

URBAN WATER MANAGEMENT PLAN 2005



City of Cerritos

March 9, 2006

TABLE OF CONTENTS

| <u>Section</u> | | <u>Page</u> |
|-----------------------|---|--------------------|
| | ACRONYMS and ABBREVIATIONS | ACR-1 |
| 1 | Introduction | |
| 1.1 | Purpose and UWMP Summary | 1-1 |
| 1.2 | UWMP Update Preparation | 1-1 |
| 1.3 | Water Service Area | 1-4 |
| 1.4 | City of Cerritos Water Utility and System Facilities..... | 1-5 |
| 2 | Water Sources and Supplies | |
| 2.1 | Water Sources..... | 2-1 |
| 2.1.1 | Metropolitan Water District of Southern California..... | 2-1 |
| 2.1.2 | Central Basin Municipal Water District | 2-1 |
| 2.1.3 | Water Replenishment District of Southern California..... | 2-2 |
| 2.1.4 | Sanitation Districts of Los Angeles County | 2-2 |
| 2.2 | Water Supply | 2-3 |
| 2.2.1 | Imported Water..... | 2-3 |
| 2.2.2 | Groundwater..... | 2-3 |
| 2.2.3 | Recycled Water | 2-7 |
| 3 | Water Quality | |
| 3.1 | Water Quality of Existing Sources | 3-1 |
| 3.1.1 | Imported Water..... | 3-1 |
| 3.1.2 | Groundwater..... | 3-6 |
| 3.2 | Water Quality Effect on Water Management Strategies and Supply Reliability | 3-10 |
| 4 | Water Reliability Planning | |
| 4.1 | Reliability of Water Supplies..... | 4-1 |
| 4.1.1 | Regional Agencies and Water Reliability..... | 4-1 |
| 4.2 | Demand and Supplies Comparison | 4-11 |
| 4.3 | Vulnerability of Supply to Seasonal or Climatic Shortage..... | 4-24 |
| 4.4 | Planned Water supply Projects and Programs to Meet Projected Water Use | 4-24 |
| 4.4.1 | City of Cerritos Projects..... | 4-24 |
| 4.4.2 | Regional Agency Projects | 4-25 |
| 4.5 | Exchange and Transfer Opportunities | 4-32 |
| 4.6 | Desalinated Water Opportunities..... | 4-33 |
| 5 | Water Use Provisions | |
| 5.1 | Past, Current and Projected Water Use Among Sectors..... | 5-1 |

| <u>Section</u> | <u>Page</u> |
|-----------------------|--|
| 6 | Water Demand Management Measures |
| 6.1 | Introduction.....6-1 |
| 6.2 | Determination of DMM Implementation6-1 |
| 6.3 | Demand Management Measures6-2 |
| 6.4 | Water Use Efficiency Program Scheduling and Effectiveness....6-17 |
| 7 | Water Shortage Contingency Plan |
| 7.1 | Introduction.....7-1 |
| 7.2 | Water Shortage Contingency Plan7-1 |
| 7.3 | Estimate of Minimum Supply for Next Three Years7-7 |
| 7.4 | Catastrophic Supply Interruption Plan7-7 |
| 7.5 | Prohibitions, Penalties, and Consumption Reduction Methods7-9 |
| 7.6 | Revenue and Expenditure Impacts and Measures to Overcome those Impacts7-10 |
| 7.7 | Water Shortage Contingency Ordinance7-10 |
| 7.8 | Mechanisms to Determine Reductions in Water Use7-10 |
| 8 | Water Recycling |
| 8.1 | Recycled Water in Southern California.....8-1 |
| 8.2 | Coordination of Recycled Water in Service Area.....8-1 |
| 8.3 | Wastewater Collection and Treatment.....8-1 |
| 8.4 | City of Cerritos Recycled Water Planning.....8-2 |
| 8.4.1 | 2000 Projection Compared to 2005 Actual Use8-3 |
| 8.4.2 | Potential Uses of Recycled Water8-4 |
| 8.4.3 | Encouraging and Optimizing Recycled Water Use8-4 |

TABLES

| | |
|---------------|---|
| Table 1.2-1 | City of Cerritos Urban Water Management Plan Development – Coordination and Public Involvement1-3 |
| Table 1.3-1 | City of Cerritos Average ETo, Temperatures, and Rainfall1-4 |
| Table 1.3-2 | City of Cerritos Population Projections1-5 |
| Table 2.2-1 | City of Cerritos Current and Projected Water Supplies.....2-3 |
| Table 2.2.2-1 | Active and Planned Wells2-6 |
| Table 2.2.2-2 | Amount of Groundwater Pumped2-7 |
| Table 2.2.2-3 | Amount of Groundwater Projected to be Pumped2-7 |
| Table 4.1.1-1 | SWP Table A Deliveries from the Delta Percent of Total Table A Amount of 4.133 MAF.....4-5 |
| Table 4.2-1 | MWD Regional Imported Water Supply Reliability Projections for Average and Single Dry Years4-12 |
| Table 4.2-2 | MWD Regional Imported Water Supply Reliability Projections for Average and Multiple Dry Years4-14 |

| <u>Table</u> | <u>Page</u> |
|---|--------------------|
| Table 4.2-3 City of Cerritos Water Production for 2000 – 2004 Including Comparison with Area Climatologic Data..... | 4-16 |
| Table 4.2-4 City of Cerritos Projected Water Supply and Demand – Normal Water Year | 4-17 |
| Table 4.2-5 City of Cerritos Projected Water Supply and Demand – Single Dry Year..... | 4-18 |
| Table 4.2-6 City of Cerritos Projected Water Supply and Demand – Multiple Dry Years – 2006-2010 | 4-19 |
| Table 4.2-7 City of Cerritos Projected Water Supply and Demand – Multiple Dry Years – 2011-2015 | 4-20 |
| Table 4.2-8 City of Cerritos Projected Water Supply and Demand – Multiple Dry Years – 2016-2020 | 4-21 |
| Table 4.2-9 City of Cerritos Projected Water Supply and Demand – Multiple Dry Years – 2021-2025 | 4-22 |
| Table 4.2-10 City of Cerritos Projected Water Supply and Demand – Multiple Dry Years – 2026-2030 | 4-23 |
| Table 4.4.1-1 City of Cerritos Future Water Supply Projects | 4-25 |
| Table 4.4.2-1 Metropolitan Integrated Resources Plan Update Resources Status | 4-26 |
| Table 5.1-1 Number of Water Service Connections By Sector | 5-1 |
| Table 5.1-2 Past, Current and Projected Water Use By Sector | 5-1 |
| Table 6.3-1 DMM 1 – Single Family and Multi-Family Surveys Implementation Schedule | 6-2 |
| Table 6.3-2 CBMWD Residential Plumbing Retrofit and Devices | 6-3 |
| Table 6.3.3 DMM 2 – Residential Plumbing Retrofit – Water Conservation Kits..... | 6-3 |
| Table 6.3-4 DMM 5 – Large Landscape Conservation Program Water Savings | 6-5 |
| Table 6.3-5 DMM 6 – City’s Historical and Projected HEWM Rebates | 6-6 |
| Table 6.3-6 High Efficiency Washing Machine Rebates in CBMWD Service Area for 2003 and 2004 | 6-8 |
| Table 6.3-7 DMM 8 – School Education Programs..... | 6-9 |
| Table 6.3-8 CBMWD School Education Program | 6-10 |
| Table 6.3-9 DMM 9 – CII Rebate Program | 6-13 |
| Table 6.3-10 DMM 14 – City Historical and Projected Residential ULFT Rebates | 6-15 |
| Table 6.3-11 CBMWD ULFT Rebate Program – Historic Rebates | 6-15 |
| Table 6.3-12 CBMWD ULFT Replacement Program – Historic Distribution..... | 6-15 |

| <u>Table</u> | <u>Page</u> |
|--|--------------------|
| Table 7.2-1 Water Use Reduction Stages..... | 7-3 |
| Table 7.2-2 Per Capita Health and Safety Water Quantity Calculations | 7-6 |
| Table 7.3-1 3-Year Estimated Water Supply Based on Driest 3-Year Historic Sequence..... | 7-7 |
| Table 8.3-1 Wastewater Collection and Treatment Within the City’s Service Area | 8-2 |
| Table 8.4-1 City of Cerritos Recycled Water Customers – Current and Projected..... | 8-3 |
| Table 8.4.1-1 City of Cerritos Recycled Water Customers – Current and Projected..... | 8-4 |

APPENDICES

| | |
|------------|--|
| Appendix A | Urban Water Management Planning Act of 1983 as amended 2005 |
| Appendix B | DWR 2005 Urban Water Management Plan “Review for Completeness” Form |
| Appendix C | DWR 2005 Urban Water Management Plan “Review for DMM Completeness” Form |
| Appendix D | Notice of Public Hearing and Resolution of Plan Adoption |
| Appendix E | References |
| Appendix F | Central Groundwater Basin Judgment |
| Appendix G | Emergency Water Conservation Plan Resolution No. 91-6 |
| Appendix H | Draft Water Shortage Stage Resolution |

FIGURES

| | | |
|------------|---|-----|
| Figure 1.1 | City of Cerritos Water Service Area | 1-6 |
|------------|---|-----|

ACRONYMS and ABBREVIATIONS

| | |
|---------|--|
| AB | Assembly Bill |
| AF | Acre Feet |
| AFY | Acre Feet per Year |
| AWWA | American Water Works Association |
| BMP | Best Management Practice |
| CALSIM | California Water Allocation and Reservoir Operations Model |
| CBMWD | Central Basin Municipal Water District |
| CCF | Hundred Cubic Feet |
| CDHS | California Department of Health Services |
| CFS | Cubic Feet Per Second |
| CII | Commercial, Industrial, and Institutional |
| CPUC | California Public Utilities Commission |
| CRA | Colorado River Aqueduct |
| CUWCC | California Urban Water Conservation Council |
| CVP | Central Valley Project |
| DBP | Disinfection Byproducts |
| DHS | California Department of Health Services |
| DMM | Demand Management Measure |
| DWCV | Desert Water Agency/Coachella Valley Water District |
| DWR | Department of Water Resources |
| EOC | Emergency Operations Center |
| EPA | Environmental Protection Agency |
| ERR | Emergency Response and Recovery |
| ETo | Evapotranspiration |
| GIS | Geographic Information System |
| GPD | Gallons Per Day |
| GPCD | Gallons Per Capita Per Day |
| GPF | Gallons Per Flush |
| GPM | Gallons Per Minute |
| HAA | Haloacetic Acids |
| HEWM | High-Efficiency Washing Machines |
| IAWP | Interim Agricultural Water Program |
| IID | Imperial Irrigation District |
| IRP | Integrated Resources Plan |
| LACSD | Sanitation Districts of Los Angeles County |
| LAEOC | Los Angeles County Emergency Operations Center |
| LARWQCB | Los Angeles Regional Water Quality Control Board |
| LRP | MWD Local Resources Program |
| MAF | Million Acre Feet |
| MARS | Member Agency Response System |
| MCL | Maximum Contaminant Level |
| MGD | Million Gallons per Day |
| MG/L | Milligrams per liter |
| MOU | Memorandum of Understanding |
| MTBE | Methyl Tertiary Butyl Ether |
| MWD | Metropolitan Water District of Southern California |
| NDMA | N-Nitrosodimethylamine |

| | |
|-------|---|
| NPDES | National Pollutant Discharge Elimination System |
| PAC | Project Advisory Committee |
| pCi/L | picocuries per liter |
| PCE | Tetrachloroethylene |
| PSP | Proposal Solicitation Package |
| QSA | Quantification Settlement Agreement |
| RWQCB | Regional Water Quality Control Board |
| SB | Senate Bill |
| SDP | Seawater Desalination Program |
| SEMS | State Emergency Management System |
| SWP | State Water Project |
| SWRCB | State Water Resources Control Board |
| TCE | Trichloroethylene |
| TDS | Total Dissolved Solids |
| THM | Trihalomethane |
| TOC | Total Organic Carbon |
| Ug/L | Micrograms Per Liter |
| ULF | Ultra Low Flush |
| ULFT | Ultra Low Flush Toilet |
| USBR | United States Bureau of Reclamation |
| USGS | United States Geological Survey |
| UWMP | Urban Water Management Plan |
| VOC | Volatile Organic Compounds |
| WBMWD | West Basin Municipal Water District |
| WF | Water Factory |
| WRD | Water Replenishment District of Southern California |
| WSDM | Water Surplus and Drought Management |

SECTION 1 INTRODUCTION

1.1 PURPOSE AND UWMP SUMMARY

An Urban Water Management Plan (UWMP or Plan) prepared by a water purveyor is to ensure the appropriate level of reliability of water service sufficient to meet the needs of its various categories of customers during normal, single dry or multiple dry years. The California Water Management Planning Act of 1983 (Act), as amended, requires urban water suppliers to develop an UWMP every five years in the years ending in zero and five.

