comments on the 2005 UWMP were resolved prior to finalization of the document.

9.5 Distribution of 2005 UWMP

The final Western Municipal Water District 2005 UWMP was distributed to the following entities:

- City of Riverside;
- City of Corona;
- City of Norco;
- County of Riverside;
- MWD of Southern California;
- Rancho California Water District;
- Box Spring Mutual Water Company;
- SAWPA;
- Rubidoux Community Services District;
- Jurupa Community Services District;
- Elsinore Valley Municipal Water District;
- Home Gardens County Water District; and
- Lee Lake Water District.

Copies of the Plan are available to the general public upon request.

California Regional Water Quality Control Board, Santa Ana Region, 1995
Water Quality Control Plan Santa Ana River Basin (8).

City of Riverside, 2004.
General Plan and Supporting Documents, Environmental Impact Report.

County of Riverside, 2003.
General Plan, October 2003.

County of Riverside, 2004.
Multi-Jurisdictional Local Hazard Mitigation Plan (LUMP), Riverside Operational Area.

David Taussing & Associates, Inc. 2003.
Western Riverside County Multiple Species Habitat Conservation Plan, Final Mitigation Fee Nexus Report, July 2003.

Department of Water Resources Bay-Delta Office, 2002.
The State Water Project Delivery Reliability Report.

Dudek & Associates, Inc., 2005.
Riverside LAFCO, Water & Wastewater Municipal Service Review, Final Report, February 2005.

MWD, 2005.
Draft Regional Urban Water Management Plan, May 2005.

Southern California Association of Governments, 2004.
2004 Regional Transportation Plan/Growth Vision: Socio-Economic Forecast Report, June 2004.

U.S. Census Bureau,
American FactFinder Web Site 2005
County and City Data Book: 2000.

WMWD, 1992.
The Drought Contingency Plan of Western Municipal Water District of Riverside County, January 1992.

WMWD, 2004a.
Santa Ana River Water Right Application for Supplemental Water Supply, Draft Environmental Impact Report, October 2004.

WMWD, 2004b.
Santa Ana River Water Right Application for Supplemental Water Supply, Community Report, October 2004.

WMWD, 2005a.
Riverside-Corona Feeder Program Environmental Impact Report, prepared by Albert Webb & Associates, May 2005.

WMWD, 2005b.
Emergency Response and Recovery Plan, January 2005.

LIST OF ACRONYMS

AF	Acre-Feet
AF/YR	Acre-Feet per Year
BMP	Best Management Practices
CRA	Colorado River Aqueduct
DMM	Demand Management Measures
IWRP	Integrated Water Resources Plan
MG	Million Gallons
MWD	Metropolitan Water District of Southern California
SAWPA	Santa Ana Watershed Project Authority
SCAG	Southern California Association of Governments
SWP	State Water Project
UWMP	Urban Water Management Plan
WMWD	Western Municipal Water District
WWRF	Wastewater Reclamation Facility

FIGURES

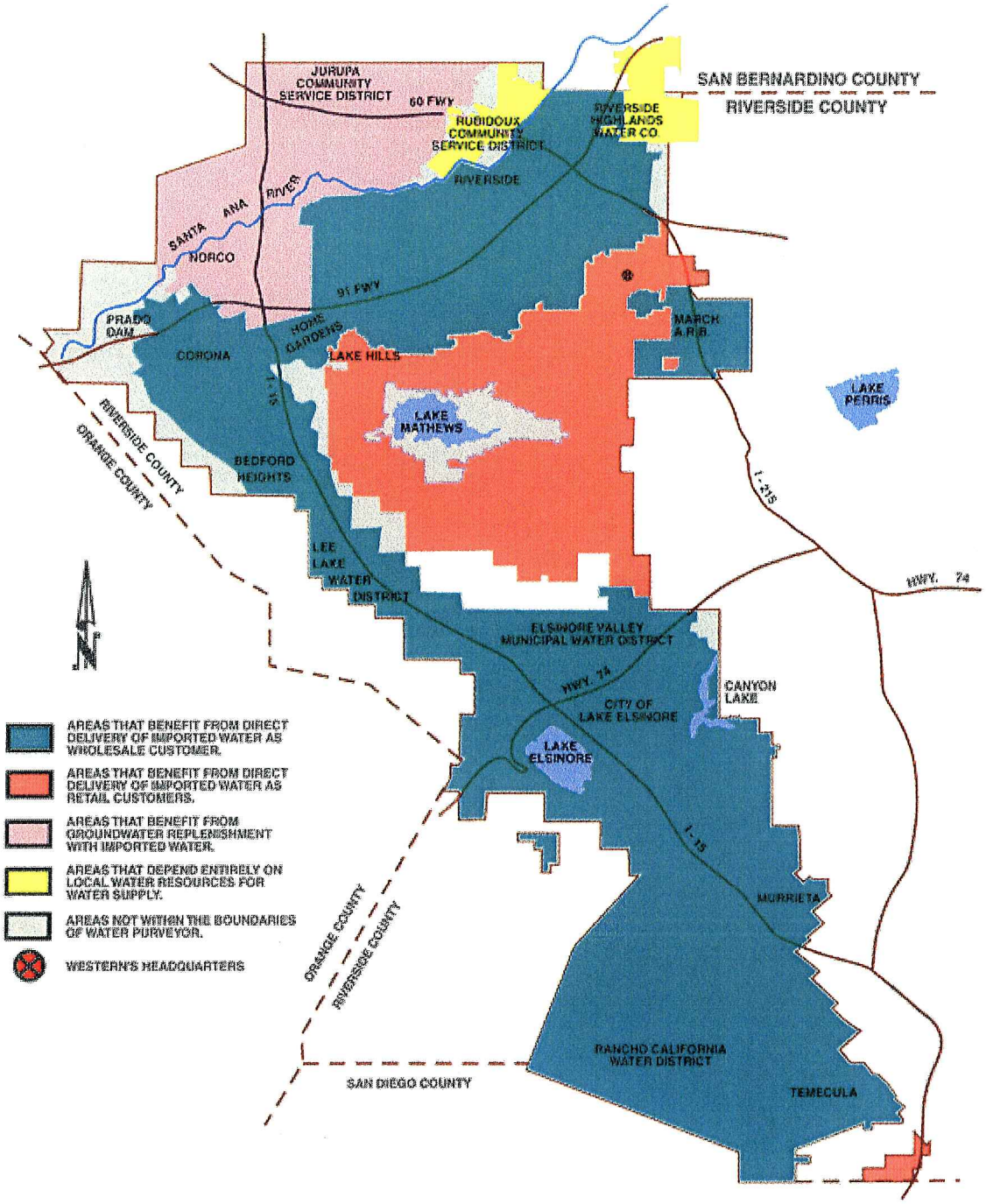
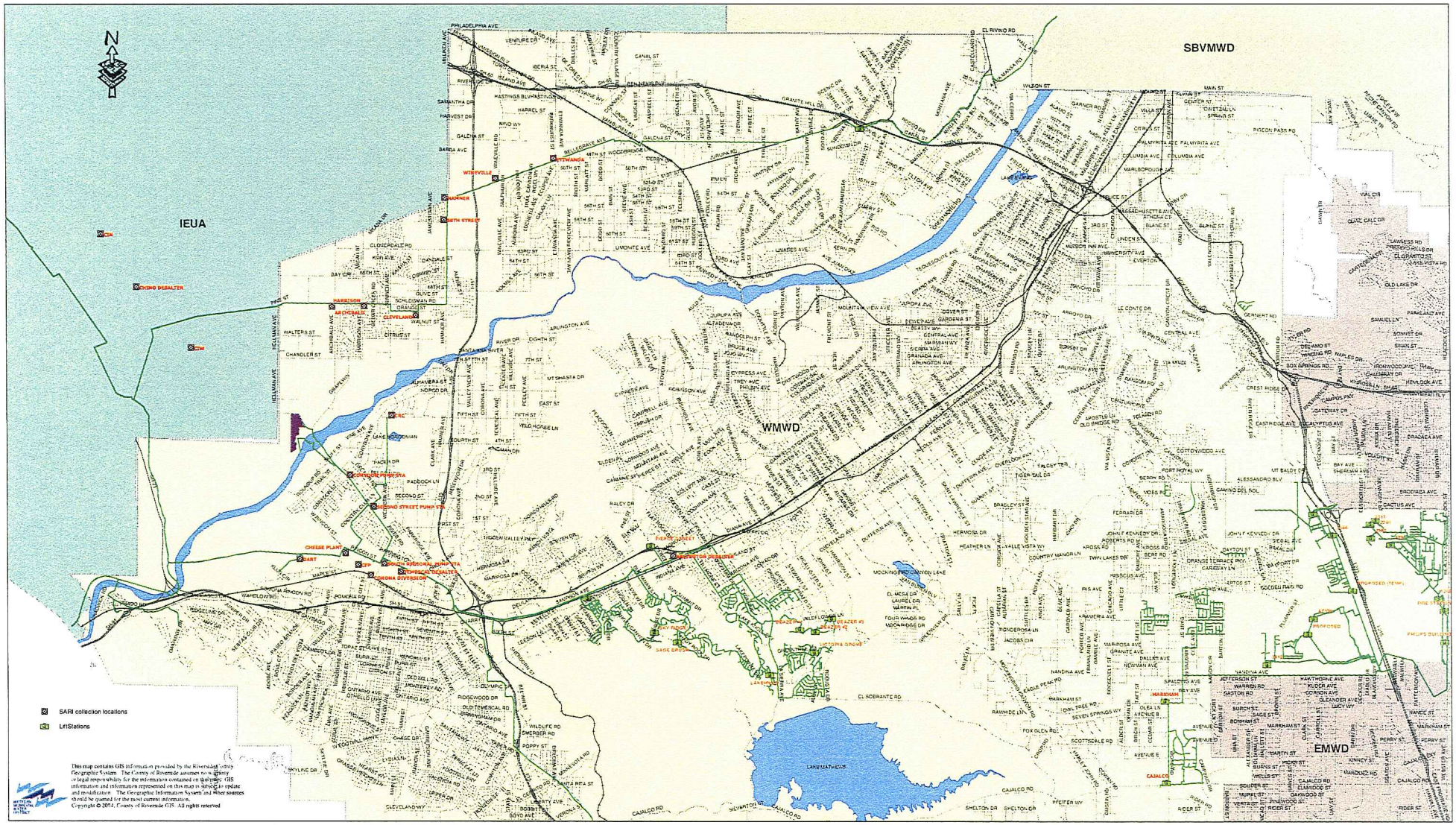


Figure 1
Western Municipal Water District
Boundary and Subagencies

WASTEWATER MAP



h\autocad\mxd\wastewater map.mxd 8-17-05

Figure 3

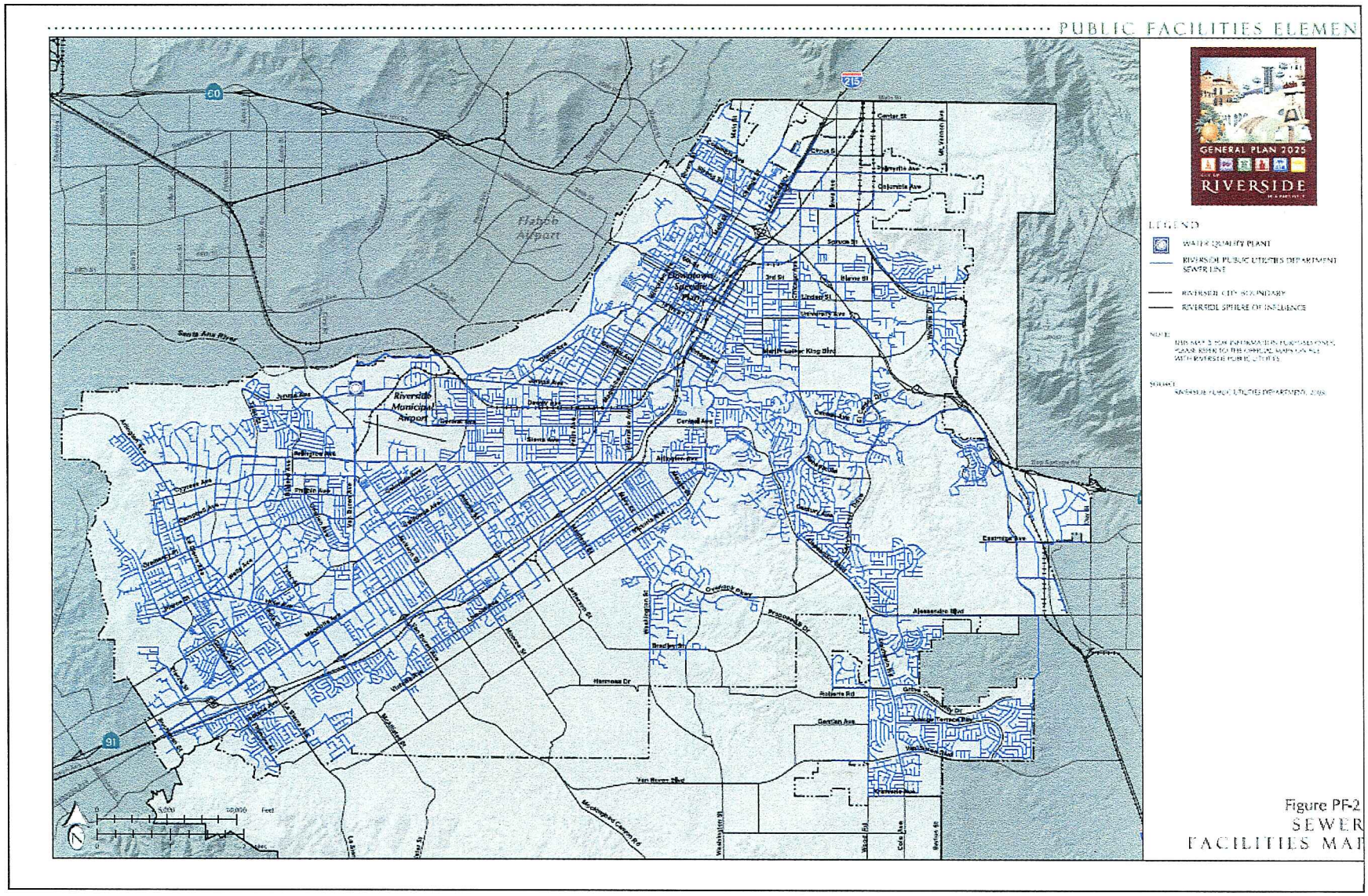


Figure 4
City of Riverside, Wastewater Collection Area

Appendix A
Requests for Participation in Western's 2005 Urban Water Management Plan

February 1, 2005

«FirstName» «LastName»
«Company»
«Address1»
«City», «State» «PostalCode»

REQUEST FOR INFORMATION FOR THE 2005 URBAN WATER MANAGEMENT PLAN

Western Municipal Water District (Western) is reviewing its Urban Water Management Plan (UWMP) and is considering amendments or changes. This plan provides a means to assess water resource needs and supplies. To complete this assessment, water use projections for water supplied from Western to your agency will be required. This information will be required in 5-year increments for at least the next 20 years as shown below.

Actual and Projected Demand in AF/YR

Water Demand	2000	2005	2010	2015	2020	2025	2030

Western is also requesting information for 2030 to provide a full 20-year period for integration into water supply assessments. Please also provide any supplemental information that is required to fully evaluate your water use projections, such as expected demand change for a single dry year or multiple dry years. In turn, Western will provide information to your agency identifying and quantifying, to the extent practicable, the existing and planned sources of water over the 5-year increments and during various water-year types as that information is provided to us by Metropolitan Water District of Southern California.

When Western's UWMP is available in draft form later this year, a copy will be provided to you for your review. Additionally, a public hearing will be conducted to discuss the plan.

We appreciate your assistance in providing information for this vital plan. Should you have any questions, please do not hesitate to contact me at (951) 789-5077 or by email at bmeyer@wmwd.com.

BRENDA MEYER, P.E.
Civil Engineer

bsm/bj

cc: Central File: UWMP 2005

UWMP 2005
REQUEST FOR INFORMATION LETTERS SENT 2/1/05
TO:

Mr. Ethan Gottschalk
Box Springs Mutual Water Company
21740 Dracea Ave.
Moreno Valley, CA 92553

Mr. Kevin Milligan
City of Riverside Public Utilities
3900 Main Street
Riverside, CA 92522

Mr. Dieter Wirtzfeld Assistant Director - Water
City of Riverside Public Utilities
3900 Main Street
Riverside, CA 92522

Mr. Don Williams
City of Corona
730 Corporate Yard Way
Corona, CA 92880

Mr. Bill Thompson
City of Norco
2820 Clark Avenue
Norco, CA 91760

Mr. Julius Ma, P.E.
Elsinore Valley Municipal Water District
P.O. Box 3000
Lake Elsinore, CA 92530

Mr. Andy Webster
Rancho California Water District
P.O. Box 9017
Temecula, CA 92589

Mr. John Pastore
Lee Lake Water District
22646 Temescal Canyon Road
Corona, CA 91719

Appendix B
Resolution Adopting Western's 2005 Urban Water Management Plan

RESOLUTION 2388

RESOLUTION OF THE BOARD OF DIRECTORS
OF WESTERN MUNICIPAL WATER DISTRICT
OF RIVERSIDE COUNTY ADOPTING THE 2005
URBAN WATER MANAGEMENT PLAN

WHEREAS, The California Legislature enacted Assembly Bill 797 during the 1983-84 regular session of the California Legislature (Water Code Section 100610 et. seq.), known as the Urban Water Management Planning Act, which mandates that every urban supplier of water providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre feet of water annually, prepare an Urban Water Management Plan, the primary objective of which is to plan for the conservation and efficient use of water;

WHEREAS, AB 797 requires that said Plan be adopted by December 31, 1985, after public review and hearing, and filed with the California Department of Water Resources within thirty days of adoption;

WHEREAS, Western Municipal Water District of Riverside County did prepare and file said Plan with the California Department of Water Resources in December 1985;

WHEREAS, AB 797 requires that said Plan be periodically reviewed at least once every five years, and that the urban water supplier shall make any amendments or changes to its plan which are indicated by the review; and

WHEREAS, Western Municipal Water District of Riverside County is an urban supplier of water providing water to over 19,000 customers, and prepared and circulated for public review a draft Urban Water Management Plan (2015 Update), in compliance with the requirements of AB 797, and held a properly noticed public hearing regarding said draft Plan on October 5, 2005, prior to publishing the final Plan.

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of Western Municipal Water District of Riverside County as follows:

1. The Urban Water Management Plan for 2005, is hereby adopted as amended by changes incorporated by the Board of Directors as a result of input received (if any) at the public hearing and ordered filed with the Secretary of the Board of Directors;

2. The General Manager is hereby authorized and directed to file the 2005 Plan with the California Department of Water Resources within 30 days after the date adopted in accordance with AB 797; and

3. The General Manager is hereby authorized and directed to further consider the adopted 2005 Urban Water Management Plan, and to provide recommendations to the Board of Directors regarding necessary budgets, procedures, rules, and regulations to carry out effective and equitable water conservation programs.

ADOPTED this 7th day of December 2005.

Elizabeth L. Cunnison
Secretary-Treasurer

I HEREBY CERTIFY that the foregoing is a full, true and correct copy of Resolution 2388 adopted by the Board of Directors of Western Municipal Water District of Riverside County at its Regular Meeting held December 7, 2005.

JOHN V. ROSSI
General Manager

Appendix C
Climate Data

RIVERSIDE CITRUS EXP ST, CALIFORNIA

Period of Record General Climate Summary - Temperature

Station:(047473) RIVERSIDE CITRUS EXP ST

From Year=1948 To Year=2004

	Monthly Averages			Daily Extremes				Monthly Extremes				Max. Temp.		Min. Temp.	
	Max.	Min.	Mean	High	Date	Low	Date	Highest Mean	Year	Lowest Mean	Year	>= 90 F	<= 32 F	<= 32 F	<= 0 F
	F	F	F	F	dd/yyyy or yyyymmdd	F	dd/yyyy or yyyymmdd	F	-	F	-	# Days	# Days	# Days	# Days
January	66.4	41.5	54.0	97	31/2003	24	13/1963	62.8	103	49.0	***	0.0	0.0	1.9	0.0
February	67.9	43.1	55.5	92	07/1963	27	17/1956	60.7	95	48.5	***	0.2	0.0	0.8	0.0
March	70.1	44.9	57.5	98	26/1988	29	01/1962	66.5	104	50.6	***	0.7	0.0	0.4	0.0
April	75.1	47.8	61.4	104	06/1989	33	02/1956	66.6	92	53.2	***	2.5	0.0	0.0	0.0
May	79.4	52.4	65.9	108	29/1984	38	08/1965	73.3	97	61.5	77	4.6	0.0	0.0	0.0
June	86.5	56.2	71.3	112	16/1961	44	10/1964	77.9	81	63.8	65	12.2	0.0	0.0	0.0
July	93.7	60.3	77.0	113	21/1960	49	09/1960	81.1	84	71.2	87	23.7	0.0	0.0	0.0
August	94.3	61.1	77.7	112	30/1976	49	22/1968	83.0	98	74.0	89	24.5	0.0	0.0	0.0
September	90.4	58.4	74.4	113	14/1971	42	21/1965	80.1	84	66.9	65	16.9	0.0	0.0	0.0
October	82.3	52.3	67.3	108	01/1980	32	28/1970	73.1	103	62.4	69	7.8	0.0	0.0	0.0
November	73.1	45.2	59.1	97	02/1997	26	17/1958	64.0	76	53.6	94	1.1	0.0	0.2	0.0
December	67.4	41.2	54.3	93	04/1958	22	23/1990	59.3	58	48.7	71	0.0	0.0	1.5	0.0
Annual	78.9	50.4	64.6	113	19600721	22	19901223	66.7	97	61.6	82	94.2	0.0	4.9	0.0
Winter	67.2	41.9	54.6	97	20030131	22	19901223	58.2	81	50.5	69	0.2	0.0	4.3	0.0

RIVERSIDE CITRUS EXP ST, CALIFORNIA (047473)

Period of Record Monthly Climate Summary

Period of Record : 7/ 1/1948 to 9/30/2004

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Max. Temperature (F)	66.4	67.9	70.1	75.1	79.4	86.5	93.7	94.3	90.4	82.3	73.1	67.4	78.9
Average Min. Temperature (F)	41.5	43.1	44.9	47.8	52.4	56.2	60.3	61.1	58.4	52.3	45.2	41.2	50.4
Average Total Precipitation (in.)	2.16	2.15	1.75	0.81	0.23	0.07	0.04	0.12	0.26	0.32	0.93	1.21	10.04
Average Total SnowFall (in.)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Average Snow Depth (in.)	0	0	0	0	0	0	0	0	0	0	0	0	0

Percent of possible observations for period of record.
Max. Temp.: 85.3% Min. Temp.: 85.3% Precipitation: 91.5% Snowfall: 85.8% Snow Depth: 85.8%
Check Station Metadata or Metadata graphics for more detail about data completeness.

Western Regional Climate Center, wrcc@dri.edu

Monthly Average ETo Report

California Irrigation Management Information System
Department of Water Resources
Office of Water Use Efficiency
Rendered in ENGLISH units
Printed on January 25, 2005

Number	Name	Region
44	U.C. Riverside	Los Angeles Basin

Stn	Jan	Mar	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
44	2.49	2.91	4.16	5.27	5.94	6.56	7.22	6.92	5.35	4.05	2.94	2.56	56.37

Back to:

State Map | Western U.S. map | Home Page

NOTE:
To print data frame (right side), click on right frame before printing.

1971 - 2000

- Daily Temp. & Precip.
- Daily Tabular data (~23 KB)
- Monthly Tabular data (~1 KB)
- NCDC 1971-2000 Normals (~3 KB)

1961 - 1990

- Daily Temp. & Precip.
- Daily Tabular data (~23 KB)
- Monthly Tabular data (~1 KB)
- NCDC 1961-1990 Normals (~3 KB)

Period of Record

- Station Metadata
- Station Metadata Graphics

General Climate Summary Tables
- Temperature
- Precipitation
- Heating Degree Days
- Cooling Degree Days
- Growing Degree Days

Temperature
- Daily Extremes and Averages
- Spring 'Freeze' Probabilities
- Fall 'Freeze' Probabilities
- 'Freeze Free' Probabilities
- Monthly Temperature Listings
  - Average
  - Average Maximum
  - Average Minimum

Precipitation
- Monthly Average
- Daily Extreme and Average
- Daily Average
- Precipitation Probability by Duration.
- Precipitation Probability by Quantity.
- Monthly Precipitation Listings

Monthly Totals

Snowfall

- Daily Extreme and Average
- Daily Average
- Monthly Snowfall Listings

Monthly Totals

Snowdepth

- Daily Extreme and Average
- Daily Average

Heating Degree Days

- Daily Average

Cooling Degree Days

- Daily Average

Period of Record Data Tables

- Daily Summary Stats (~55 KB)
- Monthly Tabular data (~2 KB)

Western Regional Climate Center,
wrcc@dri.edu

CALIFORNIA THE GOLDEN STATE

CALIFORNIA HOMEPAGE | GOVERNOR'S HOMEPAGE

CALIFORNIA IRRIGATION MANAGEMENT INFORMATION SYSTEM
DEPARTMENT OF WATER RESOURCES
OFFICE OF WATER USE EFFICIENCY

WELCOME | INFO CENTER | DATA | RESOURCE CENTER | MY CIMIS

General

- CIMIS Overview
- CIMIS Data Uses

Weather Stations

- Station List
- Location Maps
- Sensor Specs
- Siting Info
- Network Maintenance

Evapotranspiration

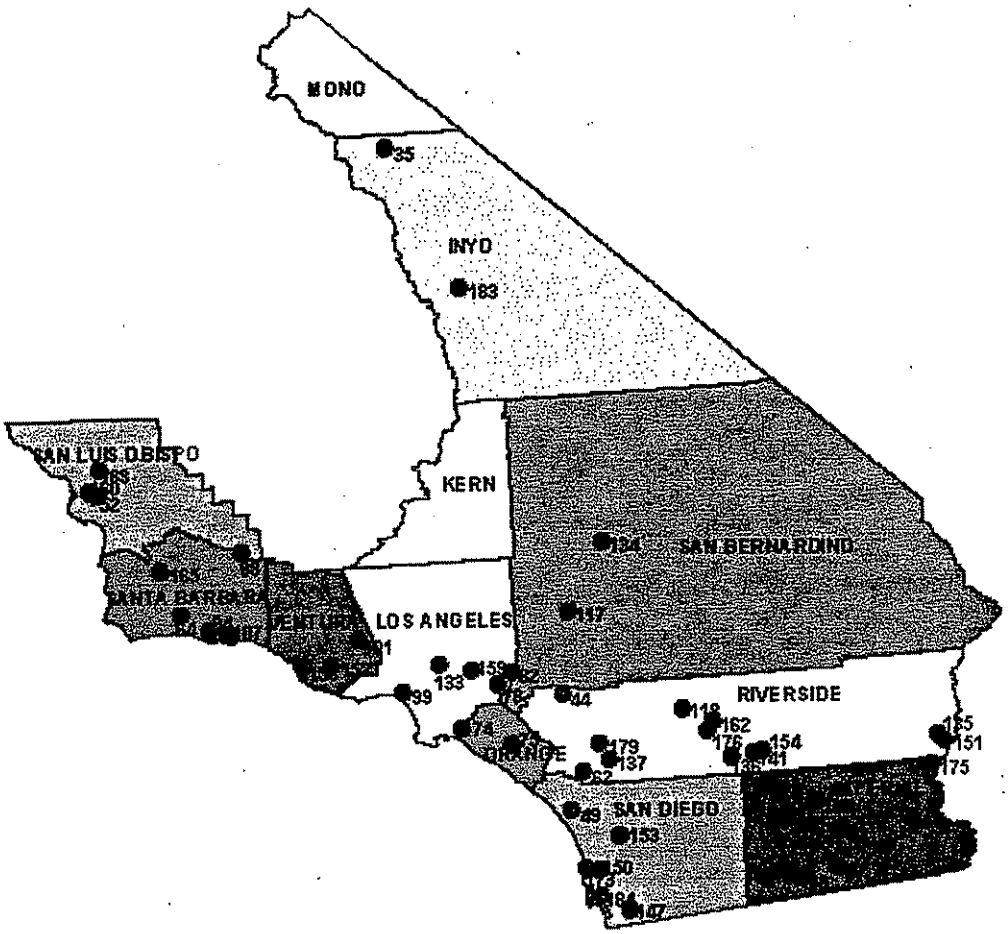
- ET Overview
- Equations
- Crop Coefficients
- ETo Zones Map

Irrigation

- Irrigation Overview
- Water Budget
- Irrigation Scheduling
- Mobile Labs
- Software
- Consultants

Southern District

Click on any station to view its detailed station description.



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Station Detail Report

The **Station Detail Report** provides detailed information on CIMIS stations including the region in which they are located, nearby city, installation dates, termination dates (if inactive), geographic locations (latitude and longitude), elevations above see level, zip codes, surface types (grass or alfalfa), station site descriptions, and photographs of the stations.

U.C. Riverside #44

Los Angeles Basin Region Riverside County Southern District
Nearby city is Riverside

- Activated On June 02, 1985
- Station is Active
- ETo Reported
- Reference Surface is Grass
- Datalogger is CR10

Station 44
North | South | East | West |

Geographic Information

Elevation (ft):	1020
Latitude:	33°57'54"N / 33.97
Longitude:	117°20'08"W / -117.34

Associated Zip Codes

92501, 92502, 92503, 92504, 92505, 92506, 92507, 92509, 92513, 92514, 92515, 92516, 92517, 92518, 92519, 92521, 92522

Station Siting Description

Sorry, this information is not available at this time.

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Appendix D
Western's Water Supply Agreements

PURCHASE ORDER FOR IMPORTED WATER SUPPLY TO BE PROVIDED BY THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

PURCHASER: **Western Municipal Water District of Riverside County**	**TERM** 10 years
INITIAL BASE DEMAND: **65,298.5** acre-feet	**EFFECTIVE DATE:** January 1, 2003
INITIAL TIER 1 ANNUAL MAXIMUM: **58,768.7** acre-feet	
PURCHASE ORDER COMMITMENT: **391,791.0** acre-feet	

Definitions of capitalized terms used in this Purchase Order are provided in Attachment 1. Terms used in this Purchase Order and not defined in Attachment 1 are defined in Metropolitan's Administrative Code.

COMMITMENT TO PURCHASE.

In consideration of Purchaser's commitment to purchase System Water pursuant to this Purchase Order, Metropolitan agrees to sell such System Water to Purchaser at the Tier 1 Supply Rate each year in an amount up to the Tier 1 Annual Maximum. System Water sold to Purchaser (excluding deliveries of System Water made under the Interim Agricultural Water Program and Long-term Seasonal Storage Service) in an amount greater than the Tier 1 Annual Maximum shall be sold to the Purchaser at the Tier 2 Supply Rate. In connection with the receipt of System Water, the Purchaser also agrees to pay all other applicable rates and charges, as established by Metropolitan from time to time in accordance with Section 4304 of the Administrative Code. The rates and charges applicable to System Water as of the Effective Date are shown in Attachment 2.

Purchaser agrees to purchase System Water from Metropolitan during the Term in an amount (excluding deliveries of System Water, made under the Interim Agricultural Water Program and Long-term Seasonal Storage Service) not less than the Purchase Order Commitment.

Purchaser recognizes and agrees that Metropolitan has relied and will, during the term of this Purchase Order, rely on this commitment by Purchaser in setting its rates and charges, planning and providing its capital facilities and developing its water supply, management and reliability programs. If Purchaser's applicable System Water purchases during the Term are less than the Purchase Order Commitment, Purchaser agrees to pay Metropolitan an amount equal to the difference between the Purchase Order Commitment and Purchaser's applicable System Water purchases during the Term times the average of the Tier 1 Supply Rate in effect during the Term. The Purchaser agrees to pay such amount to Metropolitan within the next regular billing cycle following the reconciliation of all certifications for special programs that the Purchaser may participate in (e.g. Interim Agricultural Water Program, Long-term Seasonal Storage Service). The Purchaser may elect to pay such amount in twelve equal monthly

payments over the course of the next twelve months beginning with the first regular billing cycle following the reconciliation of all outstanding certifications for special programs. If the Purchaser elects to pay such amount over the course of the next twelve months following the regular billing cycle any outstanding balance shall bear interest at Metropolitan's then current investment portfolio average yield. All other amounts payable under this Purchase Order shall be billed and paid in accordance with the Administrative Code.

The Purchaser further recognizes that this Purchase Order is entered into for the direct benefit of the holders and owners of Metropolitan's Bonds issued from time to time under the Act and the Bond Resolutions, and the income and revenues derived from this Purchase Order will be pledged for the purposes set forth in the Bond Resolutions, including the payment of principal of and interest on such Bonds.

RENEWAL:

Prior to but not later than December 31, 2010, the Purchaser may provide a non-binding written notice to Metropolitan of the Purchaser's determination to extend this Purchase Order. Upon the receipt of such notice, the Board of Directors of Metropolitan (the "Board") shall determine whether Metropolitan will continue to provide System Water to member agencies by Purchase Order. If the Board so determines, the Purchaser and Metropolitan shall amend this Purchase Order to include an extended term and/or to include such other terms and conditions as may be mutually agreed by the parties. If the Purchaser elects not to renew this Purchase Order it will terminate upon the expiration of the Term.

WATER SERVICE:

Conditions of water service by Metropolitan to the Purchaser, including but not limited to (i) delivery points, (ii) water delivery schedules, and (iii) water quality, will be determined in accordance with Chapter 5 (Section 4500 through 4514, inclusive, as applicable) of Metropolitan's Administrative Code.

In accordance with its Administrative Code, Metropolitan shall use its reasonable best efforts to supply System Water in the quantities requested by the Purchaser, but is not obligated to dedicate any portion of System capacity for the conveyance, distribution, storage or treatment of System Water for the benefit of the Purchaser or any other member agency. Metropolitan shall use its reasonable best efforts to deliver the Base Demand when needed by the Purchaser during the Term; provided however, there shall be no default under this Purchase Order if Metropolitan fails to deliver water to the Purchaser in accordance with any such schedule of deliveries during the Term.

By execution of this Purchase Order, the Purchaser recognizes and agrees that it acquires no interest in or to any portion of the System or any other Metropolitan facilities, or any right to receive water delivered through the System, excepting the right to purchase up to Purchaser's Tier 1 Annual Maximum at the Tier 1 Supply Rate provided that System Water is available. This Purchase Order governs pricing of the System Water delivered to the Purchaser pursuant to this Purchase Order and does not confer any entitlement to receive System Water.

System Water provided to the Purchaser under the terms of this Purchase Order shall be subject to reduction in accordance with the shortage allocation provisions of the Water Surplus and Drought Management Plan (the "WSDM Plan") or other such policies and principles governing the allocation of System Water as adopted by the Board.

In the event that Metropolitan's Board determines to reduce, interrupt or suspend deliveries of System Water (excluding deliveries of System Water made under the Interim Agricultural Water Program and Long-term Seasonal Storage Service) any outstanding balance of the Purchase Order Commitment at the end of the Term shall be reduced by the reduction in System Water made available to the Purchaser under this Purchase Order.

MISCELLANEOUS:

This Purchase Order will be interpreted, governed and enforced in accordance with the laws of the State of California.

This Purchase Order will apply to and bind the successors and assigns of the Purchaser and Metropolitan.

No assignment or transfer of the rights of the Purchaser under this Purchase Order will be valid and effective against Metropolitan or the Purchaser without the prior written consent of Metropolitan and the Purchaser.

If at any time during the Term, by reason of error in computation or other causes, there is an overpayment or underpayment to Metropolitan by the Purchaser of the charges provided for under this Purchase Order, which overpayment or underpayment is not accounted for and corrected in the annual re-determination or reconciliation of said charges, the amount of such overpayment or underpayment shall be credited or debited, as the case may be, to the Purchaser. .Metropolitan will notify the Purchaser in writing regarding the amount of such credit or debit, as the case may be. In no case will credits or debits for charges provided for under this Purchase Order be administered beyond the limit for billing adjustments as specified in Metropolitan's Administrative Code.

IN WITNESS WHEREOF, this Purchase Order is executed by the duly authorized officers of the Metropolitan Water District of Southern California and [Purchaser], to be effective January 1, 2003.

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

By: Ronald R. Gastelum
Ronald R. Gastelum
Chief Executive Officer

WESTERN MUNICIPAL WATER DISTRICT OF RIVERSIDE COUNTY

By:

[Title] GENERAL MANAGER

APPROVED AS TO FORM AND CONTENT:

General Counsel

Best Best & Krieger LLP
General Counsel

By:

By:

Attachment 1
Purchase Order for Imported Water Supplies
DEFINITIONS

"Act" means the Metropolitan Water District Act, California Statutes 1969, Chapter 209, as amended and supplemented from time to time.

"Base Demand" means the greater of (i) the Initial Base Demand or (ii) the ten-year rolling average of the Purchaser's Firm Demand, measured on a fiscal year basis.

"Bonds" means water revenue bonds or notes issued under the Bond Resolutions.

"Bond Resolutions" means Resolution No. 8329 or Resolution No. 8322, both as amended and supplemented, or any other resolution authorizing the issuance of bonds, notes or other obligations secured by Metropolitan's water sales revenues.