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

The City of Cerritos 2005 UWMP has been prepared in compliance with the requirements of the Act, as amended to 2005¹ (Appendix A), and includes the following:

- Water Utility Service Area
- Water Utility Facilities
- Water Sources and Supplies
- Water Quality Information
- Water Reliability Planning
- Water Use Provisions
- Water Demand Management Measures
- Water Shortage Contingency Plan
- Water Recycling

1.2 UWMP UPDATE PREPARATION

The City's 2005 UWMP updates its 2000 UWMP and incorporates changes enacted by legislation, including Senate Bill (SB) 610 (2001), Assembly Bill (AB) 901 (2001), SB 672 (2001), SB 1348 (2002), SB 1384 (2002), SB 1518 (2002), AB 105 (2004), and SB 318 (2004).

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

The sections in this Plan correspond to the outline of the Act, specifically Article 2, Contents of Plans, Sections 10631, 10632, and 10633. The sequence used for the required information, however, differs slightly in order to present information in a manner reflecting the unique characteristics of the City water utility. The Department of Water Resources (DWR) Review for Completeness form has been completed, which identifies the location of Act requirements in this Plan and is included as Appendix B. In addition, the DWR Review for DMM (Demand Management Measures) Completeness form has been complete as included in Appendix C.

Plan Adoption

The 2005 UWMP Update was adopted by resolution of the Cerritos City Council on March 9, 2006, following a public hearing. The Plan was submitted to the California DWR within 30 days of Council approval. Copies of the Notice of Public Hearing and the Resolution of Plan Adoption are included in Appendix D. Draft copies of the Plan were made available to the public prior to the public hearing and final copies were made available within 30 days following City Council approval.

Agency Coordination

Development of the UWMP was led by the Water Division of the City's Department of Water and Power. The Water Division coordinated with the City Planning Department and the City Clerk in development, distribution and adoption of the plan.

Over the past six years, approximately 78 percent of the City's potable water supply has been pumped from the groundwater aquifer, while the 22 percent balance was comprised of imported supplies. In addition to the potable water, Cerritos also supplies recycled water for customers within the City as well as customers in the City of Lakewood. The imported potable water is purchased from the Central Basin Municipal Water District (CBMWD), which purchases the water from the Metropolitan Water District of Southern California (Metropolitan or MWD). The Water Replenishment District of Southern California (WRD) acts as the groundwater manager for the Central Groundwater Basin, and the Sanitation Districts of Los Angeles County (LACSD) for its recycled water supply. All of the City's water supply planning relates to the policies, rules, and regulations of these agencies. This UWMP incorporates data obtained from these agencies where appropriate.

The intent of this plan is to focus on specific issues unique to the City's water service area. While some regional UWMP issues are introduced in this plan, comprehensive regional information is presented in Metropolitan's and CBMWD's 2005 Regional UWMPs.

To assist City staff in preparation of the City's 2005 UWMP, City staff and/or consultants to the City for preparation of the UWMP attended the following workshops facilitated by DWR and Metropolitan:

Metropolitan: 2005 Regional UWMP Workshop at the City of Santa Ana, June 6, 2005, as well as additional regional meetings with Metropolitan.

DWR: 2005 UWMP Workshop at the San Diego County Water Authority, February 1, 2005; and at the City of Santa Ana, March 1, 2005.

Table 1.2-1 lists the entities that Cerritos coordinated with in the development of the City's 2005 UWMP.

**Table 1.2-1
City of Cerritos UWMP Development
Coordination and Public Involvement**

| Entities | Coordination and Public Involvement Actions | | | | | |
|--------------------------|---|---------------------------------------|--|-------------------------|-------------------------------|-------------------------|
| | Participated in UWMP preparation | Contacted for assistance /information | Sent and/or Available To: Copy of Draft UWMP | Commented on Draft UWMP | Sent Notice of Public Hearing | Attended Public Hearing |
| City Water Division | X | X | X | X | X | X |
| City Planning Department | X | X | X | X | X | X |
| City Clerk | | X | X | | X | X |
| CBMWD | | X | X | | X | |
| Metropolitan | | X | X | | X | |
| WRD | | X | X | | X | |
| LACSD | | X | X | | X | |
| General Public | | | X | | X | |

The City also participated in an UWMP technical workshop and a planning meeting with CBMWD. Information from the CBMWD Regional UWMP, the Metropolitan Regional UWMP, and guidance prepared by DWR were used in preparing the City of Cerritos UWMP. This UWMP details the specifics as they relate to the City and its service area and will refer to Metropolitan, CBMWD, WRD and other agencies throughout. Appendix E lists the numerous references used benefiting development of this plan.

The UWMP is intended to serve as a general, flexible, and open-ended document that periodically can be updated to reflect changes in the Los Angeles region water supply trends, and water use efficiency policies. This Plan, along with other City planning documents, will be used by City staff to guide water use and management efforts through the year 2010, when the UWMP is required to be updated.

1.3 WATER SERVICE AREA

Cerritos is located in the southeastern portion of Los Angeles County and comprises an area of approximately nine square miles. The City also wholesales water to the Golden State Water Company and the City of Norwalk. The City's water service area is depicted in Figure 1.1.

Climate Characteristics

The City's service area is considered a coastal area with a Mediterranean climate, characterized by typically warm, dry summers and cool winters with an average precipitation level of about 16 inches per year. The average temperature is 74° F. Evapotranspiration (ETo)² in the region averages 49.7 inches annually. The combination of mild climate and low rainfall make the area a popular tourist and residential destination, and challenges water agencies to provide adequate and reliable water service. Table 1.3-1 shows the average ETo, temperatures and rainfall.

**Table 1.3-1
City of Cerritos
Average ETo, Temperatures and Rainfall³**

| | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Total or Avg |
|-----------------------------|-----|------|------|------|------|------|------|------|------|------|------|------|------|--------------------|
| Avg ETo (inches) | | 1.86 | 2.24 | 3.41 | 4.80 | 5.58 | 6.30 | 6.51 | 6.20 | 4.80 | 3.72 | 2.40 | 1.86 | 49.7 |
| Temperature (Fahrenheit) | Max | 66 | 67 | 68 | 71 | 74 | 77 | 82 | 84 | 82 | 78 | 72 | 67 | 74 |
| | Min | 44 | 46 | 48 | 51 | 56 | 58 | 64 | 64 | 62 | 57 | 50 | 45 | 54 |
| Rainfall (inches) | | 3.3 | 3.1 | 2.9 | 1.1 | 0.3 | 0.0 | 0.0 | 0.1 | 0.4 | 0.4 | 1.9 | 2.3 | 15.8 |

Demographics

The population of the City is currently estimated at approximately 53,000 which is slightly less than the 1990 census and slightly more than the 2000 census. Because the City is built-out, it is not anticipated that any significant additional growth in population will occur over the next 25 years. The area served by the City is primarily single-family residential with an estimated 3.34 people per dwelling unit.⁴ The City serves 14,256 residential water service connections of which over 98 percent are single family residential with the balance being multi-family residential.⁵ All but 27 of these connections are located within the City of Cerritos.

² Evapotranspiration (ET) is the loss of water to the atmosphere by the combined processes of evaporation (from soil and plant surfaces) and transpiration (from plant tissues). It is an indicator of how much water crops, lawn, garden, and trees need for healthy growth and productivity. ET from a standardized grass is commonly denoted as ETo.

³ [on-line] <http://countrystudies.us/united-states/weather/California>

⁴ Per the 2000 U.S. Census Bureau website information

⁵ Per the 2004 "Public Water System Statistics" report submitted to the Department of Water Resources

Past and projected populations are summarized in Table 1.3-2, which depicts projections in five-year increments to the year 2030.

**Table 1.3-2
City of Cerritos
Population Projections**

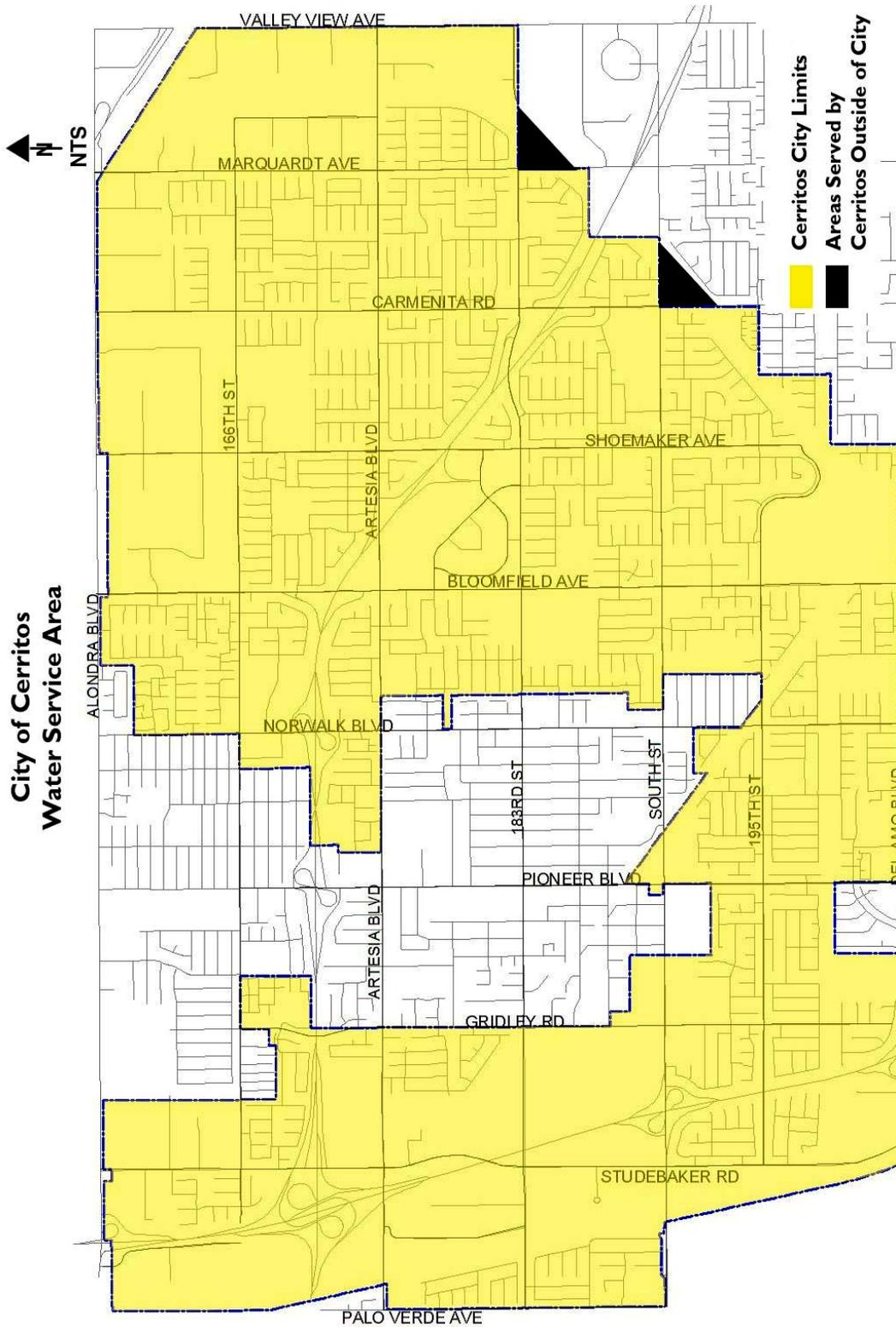
| | 1990 | 2000 | 2004 | 2010 | 2015 | 2020 | 2025 | 2030 |
|--------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|
| Service Area Population | 53,240 | 51,488 | 52,898 | 53,000 | 53,000 | 53,000 | 53,000 | 53,000 |

Source: 1990, 2000 and 2004 figures obtained from U.S. Census Bureau website (<http://www.census.gov/>). All future years are projected based on no additional growth in population.