"Effective Date" means the effective date of this Purchase Order as specified above.

"Firm Demand" means the Purchaser's purchases of non-surplus System Water supplies, including full-service and seasonal shift deliveries.

"Initial Base Demand" means the Purchaser's highest annual Firm Demand on Metropolitan in any fiscal year during the period from fiscal year 1989/90 through fiscal year 2001/02. In accordance with procedures set forth in Metropolitan's Administrative Code, the Initial Base Demand will be revised to reflect certified and verified deliveries under the Interim Agricultural Water Program and Long-term Seasonal Storage Service Program as such certifications affect the Initial Base Demand.

"Metropolitan" means The Metropolitan Water District of Southern California.

"Purchase Order Commitment" means 60% of the Initial Base Demand times 10. Deliveries of System Water made under the Interim Agricultural Water Program and Long-term Seasonal Storage Service, will not count toward the Purchase Order Commitment.

"Purchase Order" means this Purchase Order.

"Purchaser" means the member public agency specified above, a duly organized [city/water district/county water authority] of the State of California.

"System" means the properties, works and facilities of Metropolitan necessary for the supply, development, storage, conveyance, distribution, treatment or sale of water.

"System Water" means water supplies developed by Metropolitan and delivered to the Purchaser through the System or other means (e.g. conjunctive use storage).

"Term" means the term of this Purchase Order as specified above.

"Tier 1 Annual Maximum" means an amount equal to 90% of the Base Demand.

"Tier 1 Supply Rate" means Metropolitan's per-acre-foot Tier 1 Supply Rate, as determined from time to time by Metropolitan's Board of Directors. The initial Tier 1 Rate is $73/AF.

"Tier 2 Supply Rate" means Metropolitan's per-acre-foot Tier 2 Supply Rate, as determined from time to time by Metropolitan's Board of Directors. The initial Tier 2 Rate is $154/AF.

"Water Surplus and Drought Management Plan (WSDM)" means Metropolitan's policy and procedures for managing supplies and drought conditions as adopted by the Board from time to time.

Attachment 2
Purchase Order for Imported Water Supplies
RATES AND CHARGES

	Effective January 1, 2003
Tier 1 Supply Rate ($/af)	$73
Tier 2 Supply Rate ($/af)	$154
System Access Rate ($/af)	$141
System Power Rate ($/af)	$89
Water Stewardship Rate ($/af)	$23
Untreated Long-term Storage Water Rate ($/af)	$233
Untreated Interim Agricultural Water Program ($/af)	$236
Treated Long-term Storage Water Rate ($/af)	$290
Treated Interim Agricultural Water Program ($/af)	$294
Treatment Surcharge ($/af full-service)	$82
Readiness-to-Serve Charge ($millions)	$80.0
Capacity Reservation Charge ($/cfs)	$6,100
Peaking Surcharge ($/cfs)	$18,300

NON-POTABLE WATER PROJECT AGREEMENT
CITY OF RIVERSIDE AND WESTERN MUNICIPAL WATER DISTRICT OF RIVERSIDE COUNTY

AGREEMENT, made this 5th day of March 2003 between the City of Riverside ("City") , a municipal corporation, and Western Municipal Water District of Riverside County ("Western"), a municipal water district.

RECITALS:

1. The City owns and operates a municipal water supply system which provides water for domestic and irrigation purposes. Included as part of the City's water system are wells, pipelines and appurtenant facilities located in the Colton and Riverside Basins, and in the San Bernardino Basin Area, as those areas are described in the Judgment in *Western Municipal Water District v. East San Bernardino Water District*, Riverside Superior Court No. 78426.

2. Western also owns and operates potable and non-potable water supply systems which provide water service to the eastern portion of the City located at high elevations, and to adjacent areas located outside of the City but within the City's sphere of influence. Western's present water supply comes from The Metropolitan Water District of Southern California ("MWD"), and is used for both domestic purposes and the irrigation of

agricultural and other lands. Western has a need for non-potable water to be used for irrigation purposes in lieu of deliveries from MWD.

3. The Santa Ana Watershed Project Authority ("SAWPA") is a joint powers agency established for the protection of water quality and supply within the Santa Ana River Watershed. One SAWPA project, known as Project No. 16, calls for additional pumping of non-potable water from the Colton and Riverside Basins in order to lower the groundwater table, to enhance storm flow recharge, and thereby to improve the quality of groundwater in the Basin.

4. The City also owns and operates the Riverside Canal, which transports water from the Colton and Riverside Basins as far as Jefferson Street in the City. At times, the Canal also carries storm flow runoff.

5. Western also asserts that it may have groundwater available from the San Bernardino Basin Area and the Colton and Riverside Basins pursuant to agreements with the San Bernardino Valley Municipal Water District and the Elsinore Valley Municipal Water District (as successor to the rights of Agua Mansa and Meeks & Daley mutual water companies).

6. The purpose of this Agreement is to provide for the sale of non-potable water from the City to Western and to allow the limited use of surplus capacity in the Riverside Canal, and in City pipelines and appurtenant facilities, when such capacity is available, in order to supply non-potable water to Western; to improve the quality of groundwater in the Colton and Riverside Basins; and to assist in the improvement of the Riverside Canal.

7. Western represents, as the appropriate lead agency for the project, that all proceedings required under the California Environmental Quality Act ("CEQA") in order to permit approval of the project, and execution of this Agreement have been completed in accordance with law, and to the satisfaction of SAWPA and the State Water Resources Control Board for purposes of grant funding.

8. Proposition 13, adopted by the California voters in March of 2000, authorized the Southern California Integrated Watershed Program ("SCIWP") for the purpose of allocating Proposition 13 Water Bond Funds. The Santa Ana Watershed Project Authority, which acts initially as the State of California's representative for funding under the SCIWP, recommended to the State for approval and the State has now approved, a $5,250,000 grant to the City of Riverside for the reconstruction of portions of the Riverside Canal, and a $7,425,000 grant to Western for the non-potable water project. Both of these grants have now been approved by the State Water Resources Control Board. The City's grant is subject to the execution of this Agreement.

AGREEMENT

Based upon the foregoing facts, and in consideration of the mutual covenants of the parties, it is hereby agreed as follows:

9. Supply. To the extent that the City has surplus non-potable water available, the City shall sell to Western such quantities of non-potable water as Western may determine it needs, subject to two conditions: (1) such quantities shall not exceed a rate of flow of 7,200 gpm and 6,000 acre-feet per year at the point of delivery, and (2) surplus capacity is available in the Riverside Canal for the delivery of such water to Western. The wells to be used for such purpose shall be determined by the City in its sole discretion, provided that the City shall use its best efforts to use wells best suited to accomplish the purposes of SAWPA's Project 16, as identified in the SAWPA Project Information Form for Potential SCIWP Funding, a copy of which is attached hereto as Exhibit A. The City, at its sole discretion, may provide surplus water to Western in excess of the quantities stated above, but Western shall have no right under this agreement to demand such sale.

The City makes no representations or warranties as to the capacity of its wells or the quality of the water to be sold. The City will use its best efforts to sell whatever amounts of non-potable water that may be requested by Western, but does not guarantee either the quantity or timing of such deliveries. The parties recognize (aside from capacity limitations)

that the City's facilities and the Riverside Canal may sometimes be shut down for repairs, or the Canal may be unavailable because of storm flow conditions.

If the City does not have sufficient non-potable water to sell and meet the 7,200 gpm/6,000 acre-feet per year quantities identified above, Western may acquire such supplies, in whole or in part, from others who pump from the Santa Ana River System, or from its own wells, for delivery through the Riverside Canal. Western shall bear the full cost of constructing and operating facilities necessary to deliver water into the Riverside Canal other than the City's wells. In addition, with City approval, Western may utilize surplus capacity in the Riverside Canal, as set forth below, to convey water which Western may acquire from the Santa Ana River System.

Any water introduced by Western into the Canal shall not result in the diminution of the beneficial use or quality of the water otherwise in the Canal. Any such water shall only be introduced if City has approved point of delivery of any such water and quality of such water. Western shall construct, operate and pay for all facilities necessary to take water from the pont of delivery.

10. Riverside Canal Capacity. The surplus carrying capacity existing from time to time in the Riverside Canal for the transportation of non-potable water shall be subject to: (1) the City's own present and future uses for the Canal; (2) the carrying rights of the

Elsinore Valley Municipal Water District, as successor to the Confirming Agreement with the Temescal Water Company, dated November 18, 1974, or to any party holding rights thereto by agreement with Elsinore Valley Municipal Water District; (3) the Water Exchange Agreement between the City and The Gage Canal Company, dated March 12, 1991; and (4) any use of the canal for storm flow runoff. The Canal capacity subject to this Agreement extends from its headworks, downstream to approximately Jefferson Street in the City.

11. Pumping and Transportation Payments. The pricing structure for all water pumped and delivered by the City to Western pursuant to this Agreement shall be based upon the incremental costs incurred by the City. It is the intent of the parties that such costs will be calculated so that financially the City is no better off, nor worse off, than it would be in the absence of water deliveries to Western. Initially, Western shall pay the City $38 per acre-foot for non-potable delivered water. This total is based on the cost of the following components: (a) energy to pump groundwater from wells, $20 per acre-foot; (b) well and well pump operating labor and maintenance, $11 per acre-foot; (c) amortization of well rehabilitation, $2 per acre-foot; and (d) additional maintenance or other legally-required improvement to Riverside Canal from Arlington to Jefferson, $5 per acre-foot. Such incremental cost does not include a general fund transfer fee, which is currently set by the Riverside City Council at 11.5%.

To the extent that Western may convey water through the Riverside Canal that is not pumped by the City, as provided in Section 9 above, Western shall pay only the costs of additional maintenance of the Riverside Canal from Arlington to Jefferson Street, as provided in Section 11(d) above. Charges for the use of the Riverside Canal for water delivered to Western pursuant to Agua Mansa and Meeks & Daley water rights, and agreement with Elsinore Valley Municipal Water District, are governed by prior agreements affecting those rights, and are not subject to this Agreement. Western's rights to the use of surplus capacity in the Riverside Canal, as provided herein, are in addition to any rights that Western may hold pursuant to agreement with the Elsinore Valley Municipal Water District.

The prices paid by Western hereunder shall be reviewed periodically as requested by either party, and shall be adjusted as may be necessary to reflect changes in any incremental cost components associated with this Agreement.

12. Point of Delivery and Metering. The point of delivery to Western of water sold or transported pursuant to this Agreement shall be at the end of the active portion of Riverside Canal near Jefferson Street. Western shall install, maintain and calibrate a meter on the discharge side of its pumps at the point of delivery. Charges shall be determined on the basis of such metered deliveries. Western shall present evidence that the meter is properly calibrated and read. The City may require the meter to be recalibrated. Western

shall have the sole responsibility to construct, operate and pay for all facilities necessary to take the water from the point of delivery for use within its own service area.

13. Treatment of Delivered Water. Western at its own expense shall have the right to treat the non-potable water delivered hereunder, and to put all or any part of such deliveries to any beneficial use for which the treated water is appropriate; provided that Western shall not require any degree of quality of the non-potable water delivered in order to make such water treatable for domestic use, or to complain otherwise about any condition affecting the Riverside Canal that would preclude the use of water delivered hereunder for domestic purposes. This Agreement shall not preclude the City from using the Riverside Canal for transmission and/or delivery of recycled water. The quality of the water shall be in accordance with California Code of Regulations, Title 22, Section 60304(a)(5), pertaining to use of recycled water for irrigation of unrestricted access golf courses.

14. Elsinore Water. By agreement with the Elsinore Valley Municipal Water District, Western has the right to 9 cfs of water from the former Meeks & Daley, Agua Mansa wells ("Elsinore Water"), and carrying rights for such water in the Gage or Riverside Canals. Western shall have the right to deliver its Elsinore water, whenever it is available, through the Riverside Canal and the City's storm drain system for discharge to the Santa Ana River. So long as the City delivers to Western 7,200 gpm/6,000 acre-feet per year of non-potable water, Western shall not utilize the City's Olivewood booster station to take delivery

of its Elsinore water at the Gage Canal, and instead will discharge such water to the Santa Ana River through the City's storm drain system. If the City does not deliver to Western 7,200 gpm/6,000 acre-feet per year of non-potable water, then Western will still take delivery of any Elsinore water from the Riverside Canal at its Jefferson Street pump station, provided Western's pump station and pipeline to the Gage Canal are operational. However, if such facilities are not operational, then Western reserves the right to require delivery of its Elsinore water at the end of the Gage Canal.

15. Recordation Filings. The City shall include all Riverside Basin pumping for delivery to Western in its Notices filed pursuant to Water Code Sections 5000 et seq. Western, however, does not waive any claim to the water rights associated with such pumping.

16. Indemnity. Except as to sole negligence, or willful misconduct of City, Western shall defend, indemnify and hold City, their officers, agents, and employees harmless from and against any and all liability, loss, expense (including reasonable attorneys' fees), or claims for injury or damages arising out of this Agreement to the extent such liability, loss, expense, attorneys' fees, or claims for injury or damages are caused by or resulting from the acts or omissions of Western, its officers, agents, or employees. The parties expressly agree that any payment, attorney fee, cost or expense City incurs or makes to or on behalf of an injured employee under City's self-administered workers' compensation

program is included as a loss, expense or cost. The provisions of this paragraph shall survive the expiration or early termination of this Agreement.

17. Term. The term of this Agreement shall be for 20 years, commencing when the City first delivers water to Western hereunder. The parties may renew the Agreement for an additional 20-year term, subject to re-negotiation of costs on an incremental basis, and approval thereof shall not be unreasonably withheld. If the City decides to abandon the Riverside Canal during the term of this Agreement, or any renewal thereof, Western shall have an option to acquire the City's interest in the portion of the Riverside Canal covered by this Agreement at the fair market value of the property at the time the option is exercised, and subject to whatever obligations may then exist.

18. Integration. This Agreement constitutes the final, complete, and exclusive statement of the terms of the agreement between the Parties pertaining to the subject matter of this Agreement, and supersedes all prior and contemporaneous understandings or agreements of the parties. Neither party has been induced to enter into this Agreement by, and neither party is relying on, any representation or warranty outside those expressly set forth in this Agreement.

19. CEQA. If any court, governmental official, agency, department or bureau having jurisdiction over activities arising out of this Agreement or under Project 16, requires

further review or compliance under the California Environmental Quality Act ("CEQA) by or from the City, Western shall, at its own expense, comply with all such requirements. Western shall also reimburse the City for any costs the City may incur in complying with such CEQA requirements or in any lawsuit arising out of such CEQA requirements, including but not limited to attorneys' fees, filing fees or other court costs, any costs incurred in connection with any lawsuits brought against City as a result of this Agreement, and any costs of environmental studies and reviews.

IN WITNESS WHEREOF, the parties have executed this Agreement, to be effective on the date above written.

CITY OF RIVERSIDE

By _____
City Manager

ATTEST:

_____
City Clerk
City of Riverside

APPROVED AS TO FORM:

_____
City Attorney

WESTERN MUNICIPAL WATER
DISTRICT OF RIVERSIDE COUNTY

By: _____

President

ATTEST:

_____

Secretary

APPROVED AS TO FORM:

BEST BEST & KRIEGER LLP

By: _____

Arthur L. Littleworth

AMENDMENT NO. 1

AGREEMENT BETWEEN THE WESTERN MUNICIPAL WATER DISTRICT OF RIVERSIDE COUNTY AND THE ELSINORE VALLEY MUNICIPAL WATER DISTRICT FOR THE RECIPROCAL USE OF CERTAIN ASSETS RELATED TO THE PRODUCTION AND/OR CONVEYANCE OF WATER

THIS FIRST AMENDMENT ("Amendment") is executed by and between the WESTERN MUNICIPAL WATER DISTRICT OF RIVERSIDE COUNTY, a municipal water district ("Western"), and the ELSINORE VALLEY MUNICIPAL WATER DISTRICT, a municipal water district ("EVMWD"). Western and EVMWD are sometimes hereinafter individually referred to as "Party" and hereinafter collectively referred to as the "Parties." This Amendment shall be considered by the Parties to be dated and effective as of February 1, 2003.

RECITALS

A. Western and EVMWD are parties to an agreement dated August 23, 2001, entitled "Agreement Between the Western Municipal Water District of Riverside County and the Elsinore Valley Municipal Water District for the Reciprocal Use of Certain Assets Related to the Production and/or Conveyance of Water" (hereinafter "Reciprocal Use Agreement"). In general, the Reciprocal Use Agreement provides that subject to specified terms and conditions, EVMWD may use up to nine (9.0) cubic feet per second (cfs) of capacity in Reaches A through F of the Mills Pipeline to receive water, and Western may use certain groundwater production rights and facilities, and certain canal carrying rights owned by EVMWD ("EVMWD Assets"), to produce and convey up to nine (9.0) cubic feet per second of water.

B. Western is also party to an agreement with the Orange County Water District ("OCWD"), dated December 16, 2001 ("OCWD Agreement"), which provides that subject to certain terms and conditions, the groundwater produced and conveyed by Western with the EVMWD Assets shall be discharged by Western into the Santa Ana River, and OCWD shall pay Western $150.00 for every acre-foot of delivered groundwater, for purposes of helping recharge groundwater resources in Orange County.

C. EVMWD has determined that the EVMWD Assets are capable of producing and conveying additional quantities of groundwater, and Western and EVMWD now desire to amend the Reciprocal Use Agreement to provide for the delivery and conveyance of additional quantities of groundwater to meet the purposes identified in the Reciprocal Use Agreement and the OCWD Agreement.

NOW THEREFORE, in consideration of the mutual covenants and conditions stated herein and other valuable consideration, the sufficiency of which is hereby acknowledged, the Parties agree as follows:

TERMS

1.0 Section 3.3 Added to Reciprocal Use Agreement. A new Section 3.3 is hereby added to the Reciprocal Use Agreement to read as follows:

> "3.3 Production, Conveyance, and Payment of Additional Water. Notwithstanding Sections 3.0 and 3.1 of this Agreement, and subject to the availability of water and capacity in the EVMWD Assets, EVMWD may produce and deliver to Western, at the locations designated in Section 3.1 of this Agreement, more than nine (9.0) cfs of water. Notwithstanding Section 3.2 of this Agreement, if during any one (1) month, EVMWD produces and delivers to Western, at the locations designated in Section 3.1 of this Agreement, more than five hundred and forty three (543) acre-feet of water, then Western shall pay to EVMWD one hundred and fifty dollars ($150.00) for every acre-foot of water produced and delivered to Western during that month in excess of five hundred and forty three (543) acre-feet, and no other charges shall be applied or assessed to Western for the production or delivery of such water. Western, however, shall have no obligation to make any payment for water delivered by EVMWD pursuant to this Section during such times as the water would escape to the ocean and not be available for recharge purposes within Orange County; provided that Western has given notice to EVMWD of such conditions."

2.0 Affirmation of Reciprocal Use Agreement. Except as amended by this Amendment, all provisions of the Reciprocal Use Agreement shall remain in full force and effect and shall govern the actions of the Parties. Each Party represents and warrants to the other that except as amended by this Amendment, there have been no written or oral modifications of the Reciprocal Use Agreement. Each Party ratifies and reaffirms each and every one of their respective rights and obligations arising under the Reciprocal Use Agreement. Each Party represents and warrants to the other that the Reciprocal Use Agreement is currently an effective, valid, and binding obligation.

3.0 Definitions. Terms not otherwise expressly defined in this Amendment, shall have the meaning and intent set forth in the Reciprocal Use Agreement.

IN WITNESS WHEREOF, the Parties have caused this Amendment to be executed by their respective duly authorized officers.

WESTERN MUNICIPAL WATER DISTRICT OF RIVERSIDE COUNTY

By: Thaeme H. Yoleoal
President

Date: 4-16-03

ELSINORE VALLEY MUNICIPAL WATER DISTRICT

By: Phil Williams
President

Date: 4/23/04

PURCHASE ORDER FOR IMPORTED WATER SUPPLY TO BE PROVIDED BY THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

PURCHASER: **Western Municipal Water District of Riverside County**	**TERM** 10 years
INITIAL BASE DEMAND: **65,298.5** acre-feet	**EFFECTIVE DATE:** January 1, 2003
INITIAL TIER 1 ANNUAL MAXIMUM: **58,768.7** acre-feet	
PURCHASE ORDER COMMITMENT: **391,791.0** acre-feet	

Definitions of capitalized terms used in this Purchase Order are provided in Attachment 1. Terms used in this Purchase Order and not defined in Attachment 1 are defined in Metropolitan's Administrative Code.

COMMITMENT TO PURCHASE.

In consideration of Purchaser's commitment to purchase System Water pursuant to this Purchase Order, Metropolitan agrees to sell such System Water to Purchaser at the Tier 1 Supply Rate each year in an amount up to the Tier 1 Annual Maximum. System Water sold to Purchaser (excluding deliveries of System Water made under the Interim Agricultural Water Program and Long-term Seasonal Storage Service) in an amount greater than the Tier 1 Annual Maximum shall be sold to the Purchaser at the Tier 2 Supply Rate. In connection with the receipt of System Water, the Purchaser also agrees to pay all other applicable rates and charges, as established by Metropolitan from time to time in accordance with Section 4304 of the Administrative Code. The rates and charges applicable to System Water as of the Effective Date are shown in Attachment 2.

Purchaser agrees to purchase System Water from Metropolitan during the Term in an amount (excluding deliveries of System Water, made under the Interim Agricultural Water Program and Long-term Seasonal Storage Service) not less than the Purchase Order Commitment.

Purchaser recognizes and agrees that Metropolitan has relied and will, during the term of this Purchase Order, rely on this commitment by Purchaser in setting its rates and charges, planning and providing its capital facilities and developing its water supply, management and reliability programs. If Purchaser's applicable System Water purchases during the Term are less than the Purchase Order Commitment, Purchaser agrees to pay Metropolitan an amount equal to the difference between the Purchase Order Commitment and Purchaser's applicable System Water purchases during the Term times the average of the Tier 1 Supply Rate in effect during the Term. The Purchaser agrees to pay such amount to Metropolitan within the next regular billing cycle following the reconciliation of all certifications for special programs that the Purchaser may participate in (e.g. Interim Agricultural Water Program, Long-term Seasonal Storage Service). The Purchaser may elect to pay such amount in twelve equal monthly

payments over the course of the next twelve months beginning with the first regular billing cycle following the reconciliation of all outstanding certifications for special programs. If the Purchaser elects to pay such amount over the course of the next twelve months following the regular billing cycle any outstanding balance shall bear interest at Metropolitan's then current investment portfolio average yield. All other amounts payable under this Purchase Order shall be billed and paid in accordance with the Administrative Code.

The Purchaser further recognizes that this Purchase Order is entered into for the direct benefit of the holders and owners of Metropolitan's Bonds issued from time to time under the Act and the Bond Resolutions, and the income and revenues derived from this Purchase Order will be pledged for the purposes set forth in the Bond Resolutions, including the payment of principal of and interest on such Bonds.

RENEWAL:

Prior to but not later than December 31, 2010, the Purchaser may provide a non-binding written notice to Metropolitan of the Purchaser's determination to extend this Purchase Order. Upon the receipt of such notice, the Board of Directors of Metropolitan (the "Board") shall determine whether Metropolitan will continue to provide System Water to member agencies by Purchase Order. If the Board so determines, the Purchaser and Metropolitan shall amend this Purchase Order to include an extended term and/or to include such other terms and conditions as may be mutually agreed by the parties. If the Purchaser elects not to renew this Purchase Order it will terminate upon the expiration of the Term.

WATER SERVICE:

Conditions of water service by Metropolitan to the Purchaser, including but not limited to (i) delivery points, (ii) water delivery schedules, and (iii) water quality, will be determined in accordance with Chapter 5 (Section 4500 through 4514, inclusive, as applicable) of Metropolitan's Administrative Code.

In accordance with its Administrative Code, Metropolitan shall use its reasonable best efforts to supply System Water in the quantities requested by the Purchaser, but is not obligated to dedicate any portion of System capacity for the conveyance, distribution, storage or treatment of System Water for the benefit of the Purchaser or any other member agency. Metropolitan shall use its reasonable best efforts to deliver the Base Demand when needed by the Purchaser during the Term; provided however, there shall be no default under this Purchase Order if Metropolitan fails to deliver water to the Purchaser in accordance with any such schedule of deliveries during the Term.

By execution of this Purchase Order, the Purchaser recognizes and agrees that it acquires no interest in or to any portion of the System or any other Metropolitan facilities, or any right to receive water delivered through the System, excepting the right to purchase up to Purchaser's Tier 1 Annual Maximum at the Tier 1 Supply Rate provided that System Water is available. This Purchase Order governs pricing of the System Water delivered to the Purchaser pursuant to this Purchase Order and does not confer any entitlement to receive System Water.

System Water provided to the Purchaser under the terms of this Purchase Order shall be subject to reduction in accordance with the shortage allocation provisions of the Water Surplus and Drought Management Plan (the "WSDM Plan") or other such policies and principles governing the allocation of System Water as adopted by the Board.

In the event that Metropolitan's Board determines to reduce, interrupt or suspend deliveries of System Water (excluding deliveries of System Water made under the Interim Agricultural Water Program and Long-term Seasonal Storage Service) any outstanding balance of the Purchase Order Commitment at the end of the Term shall be reduced by the reduction in System Water made available to the Purchaser under this Purchase Order.

MISCELLANEOUS:

This Purchase Order will be interpreted, governed and enforced in accordance with the laws of the State of California.

This Purchase Order will apply to and bind the successors and assigns of the Purchaser and Metropolitan.

No assignment or transfer of the rights of the Purchaser under this Purchase Order will be valid and effective against Metropolitan or the Purchaser without the prior written consent of Metropolitan and the Purchaser.

If at any time during the Term, by reason of error in computation or other causes, there is an overpayment or underpayment to Metropolitan by the Purchaser of the charges provided for under this Purchase Order, which overpayment or underpayment is not accounted for and corrected in the annual re-determination or reconciliation of said charges, the amount of such overpayment or underpayment shall be credited or debited, as the case may be, to the Purchaser. .Metropolitan will notify the Purchaser in writing regarding the amount of such credit or debit, as the case may be. In no case will credits or debits for charges provided for under this Purchase Order be administered beyond the limit for billing adjustments as specified in Metropolitan's Administrative Code.

IN WITNESS WHEREOF, this Purchase Order is executed by the duly authorized officers of the Metropolitan Water District of Southern California and [Purchaser], to be effective January 1, 2003.

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

By: Ronald R. Gastelum
Ronald R. Gastelum
Chief Executive Officer

WESTERN MUNICIPAL WATER DISTRICT OF RIVERSIDE COUNTY

By:

[Title] GENERAL MANAGER

APPROVED AS TO FORM AND CONTENT:

General Counsel

Best Best & Krieger LLP
General Counsel

By:

By: Steven M. Anderson

Attachment 1
Purchase Order for Imported Water Supplies
DEFINITIONS

"Act" means the Metropolitan Water District Act, California Statutes 1969, Chapter 209, as amended and supplemented from time to time.

"Base Demand" means the greater of (i) the Initial Base Demand or (ii) the ten-year rolling average of the Purchaser's Firm Demand, measured on a fiscal year basis.

"Bonds" means water revenue bonds or notes issued under the Bond Resolutions.

"Bond Resolutions" means Resolution No. 8329 or Resolution No. 8322, both as amended and supplemented, or any other resolution authorizing the issuance of bonds, notes or other obligations secured by Metropolitan's water sales revenues.

"Effective Date" means the effective date of this Purchase Order as specified above.

"Firm Demand" means the Purchaser's purchases of non-surplus System Water supplies, including full-service and seasonal shift deliveries.

"Initial Base Demand" means the Purchaser's highest annual Firm Demand on Metropolitan in any fiscal year during the period from fiscal year 1989/90 through fiscal year 2001/02. In accordance with procedures set forth in Metropolitan's Administrative Code, the Initial Base Demand will be revised to reflect certified and verified deliveries under the Interim Agricultural Water Program and Long-term Seasonal Storage Service Program as such certifications affect the Initial Base Demand.

"Metropolitan" means The Metropolitan Water District of Southern California.

"Purchase Order Commitment" means 60% of the Initial Base Demand times 10. Deliveries of System Water made under the Interim Agricultural Water Program and Long-term Seasonal Storage Service, will not count toward the Purchase Order Commitment.

"Purchase Order" means this Purchase Order.

"Purchaser" means the member public agency specified above, a duly organized [city/water district/county water authority] of the State of California.

"System" means the properties, works and facilities of Metropolitan necessary for the supply, development, storage, conveyance, distribution, treatment or sale of water.

"System Water" means water supplies developed by Metropolitan and delivered to the Purchaser through the System or other means (e.g. conjunctive use storage).

"Term" means the term of this Purchase Order as specified above.

"Tier 1 Annual Maximum" means an amount equal to 90% of the Base Demand.

"Tier 1 Supply Rate" means Metropolitan's per-acre-foot Tier 1 Supply Rate, as determined from time to time by Metropolitan's Board of Directors. The initial Tier 1 Rate is $73/AF.

"Tier 2 Supply Rate" means Metropolitan's per-acre-foot Tier 2 Supply Rate, as determined from time to time by Metropolitan's Board of Directors. The initial Tier 2 Rate is $154/AF.

"Water Surplus and Drought Management Plan (WSDM)" means Metropolitan's policy and procedures for managing supplies and drought conditions as adopted by the Board from time to time.

Attachment 2
Purchase Order for Imported Water Supplies
RATES AND CHARGES

	Effective January 1, 2003
Tier 1 Supply Rate ($/af)	$73
Tier 2 Supply Rate ($/af)	$154
System Access Rate ($/af)	$141
System Power Rate ($/af)	$89
Water Stewardship Rate ($/af)	$23
Untreated Long-term Storage Water Rate ($/af)	$233
Untreated Interim Agricultural Water Program ($/af)	$236
Treated Long-term Storage Water Rate ($/af)	$290
Treated Interim Agricultural Water Program ($/af)	$294
Treatment Surcharge ($/af full-service)	$82
Readiness-to-Serve Charge ($millions)	$80.0
Capacity Reservation Charge ($/cfs)	$6,100
Peaking Surcharge ($/cfs)	$18,300

WATER SUPPLY AGREEMENT
BETWEEN
CITY OF RIVERSIDE PUBLIC UTILITIES DEPARTMENT
AND
WESTERN MUNICIPAL WATER DISTRICT

WHEREAS, the City of Riverside (Riverside) has rights and access to certain water supplies in the Bunker Hill and Riverside basins in excess of its immediate needs; and

WHEREAS, depending on seasonal and other peaking constraints, the existing water system infrastructure is generally capable of transporting this water to the Western Municipal Water District (Western) facilities at Mockingbird; and

WHEREAS, Western presently purchases its water requirements from MWD at rates considerably higher than Riverside's marginal cost of delivery;

NOW, THEREFORE, Riverside agrees to provide this excess water to the Western Mockingbird Pumping Plant and Western agrees to purchase said water to the maximum extent possible, at a price intended to split the savings equally after accounting for each organizations incremental costs associated with this delivery. Based on the cost information detailed in Attachment A, the initial price to Western shall be set at $210/per acre foot. The cost information in Attachment A shall be reviewed at least annually and revised by the mutual consent of both parties.

FURTHERMORE, the Operating Divisions of both organizations shall develop operating protocols to effectively coordinate these water sales and provide for proper accounting and billing procedures.

This agreement supersedes any previous agreements or portions of agreements regarding potable water sales by Riverside to Western and shall be effective the last day signed and shall remain in effect until terminated by either party on 30 day notice.

Bill D. Carnahan
City of Riverside

10/21/96
Date

Don Harriger
Western Municipal Water District

10/16/96
Date

Attachment

WATER SUPPLY AGREEMENT
BETWEEN
CITY OF RIVERSIDE PUBLIC UTILITIES DEPARTMENT
AND
WESTERN MUNICIPAL WATER DISTRICT

ATTACHMENT "A"*

Riverside Incremental Costs

Riverside Well Pumping	$27/AF	
Riverside Booster Pumping	$27/AF	
Riverside O&M	$08/AF	
	Total:	$62/AF

Western Incremental Costs

Western Booster Pumping	$62/AF	
Western O&M	$04/AF	
		$66/AF

Total Incremental Costs: $128/AF

Calculation of Savings

Metropolitan Rate to Western	$425/AF	
Less - Incremental Costs	($128)	
Total Project Savings:		$297/AF

Split the Savings $297÷2 = $148/AF

Sale Price to Western

Riverside Savings	$148/AF	
Riverside Costs	$ 62/AF	
		$210/AF

*Costs based on no new facilities constructed, and equal split of savings between Riverside and Western.

Costs based on an incremental cost analysis and is independent of total sales under this agreement, which are projected to be between 1,200 and 2,000 AF/YR.

AGREEMENT BETWEEN THE WESTERN MUNICIPAL WATER DISTRICT OF RIVERSIDE COUNTY AND THE ORANGE COUNTY WATER DISTRICT FOR THE DELIVERY OF WATER

THIS AGREEMENT ("Agreement") is made by and between the WESTERN MUNICIPAL WATER DISTRICT OF RIVERSIDE COUNTY, a municipal water district ("Western"), and the ORANGE COUNTY WATER DISTRICT, a municipal water district ("OCWD"). Western and OCWD are sometimes hereinafter individually referred to as "Party" and hereinafter collectively referred to as the "Parties." This Agreement is dated this 16th day of December, 2001 for reference purposes only.

RECITALS

A. A comprehensive settlement affecting the waters of the Santa Ana River System was reached in 1969 which included two stipulated judgments in the cases of Orange County Water District v. City of Chino, et al., Orange County Superior Court Action No. 117628 ("Orange County Judgment"), and Western Municipal Water District of Riverside County v. East San Bernardino County Water District, et al., Riverside Superior Court Action No. 78426 ("Western Judgment").

B. Pursuant to an agreement dated August 23, 2001, between Western and the Elsinore Valley Municipal Water District ("EVMWD"), Western acquired the right to temporarily use certain groundwater production and conveyance assets owned by EVMWD ("EVMWD Assets") to produce and convey up to nine (9.0) cubic feet per second ("cfs") of water, for a maximum of 6,515.46 acre-feet per year. The EVMWD Assets are identified on the map set forth in Exhibit "A," and are more particularly described as follows:

1. Meeks and Daley Rights. EVMWD owns a controlling interest in the Meeks and Daley Water Company, a mutual water company and California corporation, which entitles EVMWD to 56% of the groundwater production rights and facilities, and 56% of the canal carrying rights owned by the Meeks and Daley Water Company ("Meeks and Daley Rights"). The Meeks and Daley Rights are more particularly described as follows:

a. The groundwater production rights and facilities owned by the Meeks and Daley Water Company are located in the San Bernardino Basin Area and are subject to the Western Judgment, which provides that the Meeks and Daley Water Company holds a right to produce up to 7,833 acre-feet per year in the San Bernardino Basin Area.

b. The canal carrying rights owned by the Meeks and Daley Water Company are located in the Riverside Canal and Gage Canal.

2. Palm Avenue Well. Separate and apart from EVMWD's interest in the Meeks and Daley Water Company, EVMWD also owns a well in the Riverside South Basin which is physically capable of producing water into the Riverside Canal and Gage Canal. The production rights of EVMWD in the Riverside South Basin are not specifically provided for in the Western Judgment.

C. Western and OCWD now desire to execute an agreement for the delivery of water by Western to OCWD through use of the EVMWD Assets, to help reduce high groundwater levels in the San Bernardino Basin Area and Riverside Basin Area through increased groundwater extractions, and to help recharge groundwater resources in Orange County by discharging the extracted groundwater into the Santa Ana River or its tributaries. The location of the wells that will be used in the program are shown on Exhibit B.

NOW THEREFORE, in consideration of the mutual covenants and conditions stated herein and other valuable consideration, the sufficiency of which is hereby acknowledged, the Parties hereby agree as follows:

TERMS

1.0 Delivery of Water. Western shall cause to be delivered into the Santa Ana River or its tributaries up to a maximum of 6,515 acre-feet of water per year beginning on the Effective Date of this Agreement.

1.1 Point and Schedule for Delivery. All water delivered by Western to OCWD under this Agreement shall be delivered to the Santa Ana River at such location(s) and at such time(s) as shall be mutually agreed on by both Parties. If the Parties are unable to agree on mutually acceptable location(s) or time(s) for delivery of the water, either Party may immediately terminate this Agreement upon providing written notice to the other Party.

1.2 Measuring and Accounting for Deliveries. The Parties shall mutually agree on a methodology for quantifying the water delivered by Western to OCWD under this Agreement. If the Parties are unable to agree on mutually acceptable methodology for quantifying the water delivered under this Agreement, either Party may immediately terminate this Agreement upon providing written notice to the other Party.

1.2.1 OCWD shall bear all losses of water which may occur between the point at which the water is discharged into the Santa Ana River or tributaries and the place of use by OCWD. Such deliveries shall not be considered as base flow under the Orange County Judgment, and the Upper Area districts (as defined in the Orange County Judgment) shall not be entitled to credit at Prado or Riverside Narrows for any such deliveries. All water delivered under this Agreement shall be in

addition to all obligations of the Upper Area districts under the Orange County Judgment.

1.2.2 All water delivered under this Agreement through Western's use of the Meeks and Daley Rights is part of the natural water supply to the San Bernardino Basin Area, and shall be appropriately accounted for by the Watermaster established under the Western Judgment. No water delivered under this Agreement is from the State Water Project.