1.4 CITY OF CERRITOS WATER UTILITY AND SYSTEM FACILITIES

The City of Cerritos water supply comes from groundwater, imported water and recycled water. The groundwater is produced from three wells, with a fourth production well planned for the near future. Imported water is delivered through a connection from Metropolitan's system. Recycled water is produced at the Los Coyotes Reclamation Plant and pumped into a recycled water delivery system. Additional details on these facilities are provided in Sections 2 (potable) and 8 (recycled) of this report.

Figure 1.1
City of Cerritos Water Service Area



SECTION 2 WATER SOURCES AND SUPPLIES

2.1 WATER SOURCES

The City is a member agency of CBMWD and retails water to its customers. CBMWD purchases imported water from Metropolitan and distributes it to its member agencies. The imported water is diverted from the Colorado River Aqueduct (CRA) and from the State Water Project (SWP), via the California Aqueduct. The City also pumps groundwater from the Central Groundwater Basin and meets nonpotable demands with recycled water. In addition to being a retailer, the City also wholesales potable water to the Golden State Water Company, City of Norwalk. The City also provides recycled water to the City of Lakewood and Central Basin Municipal Water District.

In summary, the City has three sources of water supply:

1. Imported water from CBMWD through Metropolitan
2. Groundwater pumped from the Central Groundwater Basin
3. Recycled water

2.1.1 Metropolitan Water District of Southern California (Metropolitan)

Metropolitan was formed in the late 1920's. Collectively, charter members recognized the limited water supplies available within the region, and realized that continued prosperity and economic development of Southern California depended upon the acquisition and careful management of an adequate supplemental water supply. This foresight made the continued development of Southern California possible.

Following completion of Parker Dam and the CRA, water from the Colorado River flowed into Southern California. In the 1950's and 60's, Metropolitan participated in the construction of the California Aqueduct to provide for the importation of water from Northern California to the south. Metropolitan currently acquires water from the CRA and from northern California via the SWP to supply water to most of Southern California. As a wholesaler, Metropolitan has no retail customers, and distributes treated and untreated water directly to its 26 member agencies. One such member agency is CBMWD.

2.1.2 Central Basin Municipal Water District (CBMWD)

In 1952, CBMWD was formed to help mitigate the over pumping of groundwater resources in southeast Los Angeles County. Although local groundwater was inexpensive, it was diminishing rapidly and it was realized that pumping would have to be curtailed. This reduction in groundwater was to be supplemented with imported water.

In 1954, CBMWD became a member agency of Metropolitan, an agency which provides the region with imported water. CBMWD is one of the largest member agencies of Metropolitan serving Artesia, Bell, Bellflower, Bell Gardens, parts of Carson, Cerritos, Commerce, Cudahy, Downey, Hawaiian Gardens, Huntington Park, La Habra Heights, Lakewood, La Mirada, Lynwood, Maywood, Montebello, Norwalk, Paramount, Pico Rivera, Santa Fe Springs, Signal Hill, South Gate, Vernon, and Whittier. CBMWD also serves unincorporated areas of Los Angeles County such as East Los Angeles and South Whittier.⁶

2.1.3 Water Replenishment District of Southern California (WRD)

In 1959, the State Legislature enacted the Water Replenishment Act enabling the formation of WRD by voter approval. WRD was formed for the purpose of protecting and managing the groundwater resources of the Central and West Coast groundwater basins of south Los Angeles County. WRD manages groundwater for 43 cities in south Los Angeles County covering a 420-square mile service area. The users of the groundwater basin pump approximately 250,000 acre-feet (AF) of groundwater per year.⁷ The State of California relies on WRD to manage, regulate, replenish, and protect the quality of the groundwater supplies in the Central and West Coast groundwater basins.

Because of increasing populations and diminishing groundwater resources, the Central and West Coast groundwater basins were adjudicated to limit the allowable extraction amount for every water right holder within the basins. The final judgments became effective on October 1, 1966 (Central Basin) and August 18, 1961 (West Coast Basin) and appointed DWR as the Watermaster. WRD and the Watermaster cooperate closely to record groundwater extractions from the Central and West Coast groundwater basins.

2.1.4 Sanitation Districts of Los Angeles County (LACSD)

The LACSD includes 25 separate sanitation districts that serve about 5.1 million people in Los Angeles County. The service area is approximately 800 square miles and encompasses 78 cities as well as unincorporated areas of the County.⁸ LACSD constructs, operates, and maintains facilities to collect, treat, recycle, and dispose of wastewater. LACSD operates one wastewater treatment plant and nine reclamation plants to produce approximately 190 million gallons per day (MGD) of recycled water.⁹ The City purchases recycled water from the LACSD Los Coyotes Water Reclamation Plant for distribution within its service area.¹⁰ More detailed information related to recycled water is discussed in Section 8.

⁶ http://www.centralbasin.org/about_dist.php

⁷ WRD of Southern California website, <http://www.wrd.org/Purpose.htm>

⁸ Sanitation Districts of Los Angeles website, <http://www.lacsd.org>

⁹ Sanitation Districts of Los Angeles Fact Sheet, available online at http://www.lacsd.org/CSDFactSheet_Eng.pdf

¹⁰ City of Cerritos webpage, <http://www.ci.cerritos.ca.us/>

2.2 WATER SUPPLY

While the City’s water supply is currently groundwater, imported water, and recycled water, the City meets most of its retail water demand with groundwater. The City purchases imported water from CBMWD to meet the balance of its demand, which includes supplying potable water to the Golden State Water Company and City of Norwalk. Of potable water supplies, imported water is approximately 22 percent and groundwater is 78 percent although the percentages vary annually.¹¹

Available current and projected water supplies for Cerritos are shown in Table 2.2-1.

Table 2.2-1
City of Cerritos
Current and Projected Water Supplies
(AFY)¹

| Water Supply Sources | 2005² | 2010 | 2015 | 2020 | 2025 | 2030 |
|--|-------------------------|---------------|---------------|---------------|---------------|---------------|
| Imported Water (total) | 1,493 | 3,520 | 3,410 | 3,590 | 3,380 | 3,170 |
| Groundwater | 10,434 | 10,020 | 10,020 | 10,020 | 10,020 | 10,020 |
| Recycled | 2,060 | 2,300 | 2,300 | 2,400 | 2,400 | 2,400 |
| Total Supply (Potable + Recycled) | 13,987 | 15,840 | 15,730 | 16,010 | 15,800 | 15,590 |

^[1] AFY = acre-feet per year

^[2] 2005 data are actual demands for 2004/05 fiscal year; all other years are projected supply totals from Table 4.2-4.

2.2.1 Imported Water

In 2004/2005, approximately 12.5 percent of the City’s potable water supply came from imported water wholesaled by CBMWD through Metropolitan. However, over the previous five fiscal years, imported water comprised 21.2 percent of the total supply, which is more representative of the long term average. The City maintains one imported water connection to Metropolitan’s system located in the area of South Street and Palo Verde. This connection has a capacity of 30 cubic feet per second (cfs).

2.2.2 Groundwater

Extensive pumping from the Central Groundwater Basin (Basin) has led to critical overdraft and seawater intrusion. In 1966, the Los Angeles Superior Court adjudicated groundwater pumping rights. Although the City was not an original party included in the Judgment, the City has since acquired water rights in the Basin from other party members in the amount of 4,680 AF.

¹¹ City of Cerritos, 2004 Water Quality Report

WRD tracks the amount of groundwater production (pumping) that occurs annually in the Central and West Coast groundwater basins to identify trends that may impact groundwater resources. The groundwater basins currently face overdraft every year because pumping exceeds natural groundwater replenishment. Sources of replenishment water to WRD include recycled water, imported water, and natural runoff, which are captured in the regional spreading grounds.

Central Groundwater Basin (Basin)

The Basin occupies a large portion of the southeastern part of the Coastal Plain of Los Angeles County and has a total storage capacity of 13,800,000 AF. On the north, the Basin is bounded by the La Brea high, and on the northeast and east, the Basin is bounded by emergent less permeable Tertiary rocks of the Elysian, Repetto, Merced and Puente Hills. The southeast boundary between the Basin and Orange County Groundwater Basin roughly follows Coyote Creek. The southwest boundary is formed by the Newport Inglewood fault system and the associated folded rocks of the Newport Inglewood uplift. The Los Angeles and San Gabriel Rivers drain inland basins and pass across the surface of the basin on their way to the Pacific Ocean.¹²

Water bearing formations include Holocene and Pleistocene age sediments at depths that range from 1,000 feet to 2,200 feet. The Basin is divided into two forebays and two pressure areas; the Los Angeles forebay, the Montebello forebay, the Whittier pressure area, and the Basin pressure area. Both forebays have unconfined groundwater conditions and relatively interconnected aquifers that extend up to 1,600 feet deep to provide recharge to the aquifer system. The Basin pressure area is the largest of the four divisions and contains many aquifers of permeable sands and gravels separated by semi-permeable to impermeable sandy clay to clay and extends 2,200 feet below the surface. Historically, groundwater flow in the Basin has been from recharge areas in the northeastern part of the sub-basin, toward the Pacific Ocean on the southwest.¹³

Adjudication

Groundwater in the Basin was adjudicated (Judgment) to protect the underground water supply within the Basin. Prior to adjudication, annual pumping rates throughout the Basin reached levels as high as 292,000 AF. In the early 1960's, the Superior Court, County of Los Angeles limited the amount of pumping that could occur because the groundwater levels were declining causing the seawater to intrude into the coastal aquifers. The Basin adjudicated rights were set at 271,650 AFY. The Judgment, however, set a lower Allowed Pumping Allocation of 217,367 AFY.¹⁴ The adjudicated pumping amounts were set higher than the natural replenishment of groundwater, hence the annual overdrafts. A copy of the order adopted by the court describing the legal right to pump groundwater (Judgment) is included in Appendix F. The order adopted by the court, however, does not include the City as an original participant. Since the order was adopted, the City has

¹² DWR, California's Groundwater Bulletin 118, 2004

¹³ California Department of Water Resources (DWR) 1961. Planned Utilization of the Groundwater Basins of the Coastal Plain of Los Angeles County. Bulletin No. 104

¹⁴ WRD of Southern California Engineering Survey Report, 2005

purchased additional rights from others and now owns 4,680.03 AFY of groundwater rights. Groundwater production in the Basin is regulated by DWR, acting as Watermaster, and WRD.

Groundwater production in the Basin has been fairly consistent over the past five years. The amount of water that member agencies are allowed to pump is set annually, but the values remain fairly constant. The City's adjudicated pumping rights for 2004/2005 were 4,680.03 AFY. Frequently, the City pumps in excess of its adjudicated water right due to the ability to lease water rights from other purveyors. In 2004/2005, the City leased groundwater rights from ten other entities totaling to an additional 6,702.47 AF.¹⁵ The Judgment also allows water users to carryover any unused water rights up to 20% of their water right as well as extract up to 10% beyond their allowable pumping rights within a given year.¹⁶

Groundwater Production and Overdraft

Groundwater supply meets approximately 62 percent of the water supply demand for agencies within the CBMWD.¹⁷ During the water year 2003/2004, total basin production for all agencies was approximately 200,367 AF.¹⁸ As mentioned earlier, the Central and West Coast groundwater basins are in an overdraft condition; however, the groundwater levels and amount of overdraft fluctuate over time. WRD continually monitors groundwater level trends. WRD's annual Engineering Survey and Report discusses groundwater levels within the basins and estimates water levels fell up to 40 feet in the basins. WRD estimates that the annual overdraft for 2003/2004 for both basins was 135,686 AF; however, 92,686 AF was purchased as replenishment water and therefore the loss in groundwater storage was 43,000 AF. The average annual overdraft for the Central Groundwater Basin is 69,300 AF.¹⁹ The accumulated overdraft of the basins fluctuates depending on demands and availability of replenishment water. The accumulated overdraft was determined to be 702,100 AF for both basins in 2003/2004.²⁰

In an effort to eliminate long-term overdraft conditions, WRD closely monitors the groundwater basins for fluctuations in groundwater levels. WRD utilizes a groundwater model developed by the United States Geological Survey (USGS) to study and better understand the basin's reaction to pumping and recharge. WRD works closely with the Los Angeles County Department of Public Works, Metropolitan, and LACSD on current and future replenishment supplies.