1.3 No Minimum Delivery Guarantee. The actual amount of water delivered under this Agreement is contingent on groundwater extractions made bv Western through its use of the EVMWD Assets. Western shall make a good faith effort to deliver as much water as feasible, but no minimum deliveries are assured. Western shall not be responsible or liable to OCWD, for any damage, injury, or economic loss suffered by OCWD, or any third party including its customers, due to any interruption, reduction, lack of flow, or cessation in deliveries of water made under this Agreement.

2.0 Water Quality. Western makes no warranty or representation as to the quality of the water delivered to OCWD pursuant to this Agreement, provided that such deliveries shall comply with any requirements of the Santa Ana Regional Water Quality Control Board. If such compliance is not feasible or other required approvals cannot be obtained, as determined by Western in its discretion, Western shall have the option to immediately terminate this Agreement upon providing written notice to OCWD. Western shall not be liable for any damage or injury to persons or facilities resulting from the quality of water delivered under this Agreement. Western shall provide OCWD all available historic water quality data on all wells utilized in this agreement within 30 days of execution of the agreement. All future water quality data on any wells in this program will also be transmitted to OCWD.

3.0 Water Rights Not Affected. No production or delivery of water under this Agreement shall confer any appropriative, overlying, public trust, or other water right on any person or entity. The only rights granted to the Parties as a result of this Agreement are those expressly set forth herein.

4.0 Permits and CEQA Compliance. Western shall be responsible for obtaining any permits and regulatory approvals, and shall be the lead agency for purposes of complying with the California Environmental Quality Act (CEQA).

5.0 Payment. OCWD shall pay to Western the sum of One Hundred and Fifty Dollars ($150.00) per acre-foot of water delivered to OCWD by Western in accordance with the terms of this Agreement. OCWD shall have no obligation to pay for water delivered by Western during such times as the water would escape to the ocean and not be available for recharge purposes within Orange County; provided that OCWD has given notice to Western of such conditions. During such times, Western shall have no

obligation under this Agreement to deliver water to OCWD. All sums owed under this Agreement shall be payable by OCWD within thirty (30) days of its receipt from Western of a written invoice indicating the amount of water delivered and the applicable charges as set forth in this section. Any amount not paid when due, shall bear interest at the maximum legal rate.

6.0 Term. This Agreement shall begin on the Effective Date and shall continue in effect until terminated in accordance with the provisions of this Agreement.

7.0 Termination. In addition to the rights of the Parties to terminate this Agreement as provided in other sections, this Agreement may be terminated in accordance with the following:

7.1 Termination by Notice. Either Party may terminate this Agreement by providing the other Party written notice that the Agreement will terminate on the date specified in the notice, which shall be no earlier than one (1) year from the date such notice is placed in the mail or delivered.

7.2 Termination for Nonpayment. Either Party may terminate this Agreement fifteen (15) days after providing written notice to the other Party of its failure to pay when due any sums required under this Agreement.

8.0 Effect of Termination. Within thirty (30) days of the termination of this Agreement, OCWD shall pay to Western all sums due and owing under this Agreement. Western's rights under this section are in addition to any legal rights and remedies which it may otherwise have in the event of a breach of this Agreement.

9.0 Assignment or Transfer of Agreement. Neither Party shall assign, hypothecate, or transfer, either directly or by operation of law, this Agreement or any interest or obligation herein without prior written consent of the other Party, which shall not be unreasonably withheld. Any attempt to do so shall be null and void, and any assignee, hypothecatee, or transferee shall acquire no right or interest by reason of such attempted assignment, hypothecation, or transfer.

10.0 Reciprocal Indemnities.

10.1 Western's Indemnification. Western agrees to indemnify, defend, and hold harmless OCWD, its officers, employees, and agents, from any and all claims, demands, causes of action, liability, loss, damage, injury, to property or persons, including wrongful death, whether imposed by a court of law or by administrative action of any federal, state, or local governmental body or agency arising out of or connected with Western's performance or non-performance of this Agreement. Western's indemnification obligation includes, without limitation, the payment of all penalties, fines, judgments, awards, decrees, attorneys fees, and related costs or expenses, and the

reimbursement of OCWD, its elected officials, officers, employees, and agents for all legal expenses and costs incurred by each of them. Western's indemnification obligation under this section shall survive the expiration or termination of this Agreement.

10.2 OCWD's Indemnification. OCWD agrees to indemnify, defend, and hold harmless Western, its officers, employees, and agents, from any and all claims, demands, causes of action, liability, loss, damage, injury, to property or persons, including wrongful death, whether imposed by a court of law or by administrative action of any federal, state, or local governmental body or agency arising out of or connected with: (1) use by OCWD, its customers, or other third parties of the water delivered to OCWD under this Agreement, or (2) OCWD's performance or non-performance of this Agreement. OCWD's indemnification obligation includes, without limitation, the payment of all penalties, fines, judgments, awards, decrees, attorneys fees, and related costs or expenses, and the reimbursement of Western, its elected officials, officers, employees, and agents for all legal expenses and costs incurred by each of them. Western's indemnification obligation under this section shall survive the expiration or termination of this Agreement.

11.0 Future Judicial Proceedings. In any future proceedings to interpret, modify or enforce the Orange County Judgment, or for violation thereof, neither this Agreement, nor any specific project subject to this Agreement, nor any previous agreements between or among any of the parties hereto, including, but not limited to the Agreement to Produce Additional Water From The Artesian Zone of the San Bernardino Basin Area and for Reimbursement of Costs, dated February 25, 1985; the Joint Participation Agreement Between the Orange County Water District, the Western Municipal Water District of Riverside County and the Santa Ana Watershed Project Authority for the Development and the Utilization of Desalted Water From the Arlington Desalter, dated July 6, 1988; the Agreement for Temporary Exchange of Well Water for Metropolitan Water District Water between the Western Municipal Water District of Riverside County, the Orange County Water District and the Municipal Water District of Orange County, dated May 22, 1991; and the Water Exchange and Storage Agreement between the Western Municipal Water District of Riverside County, the Orange County Water District and the City of Anaheim, dated August 24, 1993, or any action taken pursuant to such agreements, shall constitute an admission or precedent with respect to the meaning of the Judgment, or grounds for modification thereof, and shall not be offered into evidence (except for the purpose of giving effect to this paragraph). Nor shall any claim of laches, waiver or estoppel be made based upon the decision to approve and implement this Agreement rather than to seek a judicial resolution of the disagreement over the meaning of the Orange County Judgment concerning the rights of OCWD, or the limitation of such rights, to export or otherwise cause water to flow from the Upper to the Lower Area.

12.0 General Provisions.

12.1 Authority to Enter Agreement. Each Party warrants that the individuals who have signed this Agreement have the legal power, right, and authority make this Agreement and bind each respective Party.

12.2 Notice. All notices, demands, invoices, and written communications required to be provided under this Agreement, shall be delivered at following addresses or such other addresses as Parties may designate by written notice:

To Western: Western Municipal Water District
Attn: General Manager
P.O. Box 5286
Riverside, California 92517-5286
Tel: 909-780-4170
Fax: 909-780-3837

To OCWD: Orange County Water District
Attn: General Manager
P.O. Box 8300
Fountain Valley, CA 92728-8300
Tel: 714-378-3200
Fax: 714-378-3373

Depending on the method of transmittal, notice shall be deemed received as follows: by facsimile, as of the date and time sent; by messenger, as of the date delivered; and by U.S. Mail first class postage prepaid, as of seventy-two (72) hours after deposit in the U.S. Mail.

12.3 Amendment; Modification. No supplement, modification, or amendment of this Agreement shall be binding unless executed in writing and signed by the Parties.

12.4 Waiver. No waiver of any default shall constitute a waiver of any other default or breach, whether of the same or other covenant or condition. No waiver, benefit, privilege, or service voluntarily given or performed by a Party shall give the other Party any contractual right by custom, estoppel, or otherwise.

12.5 No Third Party Beneficiaries. There are no intended third party beneficiaries of any right or obligation assumed by the Parties.

12.6 Time is of the Essence. Time is of the essence in this Agreement, and the Parties agree to execute all documents and proceed with due diligence to complete all covenants and conditions.

12.7 Counterparts. This Agreement may be signed in counterparts, each of which shall constitute an original and which collectively shall constitute one instrument.

12.8 Entire Agreement. This Agreement contains the entire agreement between the Parties on the subject matter of this Agreement, and it supersedes any prior oral or written statements or agreements between the Parties.

13.0 Effective Date. This Agreement shall become effective on the date water is first delivered by Western to OCWD in accordance with the terms of this Agreement, even if such date precedes the date upon which the Parties sign this Agreement.

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed by their respective duly authorized officers.

WESTERN MUNICIPAL WATER DISTRICT OF RIVERSIDE COUNTY

By: _____
President

Date: December 16, 2001

ORANGE COUNTY WATER ~~MUNICIPAL~~ DISTRICT

By: _____
President

Date: 12-19-01

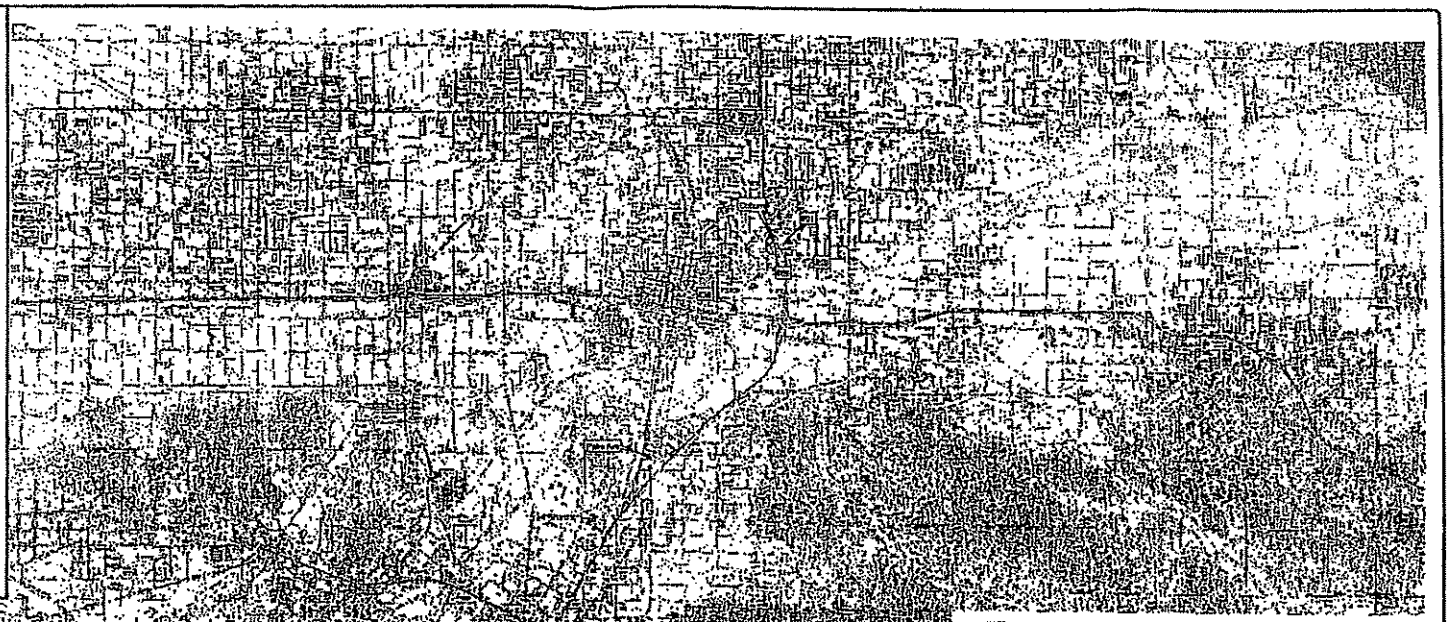
By: _____
General Manager

APPROVED AS TO FORM

By _____
General Counsel for
Orange County Water District

Mutual System Overview

Area of Interest



Legend

Wells
- EVMWD
- Arlington Line
- Olivewood Booster

Gage Canal
- Potable
- Non Potable

Riverside Canal

N

Data Sources: USGS, EVMWD, SBMWCD, City of Riverside

Scale

1" = 4500'
1:54000

4500 0 4500 9000 13500 18000 Feet

MAP HAS BEEN REDUCED
NOT TO SCALE

EVMWD GIS

Elsinore Valley Municipal Water District

Appendix E
Best Management Practices (BMP) Report & DMM Information

BMP 03: System Water Audits, Leak Detection and Repair

Reporting Unit:	BMP Form Status:	Year:
Western MWD of Riverside County - Wholesale	**100% Complete**	**2004**

A. Implementation

1. Has your agency completed a pre-screening system audit for this reporting year?	no
2. If YES, enter the values (AF/Year) used to calculate verifiable use as a percent of total production:	
a. Determine metered sales (AF)	
b. Determine other system verifiable uses (AF)	
c. Determine total supply into the system (AF)	
d. Using the numbers above, if (Metered Sales + Other Verifiable Uses) / Total Supply is < 0.9 then a full-scale system audit is required.	0.00
3. Does your agency keep necessary data on file to verify the values used to calculate verifiable uses as a percent of total production?	yes
4. Did your agency complete a full-scale audit during this report year?	no
5. Does your agency maintain in-house records of audit results or the completed AWWA audit worksheets for the completed audit?	no
6. Does your agency operate a system leak detection program?	no
a. If yes, describe the leak detection program:	

B. Survey Data

1. Total number of miles of distribution system line.	275
2. Number of miles of distribution system line surveyed.	0

C. System Audit / Leak Detection Program Expenditures

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

D. "At Least As Effective As"

1. Is your AGENCY implementing an "at least as effective as" variant of this BMP?	No
a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."	

E. Comments

Western has no specific charge account to record labor costs associated with leak detection activities. The cost is charged to general maintenance activities.

BMP 07: Public Information Programs

Reporting Unit:	BMP Form Status:	Year:
Western MWD of Riverside County - Wholesale	**100% Complete**	**2004**

A. Implementation

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

   a. If YES, describe the program and how it's organized.

   Western's public affairs team broadcasts water information to customers via many activities. The activities are focused into categories including media information, customer communication, public information, Landscapes Southern California Style garden, consumer confidence report, government affairs, and water use efficiency programs.

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

Public Information Program Activity	Yes/No	Number of Events
a. Paid Advertising	no	0
b. Public Service Announcement	yes	1
c. Bill Inserts / Newsletters / Brochures	yes	8
d. Bill showing water usage in comparison to previous year's usage	yes	
e. Demonstration Gardens	yes	18
f. Special Events, Media Events	yes	10
g. Speaker's Bureau	yes	4
h. Program to coordinate with other government agencies, industry and public interest groups and media	yes	

B. Conservation Information Program Expenditures

	This Year	Next Year
1. Budgeted Expenditures	142624	145277
2. Actual Expenditures	111506	

C. "At Least As Effective As"

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

   a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

D. Comments

Western's budget categories are not divided in such a way as to easily distinguish public information program expenditures solely for water conservation: The dollar amounts in section B above include all public information activities.

BMP 08: School Education Programs

Reporting Unit:	BMP Form Status:	Year:
Western MWD of Riverside County - Wholesale	**100% Complete**	**2004**

A. Implementation

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

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

Grade	Are grade-appropriate materials distributed?	No. of class presentations	No. of students reached	No. of teachers' workshops
Grades K-3rd	yes	24	6981	0
Grades 4th-6th	yes	0	358	0
Grades 7th-8th	yes	0	0	0
High School	yes	0	22	0

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

4. When did your Agency begin implementing this program? 09/01/1982

B. School Education Program Expenditures

	This Year	Next Year
1. Budgeted Expenditures	61783	57065
2. Actual Expenditures	53564	

C. "At Least As Effective As"

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

a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

D. Comments

No comments BMP 8 - Wholesale

BMP 10: Wholesale Agency Assistance Programs

Reporting Unit:
Western MWD of Riverside County - Wholesale

BMP Form Status:
100% Complete

Year:
2004

A. Implementation

1. Financial Support by BMP

BMP	Financial Incentives Offered?	Budgeted Amount	Amount Awarded	BMP	Financial Incentives Offered?	Budgeted Amount	Amount Awarded
1	yes	0	0	8	No	0	0
2	yes	0	0	9	yes	0	0
3	yes	0	0	10	yes	9573	8518
4	No	0	0	11	No	0	0
5	yes	20000	20000	12	No	0	0
6	yes	0	0	13	No	0	0
7	No	0	0	14	yes	0	0

2. Technical Support

a. Has your agency conducted or funded workshops addressing CUWCC procedures for calculating program savings, costs and cost-effectiveness?	No
b. Has your agency conducted or funded workshops addressing retail agencies' BMP implementation reporting requirements?	No
c. Has your agency conducted or funded workshops addressing:	
1) ULFT replacement	No
2) Residential retrofits	No
3) Commercial, industrial, and institutional surveys	No
4) Residential and large turf irrigation	No
5) Conservation-related rates and pricing	No

3. Staff Resources by BMP

BMP	Qualified Staff Available for BMP?	No. FTE Staff Assigned to BMP	BMP	Qualified Staff Available for BMP?	No. FTE Staff Assigned to BMP

1	yes	1	8	yes	1
2	yes	1	9	yes	1
3	yes	1	10	yes	1
4	yes	1	11	yes	1
5	yes	1	12	yes	1
6	yes	1	13	yes	1
7	yes	1	14	yes	1

4. Regional Programs by BMP

BMP	Implementation/ Management Program?	BMP	Implementation/ Management Program?
1	No	8	yes
2	No	9	No
3	No	10	No
4	No	11	No
5	No	12	No
6	No	13	No
7	No	14	No

B. Wholesale Agency Assistance Program Expenditures

	This Year	Next Year
1. Budgeted Expenditures	43212	41190
2. Actual Expenditures	35209	

C. "At Least As Effective As"

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

a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

D. Comments

All BMP incentives offered by Metropolitan Water District of Southern California are passed through to Western's subagencies. Western and its subagencies participate in MWD's regional CII incentive program. Western's Board approved payment of 50% of it subagencies' CUWCC dues in 2003. Western sponsors a regional school education program and included activities in its general service area.

BMP 11: Conservation Pricing

Reporting Unit:	BMP Form Status:	Year:
Western MWD of Riverside County - Wholesale	**100% Complete**	**2004**

A. Implementation

Rate Structure Data Volumetric Rates for Water Service by Customer Class

1. Residential	
a. Water Rate Structure	Uniform
b. Sewer Rate Structure	Service Not Provided
c. Total Revenue from Volumetric Rates	$28855660
d. Total Revenue from Non-Volumetric Charges, Fees and other Revenue Sources	$261520
2. Commercial	
a. Water Rate Structure	
b. Sewer Rate Structure	
c. Total Revenue from Volumetric Rates	$
d. Total Revenue from Non-Volumetric Charges, Fees and other Revenue Sources	$
3. Industrial	
a. Water Rate Structure	
b. Sewer Rate Structure	
c. Total Revenue from Volumetric Rates	$
d. Total Revenue from Non-Volumetric Charges, Fees and other Revenue Sources	$
4. Institutional / Government	
a. Water Rate Structure	
b. Sewer Rate Structure	
c. Total Revenue from Volumetric Rates	$
d. Total Revenue from Non-Volumetric Charges, Fees and other Revenue Sources	$
5. Irrigation	
a. Water Rate Structure	
b. Sewer Rate Structure	
c. Total Revenue from Volumetric Rates	$
d. Total Revenue from Non-Volumetric Charges, Fees and other Revenue Sources	$
6. Other	
a. Water Rate Structure	
b. Sewer Rate Structure	
c. Total Revenue from Volumetric Rates	$
d. Total Revenue from Non-Volumetric Charges, Fees and other Revenue Sources	$

B. Conservation Pricing Program Expenditures

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

C. "At Least As Effective As"

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

a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

D. Comments

No comments regarding BMP 11 - Wholesale

BMP 12: Conservation Coordinator

Reporting Unit:	BMP Form Status:	Year:
Western MWD of Riverside County - Wholesale	**100% Complete**	**2004**

A. Implementation

1. Does your Agency have a conservation coordinator?	yes
2. Is this a full-time position?	yes
3. If no, is the coordinator supplied by another agency with which you cooperate in a regional conservation program ?	no
4. Partner agency's name:	N/A
5. If your agency supplies the conservation coordinator:	
a. What percent is this conservation coordinator's position?	60%
b. Coordinator's Name	TIM BARR
c. Coordinator's Title	COMMUNICATION SPECIALIST
d. Coordinator's Experience and Number of Years	13 YEARS
e. Date Coordinator's position was created (mm/dd/yyyy)	01/12/1994
6. Number of conservation staff, including Conservation Coordinator.	1

B. Conservation Staff Program Expenditures

	This Year	Next Year
1. Budgeted Expenditures	17029	12904
2. Actual Expenditures	19779	

C. "At Least As Effective As"

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

a. If YES, please explain in detail how your implementation of this BMP differs from Exhibit 1 and why you consider it to be "at least as effective as."

D. Comments

ACTUAL EXPENDITURES ARE YEAR-TO-DATE TOTALS (11.30.04). BUDGET FIGURES FROM WMWD ACTIVITY A465 ONLY (COORDINATOR SALARY).

Water Conservation Incentive Program History

All Programs in Western's General Service Area

Year	Residential Programs: Ultra-Low-Flow Toilets unit quantity	Ultra-Low-Flow Toilets water savings(AF)	High Efficiency Clothes Washers unit quantity	High Efficiency Clothes Washers water savings(AF)
1995	-	-	-	-
1996	2359	82	-	-
1997	2450	85.6	-	-
1998	1780	62	-	-
1999	1708	59.7	-	-
2000	1384	48	-	-
2001	1468	51.3	-	-
2002	1914	66.9	204	3.3
2003	2182	76.2	1346	21.5
2004	1892	66.1	2317	37.1

Residential Water Savings Totals (savings in acre feet) current year	cumulative total	Year
0.0	0.0	1995
82.4	82.4	1996
85.6	250.4	1997
62.2	563.1	1998
59.7	853.0	1999
48.4	1191.2	2000
51.3	1580.8	2001
70.1	2040.5	2002
97.8	2597.9	2003
103.2	3258.6	2004

Year	Total Incentive Dollars: by Metropolitan ULFT	by Metropolitan HECW	Third Party Grants ULFT	Third Party Grants HECW	by Local Agency ULFT	by Local Agency HECW	Totals ULFT	Totals HECW
1995	-	-	-	-	-	-	-	-
1996	$141,540	-	-	-	$141,540	-	$283,080	-
1997	$147,000	-	$48,000	-	$70,650	-	$265,650	-
1998	$106,800	-	-	-	$74,760	-	$181,560	-
1999	$102,480	-	-	-	$69,738	-	$172,218	-
2000	$83,040	-	-	-	$58,128	-	$141,168	-
2001	$88,080	-	-	-	$42,252	-	$130,332	-
2002	$114,840	$7,140	-	$15,300	$45,378	$10,545	$160,218	$32,985
2003	$130,920	$47,110	-	$100,950	$44,466	$28,035	$175,386	$176,095
2004	$113,520	$81,095	-	$173,775	$41,271	$38,490	$154,791	$293,360

Average AF Cost of Water Saved (over the estimated life of device) ULFT (10years)	HECW (14 years)	Year
-	-	1995
$343.45	-	1996
$310.33	-	1997
$291.93	-	1998
$288.58	-	1999
$291.93	-	2000
$254.10	-	2001
$239.58	$721.84	2002
$230.05	$584.06	2003
$234.15	$565.23	2004

MINUTES
ADJOURNED REGULAR MEETING OF THE BOARD OF DIRECTORS
WESTERN MUNICIPAL WATER DISTRICT
OF RIVERSIDE COUNTY

January 12, 1994

14673 The adjourned regular meeting of the Board of Directors of Western Municipal Water District was held in the District office at 9:30 a.m., January 12, 1994.

Present

14674 Directors Present:

President Donald L. Schroeder, Presiding
Wayne C. Keith, Vice President
John M. Mylne III, Secretary-Treasurer
Wayne H. Holcomb
Frances J. Nelson

Others Present:

Donald L. Harriger, General Manager and Deputy Secretary-Treasurer
Norman L. Thomas, Manager of Engineering and Operations
Kenneth P. Weel, Manager of Finance
Renae M. Hinchey, Manager of Administration and Public Affairs
Anne Thomas, Best, Best & Krieger
Joan Seeley, Recording Secretary

Dick Smith, SAWPA
Mike Wright, SAWPA
Tim Quinn, MWD
Kathy Gibson, MWD
Doug Beeman, Press-Enterprise
Mrs. Liz Cunnison, Riverside

14675 President Schroeder appointed District Counsel, Anne Thomas, as Temporary Chairman. Ms. Thomas stated that this was the time and place to consider the election of a president, vice president and secretary-treasurer of the Board, and opened the floor for nominations for president. Director Mylne nominated Director Keith for the Office of President of the Board of Directors. Director Holcomb nominated Director Schroeder for the Office of President. Director Mylne moved that the nominations be closed. Director Nelson seconded the motion. Counsel Thomas asked for a show of hands of all those in favor of Director Keith as President. There were four ayes and one no vote. Counsel Thomas stated that by a majority vote of the Board, Director Keith is elected President of the Board of Directors.

M-4311
Election of President

M-4312
Election of
Vice
President

14676 Nominations were opened for the Office of Vice President of the Board of Directors. Director Nelson nominated Director Holcomb for the Office of Vice President. Director Mylne moved that the nominations for vice president be closed. The motion was seconded by Director Keith and there was a unanimous vote for Director Holcomb to serve as Vice President of the Board of Directors.

M-4313
Election of
Secretary-
Treasurer

14677 Nominations were opened for the Office of Secretary-Treasurer. Director Nelson nominated Director Mylne for the Office of Secretary-Treasurer. Director Nelson moved that nominations be closed for the office of secretary-treasurer. Director Keith seconded the motion and there was a unanimous vote for Director Mylne to serve as Secretary-Treasurer of the Board of Directors.

The gavel was passed to the newly elected President of the Board, Director Keith, who thanked the Board and stated that in looking back over the past few years, Western has made some great progress. A mission statement was adopted, long range planning was done, and procedures were developed to identify revenue and expenses and how they relate to each other. At the same time, the District went through some difficult times. MWD chose to pass on a large increase in water rates and this had to be passed on to Western's customers. Efforts were also made by this district for our agricultural customers in terms of water supply with arrangements made for wheeling water, and making arrangements with Orange County and San Bernardino for water exchanges. President Keith stated that Western can look back and see that great strides forward have been made and hopefully this will continue in supplying water and sewer service to our customers.

The Board thanked the outgoing president, Director Schroeder for his efforts during the past year.

M-4314
Minutes
12/8/93
12/15/93
1/5/94

14678 Director Holcomb moved, Director Mylne seconded and it carried that approval be given to the minutes of the Adjourned Regular Board Meeting of December 8, 1993, as corrected, theRegular Board Meeting of December 15, 1993, and the Regular Board Meeting of January 5, 1994, as mailed to the Directors.

14679 A letter signed by General Manager Harriger, dated January 12, 1994, addressed to the Board of Directors regarding the proposal to provide water and sewer service to March Air Force Base, was read by Manager of Engineering Norman Thomas. March AFB was annexed to Western in 1968, at their request, and the District now provides service not only to March AFB but the National Cemetery and Air Force Village West as well. Early in 1993 the Civil Engineering

office at March contacted the District regarding alternative water and sewer service in the event of base realignment or closure. The President's decision in July changed the mission at March to that of Air Force Reserve and Air National Guard. District staff, at the request of Chancellor Orbach, has been participating in the Technical Advisory Committee for March Realignment in order to provide technical support. Western's Board adopted a resolution December 1, 1993, affirming its obligations and commitments to provide water and wastewater services to March, the golf course, the National Cemetery, Air Force Village West and adjacent lands which might be converted to private use. The District also prepared a conceptual proposal for the March realignment entitled "Revitalizing the March Community". The Ad Hoc Committee, at their meeting December 30, approved the proposal and distribution to Air Force personnel in Washington, D.C., as well as March AFB, the National Cemetery, Air Force Village West. The Committee also recommended further distribution to members of the Joint Powers Authority and Technical Advisory Committee for March Realignment, including representatives of the County of Riverside, City of Riverside, City of Moreno Valley, City of Perris, Western Riverside Council of Governments, and Chancellor Raymond Orbach. Following discussion, it was moved by Director Nelson, seconded by Director Mylne and carried unanimously that the action of the Ad Hoc Committee be ratified.

M-4315
March AFB

14680 A letter, signed by General Manager Harriger, dated January 12, 1994, addressed to the Board of Directors regarding an application to LAFCo and a resolution for determining property tax exchange with Riverside County in relation to the 35th Fringe Annexation to WMWD, Elsinore Valley MWD, and MWD was summarized by Manager of Engineering, Norman Thomas. Following discussion, it was moved by Director Schroeder, seconded by Director Holcomb and carried unanimously that Resolutions 1861 and 1862 be adopted as follows:

RESOLUTION 1861

RESOLUTION OF THE BOARD OF DIRECTORS OF WESTERN MUNICIPAL WATER DISTRICT OF RIVERSIDE COUNTY MAKING APPLICATION TO THE LOCAL AGENCY FORMATION COMMISSION OF RIVERSIDE COUNTY FOR THE ANNEXATION OF CERTAIN UNINHABITED TERRITORY IDENTIFIED AS THE THIRTY-FIFTH FRINGE AREA

R-1861
Application to LAFCo 35th Fringe Area Annexation

(See Resolution Book)

14681 General Manager Harriger stated that Tim Quinn of MWD has not yet arrived. Mr. Quinn is scheduled to talk on the next agenda item, the Memorandum of Understanding regarding Urban Water Conservation in California. Mr. Harriger requested that this item be postponed until Mr. Quinn arrives.

Report on Arlington Desalter

14682 General Manager Harriger reported on the Arlington Desalter, as requested by the Board at their last meeting. The problem at the Desalter is the result of a change in the MWD pricing structure. MWD abandoned the interruptible rate structure a couple of years ago in favor of the seasonal storage rate. Interruptible water was available to a replenishment agency like Orange County Water District on a year round basis and was only interrupted in the event MWD was having trouble making service. The effect on the project has been that Orange County WD can only buy water at this preferred rate during certain months of the year and our agreement with Orange County WD says that to the extent that Western MWD can take water and serve it in its area, we have a right to one-half the water. We were unable to establish a market for this water largely because water at the same price is available from other sources within MWD, particularly the Mills Filtration Plant, at a higher elevation which means more energy and less nitrates than in the Mills water and Colorado River water. The market for Arlington Desalter water would be in Norco and Corona but both cities have problems with high nitrates so they are looking for water they can blend with their local supply. The agreement with Orange County states that if Western does not have a market for the water, Orange County WD is obligated to take the water. At the time of the agreement, Orange County assumed that obligation on the basis the interruptible rate would stay in place on a year round basis. When MWD implemented the seasonal storage rate, Orange County was buying non-interruptible water, during the summer months, at the non-interruptible rate. In 1992, arrangements were made with MWD whereby the seasonal rate paid by Orange County WD was extended through the summer months while we were trying to work out this problem. In 1993, because of the abundance of water in the MWD service area, the seasonal storage rate was extended for all seasonal storage users through the summer months so it was not a problem in 1993. MWD recognizes that they are essentially the cause of the problem so it is hoped there will also be relief for 1994.

Dick Smith of SAWPA addressed the Board and stated that one of the primary alternatives SAWPA would very much like to take advantage of is to move the Arlington Desalter out of the local projects program and into Metropolitan's ground

water recovery program which offers some advantages in terms of subsidy from MWD. It would require, however, that the product water be placed in a potable water system. Mr. Smith stated that the most cost effective way to currently operate the Arlington Desalter is one that pushes the nitrate level near the upper limits as allowed by the State Health Department. There are opportunities, under the groundwater recovery program, but until there is a firm commitment on the purchase of the water, it is not feasible to evaluate the alternative of producing lower nitrate water from the Desalter. A question and answer period followed this report.

14683 Director Holcomb reported to the Board on the Special Districts Meeting held January 5, 1994 in Banning. The purpose of this meeting was to elect a special district member to LAFCo. Mr. Holcomb reported that Western was supporting the election of Don Galleano, however, Marion Ashley of Eastern MWD won the election by four votes. Don Galleano will remain an alternate. Mr. Holcomb also stated that Director Mylne and MWD Representative, Lois Krieger also attended the meeting.

Directors Reports

Director Mylne reported to the Board on MWD activities. The Blue Ribbon Committee made an extensive report to the MWD Board on Tuesday, January 11. Each of the sub-committee members also made their own report. Chancellor Ray Orbach led the sub-committee on integrated resources planning combined with the financial structure. Jack Yeager led a sub-committee on the business aspects of MWD activities. The recommendation made by Chancellor Orbach was that the integrated resource planning process should be as open as possible and that all resources be brought up for consideration, and that this be combined with the rate setting process. It is felt that the facilities that are being proposed to serve water into the next century are associated with the cost. Another area the Blue Ribbon Committee covered was the governance issue. The Committee felt strongly that MWD needed to be much more than an engineering function for the acquisition, conveyance and delivery of water; MWD needs to broaden its political base and its perspective in what it was doing to support the business people infrastructure of Southern California and possibly

throughout the State. Mr. Mylne stated that the Committee was very complimentary of MWD in a number of ways, but also had suggestions where certain elements could be improved upon. One element the Committee felt strongly about was that the rates MWD is suggesting can have a significant effect on agriculture. They want to be sure that a segment of business that needs a resource in this area is not destroyed. Mr. Mylne also reported that Assemblyman Haynes spoke to the Water Problems Committee on Monday, January 10th regarding agriculture water pricing. The MWD General Manager asked the Board for approval to appoint an ad hoc committee to review agriculture water pricing. Approval was given to appoint this committee.

Director Nelson stated that since she and Director Holcomb were appointed to the Ad Hoc Committee regarding March AFB they have been handling the issues as they come up. In this regard, Mrs. Nelson stated it would be helpful for the Board members to pass on any information they might obtain through discussions or meetings.

14684 A letter, signed by General Manager Harriger, dated January 12, 1994, addressed to the Board of Directors regarding the Memorandum of Understanding regarding Urban Water Conservation in California was summarized by Manager of Administration and Public Affairs, Renae Hinchey. This agreement was formulated in cooperation with the State Department of Water Resources and the State Water Conservation Coalition, and has been signed by many of the major urban water suppliers and environmental and public interest groups in California. Miss Hinchey introduced Tim Quinn and Kathy Gibson of MWD, who came out at the request of MWD Representative Lois Krieger, to make a presentation to the Board on the subject. Mr. Quinn addressed the Board and stated that he is a division director at MWD responsible for the State Water Project, everything that happens with respect to the Bay Delta, water transfer negotiations in the Central Valley and conservation. Mr. Quinn stated that conservation is a vital part of the job in convincing people that MWD is a wise user of water and that demand management in Southern California is an equal and important part of the long range planning exercise. Part of the long term planning is the integrated resources plan which was discussed by the Blue Ribbon Committee. Mr. Quinn stated that Mr. Harriger, on behalf of Western MWD, has been one of the general managers playing a continuous role in the planning process. Mr. Quinn also stated that it is quite apparent that conservation, reclamation, and groundwater recovery are going to play a major role in the long term reliability program. The basis of the MOU is that the water suppliers who sign will focus on implementing water conservation programs that are cost effective. There are

16 different conservation measures identified in the MOU and they are referred to as Best Management Practices. Agencies can exempt themselves from BMP requirements if they can show that a particular program is not cost effective for them. The member agencies will make their own decisions on the programs but MWD will provide service, not only in the conservation credits program, but also staff support. Mr. Quinn also stated that Western has a conservation record to be very proud of. Following a question and answer period, it was moved by Director Mylne, seconded by Director Schroeder and carried unanimously that the Board approve the MOU Regarding Urban Water Conservation in California, and authorize signature by the President.
The Board requested that staff bring this item back for re-evaluation in one year.

M-4316
MOU Re Urban Water Conservation in California

14685 Director Holcomb reported to the Board that the SAWPA Commission, on Tuesday, January 11, 1994, approved payment to Western of the $567,846 receivable. The Board was very pleased with this outcome.

SAWPA Receivable

14686 The Minutes of the November 1993 Meeting of the Santa Ana Watershed Project Authority were received and filed.

SAWPA Minutes 11/93

14687 MWD Representative, John Mylne III, reported to the Board that the Chairman of the Blue Ribbon Committee appointed a Review Committee of the Board to determine how the recommendations of the Blue Ribbon Committee could be integrated into MWD's operations. Mr. Mylne reported that he was appointed to this committee. Mr. Mylne also reported that the MWD Board gave the general manager approval to pay the State Contract as he felt necessary and desirable in compliance with the contract.

MWD Report

14688 Manager of Administration and Public Affairs, Renae Hinchey, stated that the presentation that General Manager Harriger made before the Senate Agriculture and Water Resources Committee has been put in slide presentation. This was shown to the Board. Following this showing Director Mylne stated that the Ag Committee appointed at the MWD Board Meeting January 11, was requested to report back with

Slide Presentation on the Effect of MWD Pricing Polic on Agricultur

their report and recommendations at the April Board Meeting. Mr. Mylne stated he felt this was because it has been made clear to MWD by General Manager Harriger that that is the time agriculture is most likely to turn off the water for the summer.