Recharge

Another method for controlling overdraft is through recharge management programs. Local precipitation on the Basin has little influence on the recharge of groundwater,

¹⁵ DWR, Watermaster Service in the Central Basin Los Angeles County July1, 2004 – June 30, 2005, October 2005

¹⁶ WRD of Southern California Engineering Survey Report, 2005

¹⁷ Central Basin Municipal Water District, 2005 UWMP

¹⁸ WRD of Southern California Engineering Survey Report, 2005

¹⁹ WRD of Southern California, Technical Bulletin Volume 1, Fall 2004.

²⁰ WRD of Southern California Engineering Survey Report, 2005

because of impermeable materials that lie between the surface and the producing aquifers. As a result, little water that falls directly on the Basin reaches the groundwater.²¹ WRD must therefore depend on artificial recharge programs to replace the annual overdraft. The amount of water available for recharge will vary from year to year. In 2003/2004, WRD recharged 92,686 AF. The various methods of recharging the Basin using imported and recycled water are described below:

- **Spreading** – Groundwater recharge takes place along the spreading grounds adjacent to the Rio Hondo and San Gabriel River and at the Whittier Narrows Reservoir.
- **Injection** – WRD also recharges the Basin by injecting water into the Basin to prevent seawater intrusion. A barrier is formed by injection of treated imported water from Metropolitan in wells along the Alamitos Gap.
- **In-lieu Replenishment Water** – The in-lieu program allows the natural recharge of the Basin by offsetting groundwater production with the use of imported water. The reduction in pumping naturally recharges the basin.

City of Cerritos Groundwater Wells

Groundwater is currently produced from three deep operating wells that vary in depth from 765 feet to 1,000 feet, with production varying from 2,000 gallons per minute (gpm) to 3,800 gpm, with an existing total system capacity of approximately 9,600 gpm as shown in Table 2.2.2-1. The City's future system capacity is anticipated to be 11,850 with the completion of Well C-5 in early 2007.

**Table 2.2.2-1
Active and Planned Wells**

| Well No. | Depth (feet) | Design Flow (gpm) | Status |
|--------------------------------|--------------|-------------------|----------------|
| C-1 | 765 | 2,000 | Active |
| C-2 | 1,000 | 3,800 | Active |
| C-4 | 1,000 | 3,800 | Active |
| Existing Total Capacity | | 9,600 | |
| C-5 ¹ | 1,230 | 2,250 | <i>Planned</i> |
| Future Total Capacity | | 11,850 | |

^[1] Well C-5, although designed for 3,500 gpm, will only be pumped by the City at 2,250 gpm.

Table 2.2.2-2 summarizes the amount of groundwater pumped by the City for the years 2000 through 2005.

²¹ Water Master Service in the Central Basin Los Angeles County, 2004

Table 2.2.2-2
Amount of Groundwater Pumped
 (AFY - Rounded to the Nearest Ten)

| Basin | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
|---------------------------|-------|-------|--------|-------|--------|--------|
| Central Groundwater Basin | 9,515 | 9,760 | 10,504 | 9,971 | 10,349 | 10,434 |

Note: The years shown are considered fiscal years. For example, the total groundwater pumped in 2001 is from July 1, 2000 to June 30, 2001.

Table 2.2.2-3 shows the amount of water that is projected to be pumped from the Basin in the next 25 years. The amount of groundwater pumped from the Basin is limited by the City’s adjudicated water rights, currently 4,680 AFY. The City anticipates continuing to lease approximately 6,000 AFY from others; therefore, the projected amount of groundwater pumping is anticipated to be 10,020 AFY. The proposed well, C-5, will assist the City in pumping additional groundwater.

Table 2.2.2-3
Amount of Groundwater Projected to be Pumped
 (AFY)

| Basin | 2010 | 2015 | 2020 | 2025 | 2030 |
|---------------------------|--------|--------|--------|--------|--------|
| Central Groundwater Basin | 10,020 | 10,020 | 10,020 | 10,020 | 10,020 |

2.2.3 Recycled Water

As the City transitioned from an agricultural to urban community, it became apparent that potable water should not be relied upon as a reliable source of supply for irrigation. The City, working closely with the LACSD, implemented the first use of recycled water at the City’s nine-hole golf course. The use of recycled water within the City has since expanded to include over 230 customers. Recycled water is purchased from the Los Coyotes Water Reclamation Plant located west of the 605 Freeway and north of the 91 freeway, adjacent to the City’s Iron-wood Nine Golf Course. In addition to serving customers within its service area, the City also sells recycled water to the City of Lakewood. The City’s use of recycled water augments valuable groundwater and imported water within the area. Detailed information related to recycled water is included in Section 8.

This page intentionally left blank.

SECTION 3 WATER QUALITY

3.1 WATER QUALITY OF EXISTING SOURCES

As required by the Safe Drinking Water Act, which was reauthorized in 1996, the City provides annual Water Quality Reports to its customers; also known as Consumer Confidence Reports. This mandate is governed by the Environmental Protection Agency (EPA) and the California Department of Health Services (CDHS) to inform customers of their drinking water quality. In accordance with the Safe Drinking Water Act, the City monitors a number of regulated and unregulated compounds in its water supply and as in years past, the water delivered to the City's customers, including the agencies within its wholesale zone, meets the standards required by the state and federal regulatory agencies.²² As mentioned earlier, the City's source of water is from imported water supplies, groundwater and recycled water.

3.1.1 IMPORTED WATER

The City receives imported water through CBMWD from Metropolitan, which receives raw water from Northern California through the SWP and CRA. Metropolitan water in total is treated at five treatment plants. However, the City's imported water is treated primarily at the Robert B. Diemer Filtration Plant in Yorba Linda, CA.

Metropolitan tests and treats its water for microbial, organic, inorganic, and radioactive contaminants as well as pesticides and herbicides. Protection of Metropolitan's water system continues to be a top priority. In coordination with its 26 member agencies, Metropolitan added new security measures in 2001 and continues to upgrade and refine procedures. Changes have included an increase in the number of water quality tests conducted each year (more than 300,000) as well as contingency plans that coordinate with the Homeland Security Office's multicolored tiered risk alert system.²³ Metropolitan also has one of the most advanced laboratories in the country where water quality staff performs tests, collects data, reviews results, prepares reports, and researches other treatment technologies. Although not required, Metropolitan monitors and samples substances that are not regulated but have captured scientific and/or public interest. Metropolitan has tested for chemicals such as perchlorate, methyl tertiary butyl ether (MTBE), and chromium VI among others.

In Metropolitan's Integrated Resources Plan (IRP) 2003 Update, water quality was identified as a possible risk to Metropolitan's future water supply reliability. Existing supplies could be threatened in the future because of contamination, more stringent water quality regulations, or the discovery of an unknown contaminant. Water quality of imported water could directly impact water supplies available to the City. Metropolitan's 2005 UWMP Update includes the following examples:

²² Consumer Confidence Reports for City of Cerritos, 2004.

²³ Metropolitan's website, www.mwdh2o.com/mwdh2o/pages/yourwater/2005_report/protect_02.html

- If a groundwater basin becomes contaminated and cannot be used, more water will be required from other sources.
- Imported water from the Colorado River must be blended (mixed) with lower salinity water from the SWP. Higher salinity levels in the Colorado River would increase the proportion of SWP supplies required.
- High total dissolved solids (TDS) in water supplies leads to high TDS in wastewater, which increases the cost of recycled water.
- If diminished water quality causes a need for membrane treatment, the process typically results in losses of up to 15 percent of the water processed.
- Degradation of imported water supply quality could limit the use of local groundwater basins for storage.
- Changes in drinking water quality standards such as arsenic, radon, or perchlorate could increase demand on imported water supplies.

Because of the concerns identified above, Metropolitan has identified those water quality issues that are most concerning and have identified necessary water management strategies to minimize the impact on water supplies. Water quality concerns with Metropolitan's water supplies and the approaches taken to ensure acceptable water quality are discussed in the following sections.

Salinity

Water from the CRA has the highest level of salinity of all Metropolitan's sources of supply, averaging 650 milligrams per liter (mg/L) during normal water years.²⁴ Several actions have been taken on the state and federal level to control the salinity with the river such as the Colorado River Basin Salinity Control Act in 1974 and formation of the Colorado River Basin Salinity Control Forum. In 1975, water quality standards and a plan for controlling salinity were approved by the EPA.

In contrast, water from the SWP is significantly lower in TDS, averaging 250 mg/L. Because of the lower salinity, Metropolitan blends SWP water with Colorado River water to reduce the salinity in the water delivered to its customers. Metropolitan's board has adopted a salinity objective of 500 mg/L for blended imported water as defined in Metropolitan's Salinity Management Action Plan. The state of California has a recommended secondary MCL of 500 – 1,000 mg/L. Metropolitan estimates that the objective can be met in seven out of ten years. In the other three years, hydrologic conditions would result in increased salinity and reduced volume of SWP supplies.

In an effort to address the concerns over salinity, Metropolitan secured Proposition 13 funding for two water quality programs:

²⁴ The Metropolitan Water District of Southern California, Regional Urban Water Management Plan, Draft September 2005.

- 1) **Water Quality Exchange Partnership** – the funding is being used to develop new infrastructure to optimize water management capabilities between the agricultural users of the eastern San Joaquin Valley and urban users of Southern California. Installing infrastructure will provide opportunities for Metropolitan to exchange SWP water for higher quality water. Because of tidal influences from the San Francisco Bay, bromide is a water quality issue for the SWP. Also, agricultural drainage presents a potential problem in the Delta which is manifested in the form of total organic carbon. These issues are discussed in detail below.
- 2) **The Desalination Research and Innovation Partnership** – the funding is being used to develop cost-effective advanced water treatment technologies for the desalination of Colorado River water, brackish groundwater, municipal wastewater, and agricultural drainage water.

Perchlorate in the Colorado River

Perchlorate is a contaminant of concern and is believed to inhibit the thyroid's ability to process iodide. Perchlorate has been detected at low levels in the Colorado River water supply. Perchlorate is difficult to remove from water supplies with conventional water treatment. Successful treatment technologies include nanofiltration, reverse osmosis, biological treatment, and fluidized bed bioreactor treatment. Metropolitan continues to monitor perchlorate contamination of the Colorado River as well as research various treatment options. In 2002, Metropolitan adopted a Perchlorate Action Plan which defined the following nine objectives:

- 1) expand monitoring and reporting programs
- 2) assess the impact of perchlorate on local groundwater supplies
- 3) continue tracking health effects studies
- 4) continue tracking remediation efforts in the Las Vegas Wash
- 5) initiate modeling of perchlorate levels in the Colorado River
- 6) investigate the need for additional resource management strategies
- 7) pursue legislative and regulatory options for cleanup activities and regulatory standards
- 8) include information on perchlorate into outreach activities
- 9) provide periodic updates to Metropolitan's board and member agencies

Disinfection By-products formed by Disinfectants Reacting with Bromide and Total Organic Carbon in State Water Project Water

SWP water supplies contain levels of total organic carbon and bromide that are a concern to Metropolitan to maintain safe drinking water supplies. When water is disinfected at treatment plants, certain chemical reactions can occur with these compounds that can form Disinfection Byproducts (DBP). DBPs include trihalomethanes (THMs) and haloacetic acids (HAAs). THMs and HAAs have been found to cause cancer in

laboratory animals. Inherent in any through-Delta water movement is the high organic and bromide loading imposed on the water from agricultural runoff and salt water intrusion. This poses significant treatment challenges to the receiving end users, like Metropolitan, to avoid problems with DBPs and the formation of THMs. It is imperative that the quality of SWP water delivered to Metropolitan be maintained at the highest levels possible.

In order to control the total organic carbon and bromide concentrations in Metropolitan's water supply, SWP water is blended with Colorado River water. The blending of the two water sources benefits in two ways: reduction in DBPs and reduction in salinity (as discussed earlier). Because of the recent drought conditions on the Colorado River, water supplies have been reduced which impacts the blending operations at the various filtration plants. Metropolitan's board therefore authorized the use of ozone as the primary disinfectant at all five Metropolitan treatment plants in July 2003 to minimize impacts from reduced deliveries of Colorado River water. Previously, only the Henry J Mills and Jensen Filtration Plants had been approved for this treatment. These two plants were chosen for the use of ozone in order to meet new DBP regulations. Metropolitan plans to install ozonation at the remaining three plants by 2009.