Mr. Harriger stated there would be more focus on this issue between now and the next couple of months.

Adjourn

14689 There being no further business to come before the Board, at 11:31 a.m., President Keith adjourned the meeting.

Wayne C. Keith
President

John M. Mylne III
Secretary-Treasurer

Appendix F
Metropolitan Water District
Summary Demand Forecasts

Final Draft

Western Municipal Water District

Average Year

Demographics (1)	2005	2010	2015	2020	2025	2030
Population	779,700	838,200	932,000	1,022,000	1,106,300	1,185,700
Occupied Housing Units	234,200	259,000	294,400	330,600	366,700	402,500
Single Family	172,000	188,800	209,000	235,200	261,000	281,600
Multi-Family	62,200	70,100	85,400	95,300	105,600	120,900
Persons Per Household	3.26	3.17	3.10	3.03	2.96	2.89
Urban Employment	275,600	320,000	364,900	409,800	456,200	504,500

Conservation	2005	2010	2015	2020	2025	2030
Conservation (2)	18,500	25,400	32,400	38,600	46,400	54,200
Installed Active Devices Through 2004	800	700	700	300	0	0
Code-Based and Price-Effect Savings	17,700	24,700	31,700	38,300	46,400	54,200

Total Demands After Conservation	2005	2010	2015	2020	2025	2030
Total Demand	303,600	337,200	365,300	388,400	411,500	432,100
Retail Agricultural	82,300	74,400	67,300	60,800	54,900	49,700
Retail Municipal and Industrial (3)	220,300	251,800	277,000	306,600	335,600	361,400
Groundwater Replenishment	1,000	11,000	21,000	21,000	21,000	21,000
Sea Water Barrier	0	0	0	0	0	0

Local Supplies	2005	2010	2015	2020	2025	2030
Total Local Supplies	205,900	206,100	206,100	206,100	206,100	206,100
Groundwater	189,000	189,000	189,000	189,000	189,000	189,000
Surface Water	0	0	0	0	0	0
Los Angeles Aqueduct	0	0	0	0	0	0
Groundwater Recovery	14,200	14,200	14,200	14,200	14,200	14,200
Total Recycling	2,700	2,900	2,900	2,900	2,900	2,900
M&I and Agricultural	*2,700*	*2,900*	*2,900*	*2,900*	*2,900*	*2,900*
Groundwater Replenishment	*0*	*0*	*0*	*0*	*0*	*0*
Seawater Barrier	*0*	*0*	*0*	*0*	*0*	*0*
Other Imported Supplies	0	0	0	0	0	0

Demands on Metropolitan	2005	2010	2015	2020	2025	2030
Total Metropolitan Demands	97,700	131,200	159,200	182,300	205,500	226,000
Full Service (Tier I and Tier II)	72,800	98,600	118,700	143,700	168,500	190,600
Replenishment Water Rate (4)	1,000	11,000	21,000	21,000	21,000	21,000
Interim Agricultural Water Program	23,900	21,600	19,500	17,600	15,900	14,400

Notes:
All units are acre-feet unless specified, rounded to the nearest hundred
Totals may not sum due to rounding
(1) Growth Projections: SCAG 2004 Regional Transportation Plan; SANDAG 2030 Forecast
(2) Includes code-based, price-effect and existing active savings through 2004; does not include future active conservation savings
Code-based conservation includes plumbing codes for pre-rinse spray heads and high-efficiency washing machines
(3) The retail M&I projections include existing active conservation through 2004, but do not include future active conservation savings
(4) Replenishment Water Rate demands include: seasonal shift, groundwater spreading, and groundwater in-lieu

Metropolitan Water District of Southern California

Average Year

Demographics (1)	2005	2010	2015	2020	2025	2030
Population	18,233,700	19,138,000	19,914,600	20,664,600	21,367,500	22,053,200
Occupied Housing Units	5,803,800	6,145,200	6,444,600	6,751,100	7,075,600	7,376,400
Single Family	3,477,300	3,651,000	3,767,600	3,945,800	4,128,700	4,250,100
Multi-Family	2,326,500	2,494,200	2,677,000	2,805,300	2,946,800	3,126,300
Persons Per Household	3.08	3.05	3.03	3.01	2.97	2.94
Urban Employment	8,186,200	8,991,300	9,402,700	9,795,200	10,163,000	10,537,600

Conservation	2005	2010	2015	2020	2025	2030
Total Conservation	735,900	865,200	955,200	1,027,600	1,106,900	1,188,300
Installed Active Devices Through 2004	91,200	85,800	63,200	23,000	900	100
IRP Conservation Target (2)	6,100	27,100	38,300	45,700	30,500	23,800
Code-Based and Price-Effect Savings (3)	388,600	502,300	603,700	708,900	825,500	914,400
Pre-1990 Conservation	250,000	250,000	250,000	250,000	250,000	250,000

Total Demands After Conservation	2005	2010	2015	2020	2025	2030
Total Demands	4,303,900	4,649,500	4,767,600	4,930,600	5,071,500	5,193,800
Retail Agricultural	347,800	318,800	285,000	250,500	215,000	194,600
Retail Municipal and Industrial	3,768,000	4,053,400	4,196,900	4,392,100	4,569,600	4,719,400
Groundwater Replenishment	140,100	200,400	212,800	215,100	214,000	206,900
Seawater Barrier	48,000	76,900	72,900	72,900	72,900	72,900

Local Supplies	2005	2010	2015	2020	2025	2030
Total Local Supplies	2,084,600	2,352,400	2,441,000	2,567,500	2,588,500	2,587,100
Groundwater	1,343,500	1,418,000	1,431,800	1,433,000	1,445,500	1,444,300
Surface Water	59,400	100,000	99,500	99,200	99,200	98,600
Los Angeles Aqueduct	373,300	252,500	253,000	252,900	253,200	253,600
IRP Local Resource Program Target	600	28,900	43,400	49,500	49,500	49,500
Groundwater Recovery	58,100	79,300	79,700	82,900	82,900	82,900
Total Recycling	208,800	315,100	342,900	366,900	367,700	367,700
M&I and Agricultural	*140,000*	*165,200*	*193,000*	*217,000*	*217,800*	*217,800*
Groundwater Replenishment	*52,000*	*90,000*	*90,000*	*90,000*	*90,000*	*90,000*
Sea Water Barrier	*16,800*	*59,900*	*59,900*	*59,900*	*59,900*	*59,900*
Other Imported Supplies	40,900	158,600	190,600	283,100	290,600	290,600

Demands on Metropolitan	2005	2010	2015	2020	2025	2030
Total Metropolitan Demands	2,219,100	2,297,200	2,326,700	2,363,200	2,482,900	2,606,700
Full Service (Tier I and Tier II)	1,941,900	2,034,100	2,067,500	2,114,600	2,253,800	2,393,200
Replenishment Water Rate (4)	167,500	169,200	179,700	182,800	183,100	176,800
Interim Agricultural Water Program	109,700	93,900	79,500	65,800	46,000	36,700
Firm Demands on Metropolitan (5)	2,019,000	2,100,000	2,123,000	2,161,000	2,286,000	2,419,000

Notes:
All units are acre-feet unless specified, rounded to the nearest hundred
Totals may not sum due to rounding
(1) Growth Projections: SCAG 2004 Regional Transportation Plan; SANDAG 2030 Forecast
(2) The 2030 savings target is derived from the 2003 IRP Update forecast projections for 2030; it is not an official target for 2030.
(3) Measured from 1990; Includes plumbing codes for pre-rinse spray heads and high efficiency washing machines
(4) Replenishment Water Rate demands include: seasonal shift, groundwater spreading, and groundwater in-lieu
(5) Firm demand on Metropolitan equals Full Service demands plus 70% of the Interim Agricultural Water Program demands

Appendix G
Sample Drought Management Resolutions

ORDINANCE 268

AN ORDINANCE OF THE BOARD OF DIRECTORS
OF WESTERN MUNICIPAL WATER DISTRICT
OF RIVERSIDE COUNTY ESTABLISHING A
RETAIL DOMESTIC WATER CONSERVATION PLAN

WHEREAS, California is in the fifth consecutive year of below normal precipitation, and reduced supplies in storage will cause shortfalls in imported water deliveries to the region unless appropriate conservation measures are implemented; and

WHEREAS, one hundred percent (100%) of the Western Municipal Water District's ("District") water supply is imported from the Metropolitan Water District of Southern California ("MWD"); and

WHEREAS, MWD has implemented a staged program called its Incremental Interruption and Conservation Plan requiring its member agencies to achieve stepped reductions ranging from twenty percent (20%) to fifty percent (50%) in the use of water for interruptible deliveries and from five percent (5%) to twenty percent (20%) for firm deliveries and imposes economic penalties for failure to meet such goals; and

WHEREAS, MWD has called upon its member agencies and subagencies to comply with its mandatory water conservation program to mitigate a water supply shortfall and related impacts; and

WHEREAS, in response to drought conditions, Western has determined that the existing stage of water shortage within Western requires that it adopt and enforce water conservation measures for retail domestic customers set forth in this ordinance; and

WHEREAS, on February 20, 1991, the District passed Resolution No. 1720, thereby declaring a water shortage emergency pursuant to Water Code Sections 350 et seq. and Water Code Sections 71640 et seq; and

WHEREAS, the District has the power and authority to enact a water conservation plan and water conservation measures pursuant to Water Code Sections 350 et seq., 375 et seq. and 71640 et seq.; and

WHEREAS, The Board of Directors may enact future amendments to this ordinance increasing or decreasing water conservation measures to reflect then-existing water shortage conditions; and

WHEREAS, the District has determined that adoption of a water conservation plan is necessary to meet the target reduction in water use mandated by MWD and to protect the public health, safety and welfare.

NOW, THEREFORE, BE IT ORDAINED BY THE BOARD OF DIRECTORS OF WESTERN MUNICIPAL WATER DISTRICT OF RIVERSIDE COUNTY as follows:

Section 1. Definitions.

The following terms are defined for the purposes of this ordinance:

"Base year" means fiscal year 1990 (July 1, 1989 through June 30, 1990).

"Board of Directors" means the Board of Directors of the Western Municipal Water District.

"Customer" means all retail domestic or municipal customers of the District.

"Developer" means any person, company or corporation which plans to construct or to have constructed a single family dwelling unit or any other new structure which will require new water connection and service from the District.

"District" means the Western Municipal Water District.

"General Manager" means the general manager of the Western Municipal Water District.

"Target water use" means 80% of the amount used by the customer during the same month in the base year of fiscal 1990, or 20 units,

whichever is greater, except that there shall be no base year allowance for construction water.

"Unit of water means an amount equal to 748 gallons or 100 cubic feet of water.

"Wasteful use" means any unreasonable or nonbeneficial use of water, or any unreasonable method of use of water, included, but not limited to, the specific uses restricted by this ordinance as hereinafter set forth.

"Water" means water supplied by the Western Municipal Water District.

"Water Conservation Measure" means a measure calculated to reduce the amount of water used by District customers.

Section 2. Purpose and Scope.

(a) The purpose of this ordinance is to provide a mandatory water conservation plan to minimize the effects of a water supply shortage on the customers of the District. Pursuant to Water Code Sections 350 *et seq.*, and 71640 *et seq.*, the Board of Directors has previously declared a water shortage emergency. The adoption of a water conservation plan and implementation of water conservation measures is therefore necessary to (1) protect the health, safety, and welfare of the inhabitants and customers of the District, (2) assure the maximum beneficial use of the water supplies of the District and (3) ensure sufficient water supplies to meet the basic needs of human consumption, sanitation and fire protection.

(b) This ordinance adopts regulations to implement a mandatory water conservation plan consistent with the goals of MWD's Incremental Interruption and Conservation Plan and projected water supply availability.

(c) This ordinance shall remain in effect until the Board of Directors finds and declares by ordinance that the provisions of this ordinance are no longer applicable to existing water supply conditions or until increasing or decreasing water shortages require the Board to amend the ordinance.

Section 3. Authorization.

(a) The Board of Directors may adopt a water conservation plan following a public hearing upon the determination by majority vote that such implementation is necessary to reduce water consumption by District customers to conserve water supplies.

(b) A public hearing shall be held to determine whether the District should adopt a water conservation plan. Notice of the time and place of this public hearing shall be published not less that ten (10) days before the hearing in a newspaper of general circulation.

(c) The provisions of Section 6 of this ordinance shall become effective immediately upon adoption by the Board of Directors. Section 5 and any other sections related to curtailment in the use of water shall become effective at the start of the first full billing period commencing on or after August 1, 1991. Prohibitions related to construction water use and new connections provided for in Sections 7 and 8 shall become effective on August 1, 1991.

Section 4. Application.

The provisions of this ordinance shall apply to all retail domestic water customers served by the District.

Section 5. Curtailment of Consumer Water Usage.

(a) No customer shall use District water in excess of eighty percent (80%) of the amount used by the customer during the same month in the base year of fiscal 1990. The customer's target water use amount for the following month will be included on each monthly District invoice.

(b) Notwithstanding the above, no customer shall be required to reduce water consumption below the minimum allocation amount of twenty (20) units of water per month. Twenty (20) units of water constitutes approximately five hundred (500) gallons of water per day per connection. If actual customer water usage is twenty (20) units of water or less per month, the base year allocation does not apply. New residential and commercial connections shall be allocated twenty (20) units of water per month.

Section 6. Water Conservation Measures.

The following uses shall be prohibited:

(a) Hosing down driveways, sidewalks, patios, building walls or any paved area except as necessary for public health or sanitation.

(b) Washing cars, trucks, vans, campers, trailers or any other vehicle without using a bucket or a hose equipped with an automatic shutoff nozzle except on the premises of a commercial car wash or service station using reclaimed or recycled water.

(c) Restaurants and other public places serving food shall not serve drinking water to customers unless expressly requested.

(d) Lawns or outdoor landscaping shall be irrigated only between the hours of 6:00 p.m. and 6:00 a.m.

(e) Parks, school grounds and golf courses shall be irrigated only between the hours of 6:00 p.m. and 6:00 a.m.

(f) The operation of sprinklers and irrigation systems shall be adjusted to avoid overspray, runoff and waste. Irrigation using these systems is prohibited during high wind periods.

The following water conservation measures are strongly recommended:

(a) The installation and use of spa and pool covers.

(b) All indoor and outdoor plumbing, such as pipes, faucets and toilets should be periodically checked for leaks and repaired promptly.

(c) The use of water saving devices such as ultra low flush toilets, toilet dams, low flow showerheads and faucet aerators.

(d) New landscaping should incorporate low water demand trees, shrubs, grasses, and water-efficient irrigation systems. The installation of large turf areas is discouraged. District resources are available to provide reasonable assistance regarding water conservation techniques. The District recommends the use of a landscaping manual entitled "Landscapes Southern California Style". The District's garden display provides examples of water conservation landscaping.

Section 7. Prohibition on Construction Water Use.

No District water shall be used for construction purposes unless no alternative water sources are available and the General Manager has determined that the District has water available for this purpose. Developers may be required to find alternative sources of water for uses such as dust control, site clean-up and compaction purposes. Potable water may only

be used for construction purposes for the disinfection and pressure testing of the delivery system and for pressure testing and limited on-site building construction needs. No potable water shall be used in conjunction with construction to wash down streets without written authorization from the District. In the event District water is available for construction uses, the rate for such water shall be twice the regular rate for such water.

New temporary unmetered connections ("jumpers") shall be prohibited after the effective date of this ordinance unless the General Manager determines that the District has water available for this purpose.

Section 8. Prohibition on New Connections Unless Water Efficient Landscaping is used.

No new connections shall be approved by the District unless the applicant has a plan for water efficient landscaping approved by the District. Developers must submit a water efficient landscaping plan for all developer planted areas to the District for approval prior to the issuance of new meter connections. These areas include, but are not limited to, landscaping medians, common areas, model homes and developer planted yard areas. Developers are encouraged to use as a resource the landscaping manual entitled "Landscapes Southern California Style".

Individual homeowners may comply with this Section by one or more of the following:

(a) Submission of a plan for low water use irrigation system acceptable to the District;

(b) Submission of a plan for low water use landscaping materials acceptable to the District;

(c) Such other measures as the District may approve upon individual application.

Section 9. Surcharge for Excess Water Consumption.

Water use in excess of the target amount permitted in Section 5 shall be billed at twice the normal water rate established by the District.

Section 10. Exemption from Compliance.

Any customer may apply in writing for exemption from any provision of this ordinance with the District. District staff may grant such exemption if special circumstances make compliance not reasonably possible, or that the restrictions herein would:

(a) Cause an unnecessary and undue hardship to the customer or the public; or

(b) Cause an emergency condition affecting the health, sanitation, fire protection or safety of the customer or of the public; or

(c) Cause unfairness if historic water use records of the customer indicated that substantial existing water conservation actions have previously been taken. Such indications would include:

(i) Use of xeriscape landscaping during the base year.

(II) Installation of interior and/or exterior permanent plumbing fixtures to conserve water, such as low flow showerheads, ultra low flush toilets, or a drip irrigation system.

(d) Cause unfairness due to the customer's justifiable increase in water use from the base year.

The request for exemption must be supported by evidence to support the applicant's request for special consideration. District staff may require the applicant to submit any additional information necessary to verify the request for exemption and may conduct an inspection of the premises in question before deciding whether to grant such

relief. A decision shall be made on the application within thirty (30) days of receipt of the request and the District shall inform the applicant of the decision in writing. If an exemption is granted, the District may impose any conditions it deems proper.

Section 11. Appeal.

An applicant shall have the right to appeal the decision regarding his or her application in writing to the Board of Directors. The appeal must be in writing and received by the District within ten(10) days of the date of the District's initial written decision. The appeal shall be heard by the Board of Directors within thirty (30) days from the date the appeal is filed. The Board of Directors, at its discretion, may affirm, reverse or modify the decision and impose any conditions it deems proper. The decision of the Board of Directors shall be final.

Section 12. Severability.

If any provision, section, subsection, sentence, clause, or phrase of this ordinance or the application of same to any person or set of circumstances is held to be unconstitutional, void, or invalid, such decision shall not affect the remaining portions of this ordinance which shall remain in full force and effect, and all provisions of this ordinance are declared to be severable for that purpose.

Section 13. Incompatible Provisions.

To the extent any provision of this ordinance is incompatible with or at variance with any prior adopted ordinance or resolution, the provisions of this ordinance shall take precedence, and all prior ordinances and resolutions shall be interpreted to harmonize with and not change the provisions of this ordinance.

Section 14. Public Health and Safety Not to be Affected.

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

Section 15. Exemption from California Environmental Quality Act.

The Board of Directors hereby determines that the adoption of this ordinance and implementation of the measures set forth herein are exempt from review under the California Environmental Quality Act (California Public Resources Code Section 21000 et seq.) as it is an action take to mitigate a water shortage emergency. The Board of Directors hereby directs staff to prepare and file a Notice of Exemption within five (5) working days of adoption of this ordinance.