Methyl Tertiary Butyl Ether (MTBE) in local surface reservoirs

The CDHS has adopted a primary maximum contaminant level (MCL) of 13 microgram per liter (ug/L) for MTBE and a secondary MCL of 5 ug/L. MTBE is an oxygenate found in gasoline. Metropolitan monitors MTBE levels at Diamond Valley Lake and Lake Skinner. The reservoirs also have boat requirements such as MTBE-free fuel to aid in the protection of imported water supplies. MTBE concentrations have been below the MCL.

Uranium

Uranium is a contaminant of concern in the water from the Colorado River. There are uranium mine tailings located approximately 600 feet from the river at Moab, Utah. Rainfall seeps through the tailings and contaminates the local groundwater which flows to the river. In 2003, an interim action system was implemented that intercepts some of the contaminated groundwater prior to reaching the river. The Department of Energy is preparing an Environmental Impact Statement that will evaluate the possibility of moving the pile, capping it in place, and other alternatives. Uranium levels at Metropolitan's intake range from 1 to 5 picocuries per liter (pCi/L) whereas the California drinking water standard is 20 pCi/L.²⁵

N-nitrosodimethylamine (NDMA)

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

²⁵ Metropolitan Water District of Southern California, Regional Urban Water Management Plan, Draft September 2005

Metropolitan manages this potential reaction by monitoring their system to ensure the water supplies meet or exceed the standards set by the State of California. The notification level for NDMA is 10 ug/L. Metropolitan currently samples quarterly for NDMA at their treatment facilities and at specific locations throughout their service area. Metropolitan focuses on areas of the system where there is a long retention time for water because these areas are where the concern for a reaction between monochloramine and organic nitrogen precursors is the greatest. Metropolitan will be expanding the number of samples taken in 2006 to better represent the system.

Hexavalent Chromium (Chromium VI)

Currently the MCL for total chromium is 0.05 mg/L, which includes Chromium VI. CDHS is to set a MCL for Chromium VI; however, the Office of Health Hazard Assessment must first establish a public health goal. Metropolitan samples for Chromium VI and monitors levels within the Colorado River because of Chromium VI detection in groundwater near the river. The plume of Chromium VI has been detected in recently installed wells that are located less than 60 feet west of the Colorado River near Topock, Arizona. In February 2005, Chromium VI was detected at a concentration of 354 ug/L.²⁶ Metropolitan is involved in a Technical Work Group that reviews monitoring results and remediation plans for contaminated groundwater.

Water Quality Programs

Metropolitan supports and is involved in many programs that address water quality concerns related to both the SWP and Colorado River supplies. Some of the programs and activities include:

- **CALFED Program** – This program coordinates several SWP water feasibility studies and projects. These include:
 1. A feasibility study on water quality improvement in the California Aqueduct.
 2. The conclusion of feasibility studies and demonstration projects under the Southern California-San Joaquin Regional Water Quality Exchange Project.²⁷ This exchange project was discussed earlier as a mean to convey higher quality water to Metropolitan.
 3. DWR's Municipal Water Quality Investigations Program and the Sacramento River Watershed Program. Both programs address water quality problems in the Bay-Delta and Sacramento River watershed.
- **Delta Improvement Package** – Metropolitan in conjunction with DWR and US Geologic Survey have completed modeling efforts of the Delta to determine if levee modifications at Franks Tract would reduce ocean salinity concentrations in

²⁶ Arizona Department of Health Services, Topock Groundwater Study Evaluation of Chromium in Groundwater Wells, September 7, 2005.

²⁷ Metropolitan Water District of Southern California, Regional Urban Water Management Plan, Draft September 2005

water exported from the Delta. Currently, tidal flows trap high saline water in the track. By constructing levee breach openings and flow control structures, it is believed saline intrusion can be reduced. This would significantly reduce TDS and bromide concentrations in water from the Delta.

- **Source Water Protection** – In 2001, Metropolitan completed a Watershed Sanitary Survey as required by CDHS to examine possible sources of drinking water contamination and identify mitigation measures that can be taken to protect the water at the source. CDHS requires the survey to be completed every five years. Metropolitan also completed a Source Water Assessment (December 2002) to evaluate the vulnerability of water sources to contamination. Water from the Colorado River is considered to be most vulnerable to contamination by recreation, urban/storm water runoff, increasing urbanization in the watershed, wastewater and past industrial practices. Water supplies from SWP are most vulnerable to urban/storm-water runoff, wildlife, agriculture, recreation, and wastewater.²⁸

3.1.2 GROUNDWATER

Both CBMWD and WRD actively monitor the Basin for water quality issues. CBMWD assists purveyors in its service area in meeting drinking water standards through its *Cooperative Basin-Wide Title 22 Groundwater Quality Program*. The program includes wellhead testing at approximately 160 groundwater wells, reservoir sample collecting, water quality testing, and reporting services.²⁹ WRD conducts a comprehensive Groundwater Quality Program to evaluate water quality compliance in production wells, monitoring wells, and recharge/injection areas.

As part of WRD's Regional Groundwater Monitoring Program, WRD collects groundwater samples twice a year from over 200 monitoring wells. The water quality data collected from these wells are used to assess ambient conditions of the Basin, monitor the effects of extraction, monitor the effectiveness of the seawater intrusion barriers, address poor water quality areas, and also provide early warning of emerging contaminants of concern. WRD supplements their sampling with information from production wells in order to broaden the coverage of the Basin.

WRD provides extensive information on groundwater quality in both its current Engineering and Survey Report (March 2005) and the Regional Groundwater Monitoring Report (April 2005). Both reports have a section devoted solely to groundwater quality management. The groundwater quality issues facing WRD and the City and the programs implemented to address those issues are summarized in the following sections.

²⁸ Metropolitan Water District of Southern California, Regional Urban Water Management Plan, September 2005 Draft

²⁹ Central Basin Municipal Water District, 2005 UWMP

Total Dissolved Solids (TDS)

One water quality concern is TDS. CDHS has established a recommended secondary standard of 500 mg/L with an upper limit of 1,000 mg/L. In the Basin, TDS generally ranged between 250 and 750 mg/L in production wells.³⁰ The City's wells have average TDS concentration ranging from 290 - 350 mg/L.

One of the major challenges for WRD is the contamination of fresh groundwater by saltwater intrusion. Therefore, WRD has implemented the Alamitos seawater intrusion barrier. WRD monitors the effectiveness of the barrier by collecting hydrogeologic and water quality data from monitoring wells near the barrier.

Iron and Manganese

Secondary standards of 0.3 mg/L for iron and 50 ug/L for manganese were established by CDHS. In the Basin, iron has been detected in monitoring wells up to 0.6 mg/L and manganese has been detected up to 670 ug/L. Although some purveyors within the Basin treat the groundwater to remove high levels of iron and manganese, the City's active wells have tested below the standard and treatment is not necessary. In the past, the City's C-4 well periodically tested above the 50 ug/L level for manganese; however, the City recently redeveloped the well and the levels in the well have dropped below the limit.

Nitrates

Nitrates are sampled because their presence indicates that contamination may have occurred due to the degradation of organic matter. Although nitrates are present throughout the Basin, no production wells within the Basin detected nitrates above the MCL (45 mg/L).

Trichloroethylene (TCE)

TCE is classified as a human carcinogen and has an MCL of 5 ug/L. TCE was detected in five WRD monitoring well locations in the Basin ranging from concentrations of below the detection limit to 31 ug/L. To date, 61 production wells have detectable levels of TCE. Fourteen of the wells were above the MCL. One of the City's wells tested positive for TCE with a concentration below the MCL of 5 ug/L.

Tetrachloroethylene (PCE)

PCE's MCL is 5 ug/L and is a possible human carcinogen. PCE has been detected at eight monitoring well locations in the Basin. The concentrations range from below the detection limit to 11 ug/L. PCE has been detected in 65 production wells in the Basin with 11 of them above the MCL.

³⁰ WRD, Regional Groundwater Monitoring Report for Water Year 2003/2004, April 2005.

Special Interest Constituents

WRD has identified special interest constituents including arsenic, hexavalent chromium, MTBE, total organic carbon, apparent color, and perchlorate as emerging water quality issues. The special interest constituents are summarized below.

Arsenic

The current arsenic standard is 50 ug/L. The new federal MCL beginning in January 2006 for domestic water supplies is 10 ug/L. CBMWD conducted a study in 1992 that determined that some of the wells within its service area would have difficulty in complying with the lower standard. For example, eight production wells in the central and southeastern portion of the Basin contain arsenic above the pending MCL. According to the 2004 Water Quality Reports, the average arsenic level is around 5 ug/L.

Hexavalent Chromium

Hexavalent chromium, or chromium 6, is an oxidized form of chromium 3 that is a known carcinogen when inhaled. Currently, the MCL for all forms of chromium is 50 ug/L. Hexavalent chromium has been reported in 29 production wells in the Basin. No City wells have detected Hexavalent Chromium.

Methyl Tertiary-Butyl Ether (MTBE)

The health effects of MTBE are uncertain. The EPA currently classifies MTBE as a possible human carcinogen. The WRD monitoring wells have not shown detection of MTBE. However, three production wells within the Basin have been reported to have MTBE although the concentrations are below the MCL of 13 ug/L. No City wells have detected MTBE when they were sampled in 2004.

Total Organic Carbon (TOC)

TOC is the measure of the organics in water and provides an indication of the potential formation of disinfectant byproducts.³¹ There is no MCL for TOCs; however, 32 of the 38 production wells tested above the detection limit for TOC. Most of the wells contained concentrations of TOC in the range of 1 to 5 mg/L.

Apparent Color

Although apparent color in groundwater is not harmful, an MCL of 15 apparent color units has been established for aesthetic reasons. Wells within Long Beach, Inglewood, La Mirada/Norwalk, Pico Rivera and Los Angeles tested above the MCL

³¹ WRD, Regional Groundwater Monitoring Report for Water Year 2003/2004, April 2005.

for apparent color. Some water purveyors in these areas have treatment systems to remove the color from the groundwater. The wells within the City's service area are below the MCL.

Perchlorate

CBMWD began monitoring for perchlorate voluntarily in 1997. To date, perchlorate has been detected in nine separate wells; however, most wells test below the detection limits. The San Gabriel Basin which is adjacent to the Central groundwater basin has been contaminated with perchlorate. CBMWD supports the clean up of perchlorate before it migrates to the Central groundwater basin. Perchlorate has not been detected in the City's wells.

Water Quality Programs

CBMWD and WRD support and are involved in many programs that address water quality concerns of the Basin. Some of the programs and activities include:

- **WRD's Safe Drinking Water Program** – This program promotes the treatment of contaminants at the wellhead for potable purposes. Currently, the program is focusing on volatile organic carbons (VOCs) and provides financial assistance for the design and installation of wellhead treatment systems.
- **CBMWD's Water Quality Protection Project** – This project was developed to protect the Basin from TCE and PCE from migrating from the San Gabriel Valley aquifer. The project includes two extraction wells and a treatment facility. Approximately 3,600 gpm of groundwater are treated at a site within the City of Pico Rivera.
- **WRD's Groundwater Quality Program** – This program monitors and evaluates the impacts of pending drinking regulations on the groundwater basin. Contaminates of concern such as perchlorate, NDMA, hexavalent chromium, and 1,4-dioxane are closely monitored.
- **WRD's application for AB303 Groundwater Management Grant Program** – WRD along with the USGS, EPA, Department of Toxic Substance Control, Regional Water Quality Control Board (RWQCB), and the City of Sante Fe Springs recently resubmitted a grant application for funding to investigate potential contamination movement within the aquifer system.
- **WRD's Water Augmentation Study** – This study evaluates the feasibility of capturing storm runoff in-lieu of discharge to surface waters.

3.2 WATER QUALITY EFFECT ON WATER MANAGEMENT STRATEGIES AND SUPPLY RELIABILITY

The previous section summarized the general water quality issues of Metropolitan's imported water and the Basin's groundwater supplies. The same water quality concerns apply to the City's water supply. Similar to Metropolitan, the City prepared an assessment of its drinking water in April 2002. The groundwater sources were found to be most vulnerable to possible contamination from automobile gas stations, chemical/petroleum processing/storage, known contaminant plumes, contractor or government agency equipment storage yards, parks, freeway/state highway transportation corridors, herbicide use in road rights-of-way, water supply wells, dry cleaners, metal plating/finishing/fabricating, automobile repair shops, utility station maintenance areas, and wastewater treatment plants.³² The City continues to monitor its groundwater wells for the first indication of problems as part of their water management strategy.

The City's monitoring program includes monthly sampling for microbiological and physical quality. Additional samples are collected and analyzed for various chemical, radiological and aesthetic quality constituents. The City's water quality staff collects approximately 20 samples each week in the distribution system to test for microbiological quality, monthly for physical quality, and quarterly for total THM formation.

In the near future, EPA's Stage 2 regulation of the disinfection byproducts rule will be in effect. Stage 1 was implemented in 2002 and lowered the total THM maximum annual average concentration level in water supplies; Stage 2 will further lower the THM concentration level. The City's water supplies meet the requirements of Stage 1 and will be required to meet Stage 2 levels when they become finalized.

The City has not experienced any significant water quality problems in either its surface water or groundwater supplies. The City is concerned about increasing levels of VOCs in the Basin, such as TCE. The City closely monitors for TCE within the groundwater to ensure that their water meets all standards. The City continues to sample its water supplies for potential contamination and will implement necessary mitigation measures to prevent any loss of supply. The City does not anticipate any significant or immediate changes in its available water supplies due to water quality issues in part because of the continued efforts undertaken by Metropolitan, CBMWD, and WRD as described earlier.

³² Consumer Confidence Reports for City of Cerritos, 2004.

SECTION 4 WATER RELIABILITY PLANNING

4.1 RELIABILITY OF WATER SUPPLIES

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

The City and all southern California communities and water suppliers are facing increasing challenges in their role as stewards of water resources in the region. The region faces a growing gap between its water requirements and its firm water supplies. Increased environmental regulations and the collaborative competition for water from outside the region have resulted in reduced supplies of imported water. Continued population and economic growth also contribute toward increased water demands within the region, putting an even larger burden on local supplies.

The reliability of the City's water supply is dependent on the reliability of both imported water supplies and groundwater supplies, supplemented by recycled water. Imported supplies are managed and delivered by Metropolitan through CBMWD, while the groundwater supplies are managed by WRD. The following sections will discuss these agencies as well as the RWQCB, their roles in water supply reliability, and the near and long-term efforts they are involved with to ensure future reliability of water supplies to the City and the region as a whole.

4.1.1 Regional Agencies and Water Reliability

Metropolitan Water District of Southern California (Metropolitan)

Metropolitan's primary goal is to provide reliable water supplies to meet the water needs of its service area at the lowest possible cost. The reliability of Metropolitan's water supply has been threatened as existing imported water supplies from the Colorado River and SWP face increasing challenges. Despite these challenges, Metropolitan continues to develop and encourage projects and programs to ensure reliability now and into the future. One such project is Metropolitan's Diamond Valley Lake in Hemet, California, an 800,000 AF reservoir for regional seasonal and emergency storage for SWP and Colorado River water. The reservoir began storing water in November 1999 and reached the sustained water level by early 2002.³³

Colorado River Aqueduct (CRA)

Water supplies from the Colorado River have been, and continue to be, a topic of negotiation and intense debate. The 1964 Court Decree required the state of California to limit its annual use to 4.4 million acre-feet (MAF) basic annual apportionment of

³³ Metropolitan Water District of Southern California, Regional Urban Water Management Plan, September 2005 Draft

Colorado River water plus any available surplus. To keep California at 4.4 MAF, Metropolitan reduces its level of diversions in years when no surplus is available.

Pursuant to the 1964 U.S. Supreme Court decree, Metropolitan's dependable supply of Colorado River water was limited to 550,000 AFY assuming no surplus or unused Arizona and Nevada entitlement was available and California agricultural agencies use all of their contractual entitlement. Metropolitan also possesses a priority for an additional 662,000 AFY depending upon availability of surplus water. Water under this priority, referred to as priority 5, can come from:

- Water unused by the California holders of priorities 1 through 3;
- Water conserved by the water conservation program with Imperial Irrigation District (IID);
- Water saved by the Palo Verde fallowing and forbearance program; or
- When the U.S. Secretary of the Interior determines that surplus water is available or apportioned water to Arizona and Nevada are not used.

Surplus water under priority 5 is expected to decrease in the future as water demands increase in Arizona, Nevada, and California. Metropolitan, however, continues to develop programs that will provide surplus water as discussed in Section 4.4.2. In an average year, the amount of surplus water available from these programs, above Metropolitan's dependable water supply of 550,000 AFY, ranges from 348,700 AFY in 2010 to 432,700 AFY in 2030.³⁴

In 1999, the Colorado River Board developed "California's Colorado River Water Use Plan," also known as the "California Plan" and the "4.4 Plan", which was endorsed by all seven Colorado River Basin states and the U.S. Department of the Interior. This plan developed the framework that specifies how California will transition and live within its basic apportionment of 4.4 MAF of Colorado River water.

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

Metropolitan's 2003 IRP Update recognizes that the QSA supports Metropolitan's development plans for CRA deliveries and demonstrates the reliability benefits as a result of the QSA and existing supply enhancement programs.

³⁴ Table A3-7 in the Metropolitan Water District of Southern California, Draft Regional Urban Water Management Plan, September 2005.

State Water Project (SWP)

The reliability of the SWP impacts Metropolitan's member agencies' ability to plan for future growth and supply. DWR's Bulletin 132-03, December 2004, provides certain SWP reliability information, and in 2002, the DWR Bay-Delta Office prepared a report specifically addressing the reliability of the SWP.³⁵ This report, *The State Water Project Delivery Reliability Report*, provides information on the reliability of the SWP to deliver water to its contractors assuming historical precipitation patterns.

On an annual basis, each of the 29 SWP contractors, including Metropolitan, request an amount of SWP water based on their anticipated yearly demand. In most cases, Metropolitan's requested supply is equivalent to its full Table A Amount³⁶, currently at 1,911,500 AFY. The full Table A amount is defined as the maximum amount of imported water to be delivered and is specified in the contract between the DWR and the contractor. A contractor may chose to request an amount of SWP water that is less than their full Table A amount and for that year the amount requested becomes the contractor's Table A amount. Since Metropolitan's request is typically its full Table A amount, Metropolitan's Table A amount is 1,911,500 AFY. After receiving the requests, DWR assesses the amount of water supply available based on precipitation, snow pack on northern California watersheds, volume of water in storage, projected carry over storage, and Sacramento-San Joaquin Bay Delta regulatory requirements. For example, the SWP annual delivery of water to contractors has ranged from 552,600 AFY in 1991 to 3.5 MAF in 2000. Due to the uncertainty in water supply, contractors are not typically guaranteed their full Table A Amount, but instead a percentage of that amount based on the available supply.

Typically, around December of each year, DWR provides the contractors with their first estimate of allocation for the following year. As hydrologic and water conditions develop throughout the year, DWR revises the allocations. On January 14, 2005, SWP supplies were projected to meet 60 percent of most SWP contractor's Table A Amounts. This allocation was increased to 70 percent on April 1, 2005 and again increased to 90 percent on May 27, 2005. The percentages, however, could easily have been reduced depending on changes in the year's hydrologic and water conditions. For the year 2006, DWR announced a 55 percent initial allocation of contractor's Table A Amounts on November 23, 2005. This percent will likely change (increase or decrease) throughout next year based on hydrologic conditions. Due to the variability in water supply for any given year, it is important to understand the reliability of the SWP to supply a specific amount of water each year to the contractors.

DWR is preparing an update to the SWP Reliability Report issued in 2003 and expects it to be completed soon. On November 18, 2005, DWR released the draft of the 2005 SWP Delivery Reliability Report for public review and comment. The draft Reliability Report updates the reliability report finalized in 2003 with the inclusion of two updated studies.

³⁵ Department of Water Resources, State Water Project Delivery Reliability Report. 2002.

³⁶ Two types of deliveries are assumed for the SWP contractors: Table A and Article 21. Table A Amount is the contractual amount of allocated SWP supply; it is scheduled and uninterruptible. Article 21 allows SWP contractors to receive additional water deliveries only under specific conditions. [Department of Water Resources, State Water Project Delivery Reliability Report, 2002.]

The updated studies, 4 and 5, contain the most current information for assumed demands of SWP contractors. The results of studies 4 and 5 show average deliveries of 69 percent of full Table A under current conditions and 77 percent under future conditions. The more recent studies also show a minimum delivery of 4 and 5 percent, current and future years respectively, compared to 20 percent for the 2003 report. These amounts are shown in Table 4.1.1-1 on the following page compared to the earlier CALSIM modeling as discussed below.

DWR analyzed the SWP's reliability using the California Water Allocation and Reservoir Operations Model (CALSIM II model) in their Reliability Report. The CALSIM II model was developed by DWR and the U.S. Bureau of Reclamation (USBR) to simulate operations of the SWP and the Central Valley Project (CVP). The CALSIM II model is used to estimate water deliveries to both SWP and CVP users under various assumptions such as hydrologic conditions, land use, regulations, and facility configurations. Documentation for CALSIM II, including assumptions, can be found on the DWR Web site at <http://modeling.water.ca.gov>.

One of the key assumptions of the CALSIM II model is that past weather patterns will repeat themselves in the future. The model uses a monthly time step to calculate available water supply based on historical rainfall data from 73 years of records (1922 – 1994). The model scenarios used in the preparation of the Reliability Report also assumed that regulatory requirements and facilities would not change in the future. DWR considered this assumption conservative since additional facilities such as reservoirs may be implemented in the future to specifically increase the SWP's reliability.

The CALSIM II model was used to complete three benchmark studies dated May 17, 2002 for the Reliability Report. The benchmark studies evaluated the water supply and demand at the 2001 condition and at the 2021 condition. In 2001, SWP water demand was estimated to vary from 3.0 to 4.1 MAF per year depending on the weather conditions (wet or dry years). SWP water demands in 2021 were estimated to range from 3.3 to 4.1 MAF per year. DWR prepared two benchmark studies for the 2021 condition. The first study assumed that SWP water demands would depend on weather conditions, whereas the second study assumed the contractor's water demand would be their maximum Table A Amount; 4.1 MAF per year regardless of weather. Table 4.1.1-1 shows the results, which demonstrate that SWP deliveries, on average, can meet 75 percent of the maximum Table A Amount.

**Table 4.1.1-1
SWP Table A Deliveries from the Delta
Percent of Total Table A Amount of 4.133 MAF
(MAF)**

| Study | Average | Maximum | Minimum |
|--------------------------------------|-------------|--------------|-------------|
| 2001 Study | 2.962 (72%) | 3.845 (93%) | 0.804 (19%) |
| 2021 Study A ^[1] | 3.083 (75%) | 4.133 (100%) | 0.830 (20%) |
| 2021 Study B ^[2] | 3.130 (76%) | 4.133 (100%) | 0.830 (20%) |
| Revised-Demand Today ^[3] | 2.818 (69%) | 3.848 (94%) | 0.159 (4%) |
| Revised-Demand Future ^[4] | 3.178 (77%) | 4.133 (100%) | 0.187 (5%) |

Source: Department of Water Resources, Excerpts from Working Draft of 2005 SWP Delivery Reliability Report – Attachment 1, May 25, 2005

^[1] Assumes demands depend on weather conditions.

^[2] Assumes demands at maximum Table A amount.

^[3] Revises demands to current conditions.

^[4] Revises demands at levels of use projected to occur by 2025.

The Monterey Agreement states that contractors will be allocated part of the total available project supply in proportion to their Table A Amount. The Monterey Agreement changed SWP water allocation rules by specifying that, during drought years, project supplies be allocated proportionately based on the maximum contractual Table A Amount. Water is allocated to urban and agricultural purposes on a proportional basis, deleting a previous initial supply reduction to agricultural contractors. The agreement further defines and permits permanent sales of SWP Table A Amounts and provides for transfer of up to 130,000 AF of annual Table A Amounts from agricultural use to municipal use. The Agreement also allows SWP contractors to store water in another agency's reservoir or groundwater basin, facilitates the implementation of water transfers and provides a mechanism for using SWP facilities to transport non-project water for SWP water contractors. The Agreement provides greater flexibility for SWP contractors to use their share of storage in SWP reservoirs.