ADOPTED AND APPROVED this 3rd day of July, 1991, by the Board of Directors of Western Municipal Water District of Riverside County.

Frances J. Nelson

Frances J. Nelson
President of the Board of Directors

ATTEST:

Wayne C. Keith

Wayne C. Keith
Secretary of the Board of Directors

ORDINANCE 279

AN ORDINANCE OF THE BOARD OF DIRECTORS
OF WESTERN MUNICIPAL WATER DISTRICT
OF RIVERSIDE COUNTY AMENDING ORDINANCE 268
TO MODIFY THE RETAIL DOMESTIC WATER
CONSERVATION PLAN

WHEREAS, California is in the fifth consecutive year of below normal precipitation, and reduced supplies in storage will cause shortfalls in imported water deliveries to the region unless appropriate conservation measures are implemented; and

WHEREAS, one hundred percent (100%) of the Western Municipal Water District's ("District") water supply is imported from the Metropolitan Water District of Southern California ("MWD"); and

WHEREAS, MWD has implemented a staged program called its Incremental Interruption and Conservation Plan requiring its member agencies to achieve stepped reductions ranging from twenty percent (20%) to fifty percent (50%) in the use of water for interruptible deliveries and from five percent (5%) to twenty percent (20%) for firm deliveries and imposes economic penalties for failure to meet such goals; and

WHEREAS, MWD has called upon its member agencies and subagencies to comply with its mandatory water conservation program to mitigate a water supply shortfall and related impacts; and

WHEREAS, in response to drought conditions, Western has determined that the existing stage of water shortage within Western requires that it adopt and enforce water conservation measures for retail domestic customers set forth in this ordinance; and

WHEREAS, on February 20, 1991, the District passed Resolution No. 1720, thereby declaring a water shortage emergency pursuant to Water Code Sections 350 et seq. and Water Code Sections 71640 et seq; and

WHEREAS, the District has the power and authority to enact a water conservation plan and water conservation measures pursuant to Water Code Sections 350 et seq., 375 et seq. and 71640 et seq.; and

WHEREAS, The Board of Directors may enact future amendments to this ordinance increasing or decreasing water conservation measures to reflect then-existing water shortage conditions; and

WHEREAS, the District has determined that adoption of a water conservation plan is necessary to meet the target reduction in water use mandated by MWD and to protect the public health, safety and welfare.

WHEREAS, on July 3, 1991, the District adopted Ordinance 268 establishing a retail water conservation plan which prohibits District residential and commercial customers from using water in excess of eighty percent (80%) of the amount used during the same month in the base year of fiscal 1990; and

WHEREAS, approximately twenty-five percent (25%) of District residential customers did not use District water service in all twelve months of the base year of fiscal 1990 and therefore do not have a complete year in which to compare water usage; and

WHEREAS, in order to implement the plan uniformly for the benefit of all residential customers, the District has determined that the target water use of these customers should be adjusted to reflect the average usage of similar water users; and

WHEREAS, certain customers reside within the boundaries of governmental agencies that overlap the District's service area which do not limit water usage or impose a surcharge for excess water consumption; and

WHEREAS, in certain situations, water from these governmental agencies may be made available to the District; and

WHEREAS, the cost of making such water available to District customers within the boundaries of the governmental agency would be borne by the agency and no additional costs would be incurred by the District; and

WHEREAS, in order to implement the plan fairly for the benefit of all customers, the District has determined that such water can be supplied to these customers at the District's regular rate without a surcharge for excess water consumption.

NOW, THEREFORE, BE IT ORDAINED BY THE BOARD OF DIRECTORS OF WESTERN MUNICIPAL WATER DISTRICT OF RIVERSIDE COUNTY as follows:

Section 1. Section 1 of Ordinance No. 268 is hereby amended to read as follows:

Section 1. Definitions.

The following terms are defined for the purposes of this ordinance:

"Base year" means fiscal year 1990 (July 1, 1989 through June 30, 1990).

"Board of Directors" means the Board of Directors of the Western Municipal Water District.

"Customer" means all retail domestic or municipal customers of the District.

"Developer" means any person, company or corporation which plans to construct or to have constructed a single family dwelling unit or any other new structure which will require new water connection and service from the District.

"District" means the Western Municipal Water District.

"General Manager" means the general manager of the Western Municipal Water District.

"Target water use" means eighty percent (80%) of the amount used by the customer during the same month in the base year of fiscal 1990, or 20 units, whichever is greater, except that

residential customers who did not receive more than 25 units of water in any month of the base year shall be considered to have used an amount of water equal to the average usage of similar users as determined by the General Manager and there shall be no base year allowance for construction water.

"Unit of water means an amount equal to 748 gallons or 100 cubic feet of water.

"Wasteful use" means any unreasonable or nonbeneficial use of water, or any unreasonable method of use of water, included, but not limited to, the specific uses restricted by this ordinance as hereinafter set forth.

"Water" means water supplied by the Western Municipal Water District.

"Water Conservation Measure" means a measure calculated to reduce the amount of water used by District customers.

Section 2. Section 5 of Ordinance 268 is hereby amended to read as follows:

Section 5. Curtailment of Consumer Water Usage.

(a) No customer shall use District water in excess of eighty percent (80%) of the amount used by the customer during the same month in the fiscal year. The customer's target water use amount for the following month will be included on each monthly District invoice.

(b) Notwithstanding the above, no customer shall be required to reduce water consumption below the minimum allocation amount of twenty (20) units of water per month. Twenty (20) units of water constitutes approximately five hundred (500) gallons of water per day per connection. If actual customer water usage is twenty (20) units of water or less per month, the base year allocation does not apply. Customers granted new service connections after August 1, 1991 shall be allocated twenty (20) units of water per month.

(c) Further not withstanding the above, residential customers who were granted water service prior to August 1, 1991 but did not receive more than 25 units of water in any month of the base year of fiscal 1990 shall not use District water in excess of eighty percent (80%) of the average amount of water used by similar customers during the same month in the base year. The average amount of water shall be determined by the General Manager. The customer's target water use amount for the following month will be included on each monthly District invoice.

Section 3. Section 10 of Ordinance 268 is hereby amended to read as follows:

Section 10. Exemption from Compliance.

Any customer may apply in writing for exemption from any provision of this ordinance with the District. District staff may grant such exemption if special circumstances make compliance not reasonably possible, or that the restrictions herein would:

(a) Cause an unnecessary and undue hardship to the customer or the public; or

(b) Cause an emergency condition affecting the health, sanitation, fire protection or safety of the customer or of the public; or

(c) Cause unfairness if historic water use records of the customer indicated that substantial

existing water conservation actions have previously been taken. Such indications would include:

(i) Use of xeriscape landscaping during the base year.

(II) Installation of interior and/or exterior permanent plumbing fixtures to conserve water, such as low flow showerheads, ultra low flush toilets, or a drip irrigation system.

(d) Cause unfairness due to the customer's justifiable increase in water use from the base year.

The request for exemption must be supported by evidence to support the applicant's request for special consideration. District staff may require the applicant to submit any additional information necessary to verify the request for exemption and may conduct an inspection of the premises in question before deciding whether to grant such relief. A decision shall be made on the application within thirty (30) days of receipt of the request and the District shall inform the applicant of the decision in writing. If an exemption is granted, the District may impose any conditions it deems proper.

Staff may exempt groups of customers from Sections 5 and 9 provided the following conditions are met:

(a) A city, county or other governmental agency which both overlaps the District's service area and represents the interests of the District's customers submits a request for exemption from Sections 5 and 9 for a specific group of District customers.

(b) The city, county or other governmental agency requesting an exemption enters into an agreement with the District to make water available to the District for delivery to the

specific group of customers at the District's regular rate under terms and conditions acceptable to the District.

(c) Customers exempted from provisions of Sections 5 and 9 pursuant to the above shall receive notification through the normal billing procedure of their allowable usage, the actual amount of usage and the amount of surcharge that would have been required in the absence of the exemption

(d) The District shall report monthly to the city, county or other governmental agency the amount of water delivered to the exempted group of customers in excess of the amounts allowed under Section 5.

ADOPTED AND APPROVED this 4th day of September, 1991, by the Board of Directors of Western Municipal Water District of Riverside County.

Frances J. Nelson

Frances J. Nelson
President of the Board of Directors

ATTEST:

Wayne C. Keith

Wayne C. Keith
Secretary of the Board of Directors

ORDINANCE 280

AN ORDINANCE OF THE BOARD OF DIRECTORS
OF WESTERN MUNICIPAL WATER DISTRICT
OF RIVERSIDE COUNTY REPEALING
ORDINANCE 268 AND ALL AMENDING ORDINANCES

WHEREAS, the Board finds that drought emergency conditions no longer exist,

NOW, THEREFORE, BE IT ORDAINED BY THE BOARD OF DIRECTORS OF WESTERN MUNICIPAL WATER DISTRICT OF RIVERSIDE COUNTY, as follows:

Ordinance No. 268 and all ordinances amendatory thereof, are hereby repealed and rescinded effective March 30, 1992.

ADOPTED AND APPROVED this 18th day of March 1992.

Ayes: Holcomb
Keith
Mylne
Nelson
Schroeder

Noes: None

Absent: None

Frances J. Nelson
Frances J. Nelson
President, Board of Directors

ATTEST:

Secretary-Treasurer

ORDINANCE 358

AN ORDINANCE OF THE BOARD OF DIRECTORS OF WESTERN MUNICIPAL WATER DISTRICT OF RIVERSIDE COUNTY DECLARING THAT A WATER SHORTAGE EMERGENCY CONDITION WILL EXIST IN THE DISTRICT DURING A SCHEDULED SHUTDOWN OF THE MILLS FILTRATION PLANT AND ESTABLISHING A SUPPLY INTERRUPTION WATER CONSERVATION PLAN

WHEREAS, Western Municipal Water District was formed by the voters in 1954 for the purpose of importing water supplies from the Metropolitan Water District of Southern California; and

WHEREAS, Western delivers these imported water supplies, from the State Water Project and the Colorado River Aqueduct and treated at Metropolitan's Henry J. Mills and Robert A. Skinner Filtration Plants, to communities on a wholesale basis to augment their own supplies; and

WHEREAS, Western serves a population of more than 60,000 people directly on a retail basis with State Water Project water treated at the Mills Filtration Plant; and

WHEREAS, the Metropolitan Water District periodically interrupts its water supply deliveries and/or treatment facilities operations for extended periods for routine and/or emergency maintenance; and

WHEREAS, Metropolitan has scheduled a shutdown of its Mills Filtration Plant from February 1 through February 5, 2005, creating such an extended interruption in water supply to Western; and

WHEREAS, on October 6, 2004, the Board of Directors of the Western Municipal Water District adopted Resolution

2314, setting a public hearing regarding the proposed declaration of water shortage emergency during the scheduled shutdown of the Mills Filtration Plant; and

WHEREAS, Water Code Section 71640 et seq. authorizes the District to restrict the use of District water during any emergency caused by drought, or other threatened or existing water shortage, and may prohibit the wastage of District water or the use of District water during such periods for any purpose other than household uses or such other restricted uses as the District determines to be necessary; and

WHEREAS, Water Code Section 350 et seq. and Section 375 et seq. authorize the District to declare a water shortage emergency condition whenever it finds and determines that the ordinary demands and requirements of water consumers will not be satisfied without depleting the water supply of the District to the extent that there will be insufficient water for human consumption, sanitation and fire protection; and

WHEREAS, the District has the power and authority to enact a water conservation plan and water conservation measures pursuant to Water Code Section 350 et seq., 375 et seq and 71640 et seq; and

WHEREAS, the District has determined that adoption of a water conservation plan is necessary to ensure an available water supply at the levels necessary to maintain human consumption, sanitation, and fire protection during the period of this shutdown; and

WHEREAS, in order to ensure that there are adequate water supplies to meet the needs of human consumption, sanitation, and fire protection, the District is requiring that all customers refrain from using water for non-essential

indoor and all outdoor uses, and to implement conservation measures for essential uses; and

WHEREAS, customers within the District's service area have been given notice of the severity of the situation and the restrictions, which will be in place during the water shortage emergency.

NOW, THEREFORE, BE IT ORDAINED BY THE BOARD OF DIRECTORS OF WESTERN MUNICIPAL WATER DISTRICT OF RIVERSIDE COUNTY AS FOLLOWS:

Section 1. Notice and Public Hearing. The Board conducted a public hearing on October 20, 2004 at 450 Alessandro Blvd., Riverside CA in order for customers to have the opportunity to be heard to protest against the proposed declaration of a water shortage emergency and to present their respective needs to the Board. Notice of the public hearing was published on October 12, 2004 in the Press Enterprise.

Section 2. Declaration of Water Shortage Emergency. The Board of Directors hereby determines that the scheduled shutdown of the Metropolitan Water District of its Mills Filtration Plant from February 1 through February 5, 2005, will constitute, during that time, a water shortage emergency condition. Therefore, the Board hereby declares that for the period of February 1 through February 5, 2005 ("Emergency Period"), a water shortage emergency condition shall be deemed to be in effect. The restrictions set forth in this Ordinance shall constitute a mandatory water conservation plan ("Plan") to minimize the effects of the water shortage emergency condition during the Emergency Period. The Emergency Period may be extended or revised if it is determined, in the discretion of the General Manager, that the period of the

shutdown of the Mills Filtration Plant has been extended or revised.

Section 3. Application of the Plan. The provisions of the Plan and this Ordinance shall apply to all retail and wholesale water customers served water treated at the Mills Filtration Plant by the District. The District shall provide appropriate notice and instructions to customers and recommendations for wise water usage during the Emergency Period.

Section 4. Curtailment of Water Usage by Retail Customers. The following restrictions shall apply during the Emergency Period to District retail customers served water treated at the Mills Filtration Plant.

(a) The following uses shall be prohibited:

1. Irrigating outdoor lawns and landscapes, parks, school grounds, golf courses, medians, agriculture, groves, and any other outdoor planted areas, whether for personal, aesthetic, commercial, or recreational use.

2. Hosing down driveways, sidewalks, patios, building walls, or any paved area except as required by local, county, or state health and safety codes and laws.

3. Washing cars, trucks, vans, campers, trailers or any other vehicle without using solely a hose equipped with an automatic shutoff nozzle other than on the premises of a commercial car wash or service station using reclaimed or recycled water.

(b) No District water shall be used for exterior construction purposes, including, but not limited to dust control, site cleanup, compaction or wash down of streets.

Section 5. Curtailment of Water Usage by Wholesale Customers.

a) The District will discontinue water deliveries on a wholesale basis during all or any portion of the Emergency Period. Based on availability, as determined by the General Manager, limited supply delivery may be made available in the discretion of the General Manager if the General Manager determines that such deliveries are necessary for domestic use, sanitation or fire protection.

Section 6. Enforcement.

a) Retail Customers, Excluding Construction Water Service Customers. Any user of District water in violation of the provisions of the Plan and this Ordinance shall receive a written citation upon the first occurrence. Upon the second occurrence by the same customer, the District will turn water service off to the customer's building, residence, or irrigation. Following expiration of the Emergency Period, the customer will be required to pay in person at the District's offices all applicable turn-on fees, in order to resume service, as established by the District's rules and regulations for water service. Customers without separate irrigation or landscape meters will not be required to wait for the expiration of the Emergency Period to pay fees for resumption of service.

b) Construction Water Service Customers. Any user of District water for construction water service in violation of the provisions of the Plan and this Ordinance shall receive a written citation and all water service to the construction site shall be turned off at the time of citation. Following expiration of the Emergency Period, the customer will be

required to pay all applicable turn-on fees in person at the District's offices, in order to resume service, as established by the District's rules and regulations. In addition, all water used on a construction site in violation of the Plan and this Ordinance will be billed at twice the normal District rate for such water.

Section 7. Severability. If any provision, section, subsection, sentence, clause, or phrase of this Ordinance or the application of same to any person or set of circumstances is held to be unconstitutional, void, or invalid, such decision shall not affect the remaining portions of this Ordinance which shall remain in full force and effect, and all provisions of this Ordinance are declared to be severable for that purpose.

Section 8. Incompatible Provisions. To the extent any provision of this Ordinance is incompatible with or at variance with any other District policy or rules and regulations, the provisions of this Ordinance shall be controlling, and all other District policies and rules and regulations shall be interpreted to harmonize with and not change the provisions of this Ordinance.

Section 9. Public Health and Safety Not To Be Affected. Nothing in this Ordinance shall be construed to require the District to curtail the supply of water to any customer when such water is required by that customer to maintain an adequate level of public health or public safety.

Section 10. Exemption From California Environmental Quality Act. The Board determines that the adoption of the Plan and this Ordinance, for the purpose of addressing the

supply interruption due to the scheduled maintenance of the Mills Filtration Plant, are exempt from the requirements of the California Environmental Quality Act pursuant to sections 15268(a) and 15378(b)(2) of the State CEQA Guidelines. The Board hereby directs staff to prepare and file a Notice of Exemption within five (5) working days of adoption of this Ordinance.

Section 11. Effective Date. This Ordinance shall be effective immediately upon adoption and shall remain in effect until expiration of the Emergency Period, as said Emergency Period may be extended or revised as set forth in this Ordinance. Upon said expiration of the Emergency Period, this Ordinance shall be deemed to expire and shall be of no further force or effect. Within ten days from the date of adoption, this Ordinance shall be published one time in full in the Press Enterprise. The Plan shall only be effective during the Emergency Period, as said Emergency Period may be extended or revised as set forth in this Ordinance.

ADOPTED AND APPROVED this 20th day of October, 2004 by the Board of Directors of the Western Municipal Water District.

WAYNE H. HOLCOMB
President

October 20, 2004

I HEREBY CERTIFY that the foregoing is a full, true and correct copy of Ordinance 358 adopted by the Board of Directors of Western Municipal Water District of Riverside County at its Regular Meeting held October 20, 2004.

ELIZABETH L. CUNNISON
Secretary-Treasurer

Appendix H
Public Meeting Documentation

NOTICE OF PUBLIC HEARING
ON URBAN WATER
MANAGEMENT PLAN

The Western Municipal Water District of Riverside County provides retail water service to about 14,000 customers and wholesales imported water to ten water purveyors in Western Riverside County. Western has prepared a draft water conservation and water management plan for its retail service areas to satisfy the Urban Water Management Planning Act, Water Code Section 10610 et. Seq. (Act).

There will be a public hearing pursuant to the Act on the draft plan on Wednesday, December 7, 2005 at 9:30 a.m. at the District office located at 450 Alessandro Blvd. In Riverside. Copies of the draft plan may be obtained by contacting Ms. Carroll at (951) 789-5064.

Jeffrey D. Sims
District Engineering Manager

WESTERN
MUNICIPAL
WATER
DISTRICT

Western Municipal Water District
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