It is important to note that Study No. 5, the Revised-Demand Future study shown in Table 4.1.1-1, concluded that as little as 5 percent of Table A amounts would be available to State Water Contractors during single dry years while an average of 29 percent of Table A amounts would be available during the three year multiple dry period. These low percentages are important to the overall water picture in southern California because Metropolitan receives a significant portion of its total water supply from the SWP. Such significant cuts in supply availability from DWR will therefore have major impacts upon MWD's ability to meet the demands of its member agencies during single and multiple dry years. With this in mind, MWD made major changes to its revised supply/demand projections included as part of its September 2005 Final Draft Regional Urban Water

Management Plan as compared to their earlier May 2005 projections. These changes are discussed in more detail in Section 4.2.

Report on Metropolitan's Water Supplies: Blueprint for Water Reliability

Metropolitan released their "Report on Metropolitan's Water Supplies, A Blueprint for Water Reliability" on March 25, 2003, to provide updated information on Metropolitan's projected supply and demand for incorporation into Water Verification and Water Supply Assessments for compliance with SB 221 and SB 610, respectively. These bills implement requirements to connect land use to a sufficient water supply before a development can be approved. The Metropolitan report addresses water supply reliability issues and states Metropolitan's roles and responsibilities, which include the following: (1) implementing water management programs that support the development of cost-effective local resources; (2) securing additional imported supplies as necessary through programs that increase the availability of water delivered through the CRA and the SWP; (3) providing the infrastructure needed to integrate imported and local sources; (4) establishing a comprehensive management plan dealing with periodic surplus and shortage conditions; and (5) developing a rate structure that strengthens Metropolitan's financial capabilities to implement water supply programs and make infrastructure improvements to Metropolitan's distribution system.

The report details that Metropolitan's regional water demand projections are 6 percent to 16 percent *higher*, depending on which 5-year projection period and 11 percent for Year 2025, than the aggregated projections of Metropolitan's member agencies. As stated in the Report, "this difference indicated that Metropolitan supplies would provide a level of 'margin of safety' or flexibility to accommodate delays in local resources development or adjustments in development plans."³⁷ Additionally, the report concludes that "current practices allow Metropolitan to bring water supplies on-line at least ten years in advance of demand with a very high degree of reliability." More particularly, Metropolitan documented sufficient currently available supplies to meet 100 percent of member agencies' supplemental water demands for 20 years (through 2023) under Average and Wet Year conditions, for 15 years under Multiple Dry Year conditions (with 8 to 26 percent reserve capacity), and for 15 years under Single Dry Year conditions (with 8-25 percent reserve capacity). With the addition of supplies under development, Metropolitan will be able to meet 100 percent of its agencies' supplemental water needs under all supply and demand conditions through 2030 with 20-25 percent reserve capacity.³⁸

In addition to Metropolitan's Blueprint for Water Reliability report, Metropolitan's September 2005 Draft Regional UWMP demand and supply analysis projects regional surpluses ranging from 5 to 35 percent in all years and drought scenarios through 2030.³⁹ As demand forecasts are refined, supply goals are also refined. Metropolitan has consistently supplied over 50 percent of water supplies to the Southern California region.

³⁷ Metropolitan Water District of Southern California. Report on Metropolitan Water Supplies, A Blueprint for Water Reliability, p. 9. March 25, 2003.

³⁸ Metropolitan Water District of Southern California. Report on Metropolitan Water Supplies, A Blueprint for Water Reliability, p. 24-25. March 25, 2003.

³⁹ Tables II-7, 8 and 9. Metropolitan Water District of Southern California, Draft Regional Urban Water Management Plan, September 2005.

To continue to meet this percent of water supply, Metropolitan continues to develop new and innovative projects and programs to ensure reliability. For example, Metropolitan continues to develop the following projects and programs, which are further described in section 4.4:

- seawater desalination projects;
- increased conservation efforts;
- water quality improvements by decreasing salinity in supplies from the SWP and the Colorado River;
- additional underground storage and retrieval facilities and programs;
- adoption of principles for establishing cooperative programs; and
- endorsement of legislation that would further water reliability for the region.

Integrated Water Resources Plan (IRP)

To address Metropolitan's reliability challenges, Metropolitan and its member agencies developed an IRP in 1996. The overall objective of the IRP process is the selection and implementation of a Preferred Resource Mix (or strategy) consisting of complementary investments in local water resources, imported supplies and demand-side management that meet the region's desired reliability goal in a cost-effective and environmentally sound manner. The 1996 IRP guided the development and implementation of revised Metropolitan water management programs through the year 2005.

The 2003 IRP Update was approved July 13, 2004, and includes various projects and programs that contribute to the reliability of Metropolitan's imported water supplies. The IRP Update concluded that the resource targets from the 1996 IRP, factored in with changed conditions, will continue to provide for 100 percent reliability through 2025.

While the 2003 IRP Update includes goals for a variety of resource targets, it identified the most significant programs as conservation and local supply development among the Preferred Resource Mix. The IRP includes the Local Resources Program (LRP) and the Seawater Desalination Program (SDP) as a means to increase reliability of local supplies. Currently, the LRP, including both recycling and groundwater recovery, has invested over \$121 million and partnered with member agencies on 53 recycled water projects and 22 groundwater recovery projects generating 251,000 AF of local supply in 2002.⁴⁰

The 2003 IRP Update states that Metropolitan's regional LRP target is 500,000 AF by 2020. Although in FY 2002, recycling and groundwater recovery programs narrowly missed their target, the region is expected to meet its 2010 and 2020 IRP targets. Meeting the targets will require the region to produce 159,000 AF of additional local project and/or seawater desalination supply by 2010 and 249,000 AF by 2020. Overall, the region has developed about 50 percent of the 1996 IRP local resources target for 2020.

Metropolitan continues to encourage development of local water resource projects by offering financial incentives through the LRP to its member agencies. These anticipated water supply benefits are incorporated into the forecasts of demand on Metropolitan.

⁴⁰ Metropolitan Water District of Southern California. Integrated Water Resources Plan, 2003 Update. May 2004.

Central Basin Municipal Water District (CBMWD)

Although the reliability of CBMWD's water supply relies heavily on Metropolitan, CBMWD has invested in recycled water to help improve its reliability. Utilizing recycled water helps CBMWD reduce its vulnerability to extended drought or emergency shortage events.

Another means for increasing CBMWD water supply reliability is through conjunctive use programs. A conjunctive use program provides operational flexibility, increased yield of the Basin, efficient use of surplus imported water during wet periods, and a financial benefit to groundwater pumpers.⁴¹ Conjunctive use programs would need to be closely coordinated with WRD and are still being evaluated.

Water Replenishment District of Southern California (WRD)

According to California Water Code, WRD is to perform any acts necessary to replenish, protect, and preserve the groundwater supplies of the Basin.⁴² WRD meets this requirement by participating in numerous projects and programs directly related to the replenishment of the Basin and the increase in water supply reliability for the region. A few programs have been discussed earlier and include the Groundwater Quality Program, Safe Drinking Water Program, and the Regional Groundwater Monitoring Program. In addition, the existing projects and programs are listed below.

- **Recycled Water Program** – Recycled water continues to be used at spreading basins and at seawater intrusion barriers to assist in the replenishment of the Basin. WRD's recycled water program ensures the recycled water quality is safe for groundwater recharge. WRD monitors and samples water quality near the spreading grounds and tracks the travel times between the spreading basins and production wells. Projects under this program improve the reliability of groundwater supplies for the region.
- **Groundwater Resources Planning Program** – As the entity that manages the Basin, WRD implemented this program to evaluate proposed projects/programs to determine their impacts/benefits to the overall Basin management. All new projects are brought to the WRD's Technical Advisory Committee for review and recommendation. Past programs have been conceptual in nature and have included increasing the allowed pumping allocation, banking groundwater, and relaxing carryover provisions. A potential project storage project within the Basin is described later under the planned projects section.
- **Groundwater Quality and Monitoring Programs** – These programs were mentioned in Section 3 as the means for WRD to evaluate water quality compliance in production wells, monitoring wells, and recharge/injection waters. Water quality and water level data are compiled in GIS to better understand the dynamic changes in the Central and West Coast groundwater basins.

⁴¹ Central Basin Municipal Water District, 2005 UWMP

⁴² WRD Engineering Survey and Report, March 2005.

- **Whittier Narrows Groundwater Contamination** – This program addresses the contamination within the San Gabriel Groundwater Basin and efforts to stop contamination from migrating into the Central groundwater basin. WRD has discussed projects for the future, although not specifically identified.
- **Seawater Barrier Improvement Program** – WRD purchases imported and recycled water for injection in the Alamitos, Dominguez Gap, and the West Coast Basin Barriers. The barriers are owned and operated by the Los Angeles County Department of Public Works. WRD continues to evaluate the effectiveness of the barriers and makes adjustments as needed to protect the freshwater groundwater sources.

Regional Water Quality Control Board – Los Angeles Region 4

Background

The State Water Resources Control Board (SWRCB) and the nine RWQCBs (Regional Boards) are responsible for the protection and, where possible, the enhancement of the quality of California's waters. The SWRCB sets statewide policy, and together with Regional Boards, implements state and federal laws and regulations. Each of the nine Regional Boards adopts a Water Quality Control Plan or Basin Plan, which recognizes and reflects regional differences in existing water quality, the beneficial uses of the region's ground and surface waters, and local water quality conditions and problems.⁴³

In 1975, the Los Angeles RWQCB (LARWQCB) adopted a single Water Quality Control Plan (Basin Plan) for the Los Angeles Region, which comprised of the Santa Clara and Los Angeles River Basin Plans. The two Basin Plans were amended in 1978, 1990, and 1991 and are superseded by the single Basin Plan. For planning purposes, the single Basin Plan divides the region into major surface watersheds and groundwater basins, such as the Los Angeles River and San Gabriel River Watershed.

The LARWQCB updated the Basin Plan to address issues that evolved over time due to increasing populations and changing water demands in the region. The document covers the Santa Clara and Los Angeles River Basin, and in May 2001, the LARWQCB adopted the ranking of high priorities and the complete list of priorities for the period 2001-2004.

The Basin Plan is more than a collection of water quality goals and policies, descriptions of conditions, and discussions of solutions. It is also the basis for the LARWQCB's regulatory programs. The Basin Plan establishes water quality standards for all the ground and surface waters of the region. Water quality problems in the region are listed in the Basin Plan, along with these causes, if known. For water bodies with quality below the recommended levels necessary for beneficial uses, plans for improving water quality are included. Legal basis and authority for the LARWQCB reflects, incorporates, and implements applicable portions of a number of national and statewide water quality plans and policies, including the California Water Code (Porter-Cologne Water Quality Control

⁴³ Los Angeles Regional Water Quality Control Board. Region 4 Water Quality Control Plan (Los Angeles Region. January 1995.

Act) and the Clean Water Act. The LARWQCB also regulates water discharges to minimize their effects on the region's ground and surface water quality. Permits are issued by the LARWQCB under a number of these programs and authorities.

Key Regional Issues

Water quality degradation due to excess nutrients, sediment, and bacteria from nonpoint source discharges are believed to be the greatest threats to rivers and streams within the Los Angeles Region. The increase in uncontrolled pollutants from nonpoint source discharges can be associated with the rapid population growth in the region. Major surface waters of the Los Angeles Region flow from head waters in pristine mountain areas, through urbanized foothill and valley areas, high density residential and industrial coastal areas, and terminate at highly utilized recreational beaches and harbors. These urbanized areas contribute to the surface water quality concerns of the region.

Water Resources and Water Quality Management

The LARWQCB plans to implement more watershed-based projects in the future to address water quality and/or water supply issues. The purpose of comprehensive watershed level management is to establish a more effective approach in protecting and restoring beneficial-uses water by dividing the region into several watersheds. The Los Angeles Region has been divided into six watershed management areas for planning purposes. This will increase the coordination of planning, monitoring, assessment, permitting, and enforcement elements of the various surface and groundwater programs with activities/jurisdiction in each watershed. The City's service area falls into two watershed areas: San Gabriel River Watershed and Los Angeles River Watershed.

Substantial resources have also been allocated by the LARWQCB for the investigation of polluted waters and enforcement of corrective actions needed to restore water quality. The LARWQCB has established the specific remediation programs which include:

- Underground Storage Tanks
- Well Investigations
- Spills, Leaks, Investigations and Cleanups
- Above ground Petroleum Storage Tanks
- U.S. Department of Defense and Department of Energy Sites
- Resource Conservation and Recovery Act
- Toxic Pits Cleanup Act
- Bay Protection and Toxic Cleanup

Some of these activities bear directly on the implementation of the Basin Plan, while others may lead to future Basin Plan amendments to incorporate appropriate changes, such as revised regulatory strategies for various dischargers. These investigations and the implementation of appropriate physical solutions are an essential and integral part of the effort to restore and maintain water quality in the region.

4.2 DEMAND AND SUPPLIES COMPARISON

Metropolitan Water District Supplies and Demands

As previously noted, the City of Cerritos is a member agency of CBMWD, which is a member agency of Metropolitan. In its 2005 draft UWMP report, Metropolitan has chosen the year 1977 as the single driest year since 1922 and the years 1990-1992 as the multiple driest three years over that same period. These years have been chosen because they represent the timing of the least amount of available water resources from the SWP, a major source of Metropolitan's supply.

Metropolitan Water District released its Final Draft Regional Urban Water Management Plan (RUWMP) in September 2005. In that plan, for the twenty year period from 2010 to 2030, Metropolitan projects a 0.5 percent decrease in available supply during an average year, a 4.5 percent increase during a single dry year, and a 3.8 percent increase during the third year of the multiple dry year period. The increased available supplies during drought year scenarios are primarily due to increased contract allotments of in-basin storage as well as a number of supplies under development.

In its draft report, Metropolitan also projects an increase in member agency demands. Specifically, they project a 10.2 percent increase over the same 20-year period in the average demand, an 8.5 percent increase during the single dry year scenario, and an 8.9 percent increase during the multiple dry year scenario. However, in all cases, the projected regional increase in demands by member agencies are offset by available surpluses in the Metropolitan supply.

Table 4.2-1 summarizes Metropolitan's current imported supply availability projections for average and single dry years over the 20-year period beginning in 2010 and ending in 2030. Based on these projections, Metropolitan will be able to meet all of its projected single dry year service area demands through the year 2030.

The entries in Rows K in Table 4.2-1 are important and will be used later in this section for developing Cerritos' projected demands over the next 25 years. It is also important to note that Row K (Projected Supply During a Single Dry Year as a % of Single Dry Year Demand) indicates Metropolitan's projected supply (including surplus water) will exceed its projected single dry year demand in all years.

**Table 4.2-1
Metropolitan Regional Imported Water Supply Reliability Projections
for Average and Single Dry Years⁴⁴
(AFY)**

| Row | Region Wide Projections | 2010 | 2015 | 2020 | 2025 | 2030 |
|--------------------------------------|--|--------------|--------------|--------------|--------------|--------------|
| Supply Information | | | | | | |
| A | Projected Supply During an Average Year ^[1] | 2,668,000 | 2,600,000 | 2,654,000 | 2,654,000 | 2,654,000 |
| B | Projected Supply During a Single Dry Year ^[1] | 2,842,000 | 3,033,000 | 3,002,000 | 2,970,000 | 2,970,000 |
| C = B/A | Projected Supply During a Single Dry Year as a % of Average Supply | 106.5 | 116.7 | 113.1 | 111.9 | 111.9 |
| Demand Information | | | | | | |
| D | Projected Demand During an Average Year | 2,040,000 | 2,053,000 | 1,989,000 | 2,115,000 | 2,249,000 |
| E | Projected Demand During a Single Dry Year | 2,293,000 | 2,301,000 | 2,234,000 | 2,363,000 | 2,489,000 |
| F = E/D | Projected Demand During a Single Dry Year as a % of Average Demand | 112.4 | 112.0 | 112.3 | 111.7 | 110.7 |
| Surplus Information | | | | | | |
| G = A-D | Projected Surplus During an Average Year | 628,000 | 547,000 | 665,000 | 539,000 | 405,000 |
| H = B-E | Projected Surplus During a Single Dry Year | 549,000 | 732,000 | 768,000 | 607,000 | 481,000 |
| Additional Supply Information | | | | | | |
| I = A/D | Projected Supply During an Average Year as a % of Demand During an Average Year | 130.8 | 126.6 | 133.4 | 125.5 | 118.0 |
| J = A/E | Projected Supply During an Average Year as a % of Demand During a Single Dry Year | 116.3 | 113.0 | 118.8 | 112.3 | 106.6 |
| K = B/E | Projected Supply During a Single Dry Year as a % of Single Dry Year Demand (including surplus) | 123.9 | 131.8 | 134.3 | 125.6 | 119.3 |

^[1] Projected supplies include current supplies and supplies under development, but are limited by MWD's 1.25 MAF allotment to Colorado River Water; data obtained from MWD September 2005 Draft RUWMP supply/demand projections

⁴⁴ Metropolitan Draft Regional UWMP September 2005

Table 4.2-2 summarizes Metropolitan's current imported supply availability projections over the 20-year period beginning in 2010 and ending in 2030 for average and multiple dry year scenarios. When reviewing Table 4.2-2, it is important to note that Metropolitan is projecting a surplus of supply for all multiple dry year scenarios through 2030.

The findings in this plan were derived based upon Metropolitan's September 2005 Draft Regional UWMP. These figures can be interpolated to project Metropolitan's ability to meet a specified demand expressed in terms of a percentage of average demand and supply availability. When viewed on a regional basis, some member agency demands will exceed these averages, while others will fall below the stated averages. However, when viewed from the regional perspective, it is reasonable to assume that these averages will apply to all local water purveyors.

Although a less conservative assumption might suggest surplus water supplies not used by agencies experiencing low or no growth may be freed up for use by those water purveyors experiencing more growth, this is not borne out by the overall Metropolitan supply and demand picture. In fact, Metropolitan is projecting a 19.4 percent increase in total demand (including local supplies) over its entire service area between 2005 and 2030 (4,115,700 AFY to 4,914,000 AFY)⁴⁵ compared with a 20.9 percent increase in population over the same period of (18,233,700 to 22,053,200)⁴⁶. In other words, Metropolitan's projected increase in demand roughly parallels its projected increase in population. In any event, the City of Cerritos is not anticipating any significant growth in population or water demand, so Metropolitan's supplies are more than adequate to meet the City's imported water demands.

⁴⁵ Table A.1-5 from MWD September 2005 Draft RUWMP

⁴⁶ Table A.1-2 from MWD September 2005 Draft RUWMP

**Table 4.2-2
Metropolitan Regional Imported Water Supply Reliability Projections
for Average and Multiple Dry Years⁴⁷
(in AFY)**

| Row | Region Wide Projections | 2010 | 2015 | 2020 | 2025 | 2030 |
|--------------------------------------|--|--------------|--------------|--------------|--------------|--------------|
| Supply Information | | | | | | |
| A | Projected Supply During an Average Year ^[1] | 2,668,000 | 2,600,000 | 2,654,000 | 2,654,000 | 2,654,000 |
| B | Projected Supply During Year 3 of a Multiple Dry Year Period* | 2,619,000 | 2,776,600 | 2,741,000 | 2,719,000 | 2,719,000 |
| C = B/A | Projected Supply During Year 3 of a Multiple Dry Year as a % of Average Supply | 98.2 | 106.8 | 103.3 | 102.4 | 102.4 |
| Demand Information | | | | | | |
| D | Projected Demand During an Average Year | 2,040,000 | 2,053,000 | 1,989,000 | 2,115,000 | 2,249,000 |
| E | Projected Demand During Year 3 of a Multiple Dry Year Period ^[2] | 2,376,000 | 2,389,000 | 2,317,000 | 2,454,000 | 2,587,000 |
| F = E/D | Projected Demand During Year 3 of a Multiple Dry Year Period as a % of Average Demand | 116.5 | 116.4 | 116.5 | 116.0 | 115.0 |
| Surplus Information | | | | | | |
| G = A-D | Projected Surplus During an Average Year | 549,000 | 732,000 | 768,000 | 607,000 | 481,000 |
| H = B-E | Projected Surplus During Year 3 of a Multiple Dry Year Period | 243,000 | 377,000 | 424,000 | 265,000 | 132,000 |
| Additional Supply Information | | | | | | |
| I = A/D | Projected Supply During an Average Year as a % of Demand During an Average Year | 130.8 | 126.6 | 133.4 | 125.5 | 118.0 |
| J = A/E | Projected Supply During an Average Year as a % of Demand During Year 3 of a Multiple Dry Year | 112.3 | 108.8 | 114.5 | 108.1 | 102.6 |
| K = B/E | Projected Supply During a Multiple Dry Year as a % of Multiple Dry Year Demand (including surplus) | 110.2 | 116.2 | 118.3 | 110.7 | 105.1 |

^[1] Projected supplies include current supplies and supplies under development, but are limited by MWD's 1.25 MAF allotment to Colorado River Water; data obtained from MWD September 2005 final draft RUWMP.

^[2] MWD only projects demands for year 3 of a multiple dry year period

⁴⁷ Metropolitan Water District of Southern California, Regional UWMP, September 2005 Draft.

**Table 4.2-3
City of Cerritos Water Production for 2000 – 2004
Including Comparison with Area Climatologic Data
(in AFY or inches of rainfall per year)**

| | 2000 | 2001 | 2002 | 2003 | 2004 | Average |
|--|---------------|---------------|---------------|---------------|---------------|---------------------|
| Well Production (in AF) | 9,515 | 9,759 | 10,503 | 9,971 | 10,349 | 10,019 |
| Imported Water (in AF) | 3,255 | 2,555 | 2,252 | 2,515 | 2,898 | 2,695 |
| Total Potable Demand (Import + Well Production in AF) | 12,770 | 12,314 | 12,755 | 12,486 | 13,246 | 12,814 |
| Recycled Water Usage (in AF) | NA | NA | 2,349 | 2,099 | 2,337 | 2,262 |
| Total Production (includes groundwater, imported water, and recycled water) | NA | NA | 15,104 | 14,585 | 15,583 | 15,076 |
| Calendar Year Rainfall ⁴⁹ in inches | 11.93 | 19.06 | 7.24 | 13.37 | NA | 14.62 ⁵⁰ |
| Water Year Rainfall ⁵¹ in inches | 9.21 | 14.98 | 3.77 | 8.61 | 9.25 | --- |
| Climatologic Classification | Below Average | Average | Very Dry | Dry | Dry | --- |
| Water Usage as a % of 2001 Assumed Average Year | 99.9 | 100.0 | 101.8 | 97.7 | 101.5 | --- |

Tables 4.2-4 through 4.2-10 compare current and projected water supplies and demands in normal, single dry year and multiple dry year scenarios.

The figures shown for normal years 2010 through 2030 reflect no increase in future demands. This is because the City's population is not expected to increase in future years as referenced in Section 1.3 of this report.

⁴⁹ Data for years 2000-2003 obtained from National Weather Service website; data is for downtown Los Angeles; refer to <http://www.wrh.noaa.gov/lox/climate/cvc.php>; calendar year data for 2002 and 2003 from www.net-comber.com/larain.html

⁵⁰ Average rainfall recording in downtown Los Angeles over the period 1921-2001; 2004 rainfall data from <http://www.laalmanac.com/weather/we13.htm> for downtown Los Angeles

⁵¹ Data for years Water Years (October to September) 2000 – 2003 obtained from Los Angeles County Department of Public Works website; data was recorded at Downey Fire Station 107D; refer to <http://ladpw.org/wrd/Precip/index.cfm>

Table 4.2-4
City of Cerritos
Projected Water Supply and Demand
Normal Water Year

(AFY – All projections rounded to nearest 10 AF)

| Water Sources | 2010 | 2015 | 2020 | 2025 | 2030 |
|--|---------------------------|---------------|---------------|---------------|---------------|
| Supply | Normal Water Years | | | | |
| MWD Projected Supply During an Average Year as a % of Demand During an Average Year ^[1] | 130.8 | 126.6 | 133.4 | 125.5 | 118.0 |
| Imported ^[2] | 3,520 | 3,410 | 3,590 | 3,380 | 3,170 |
| Local (Groundwater) ^[3] | 10,020 | 10,020 | 10,020 | 10,020 | 10,020 |
| Recycled ^[4] | 2,300 | 2,300 | 2,400 | 2,400 | 2,400 |
| Total Supply | 15,840 | 15,730 | 16,010 | 15,800 | 15,590 |
| % of Normal Year ^[4] | 100% | 100% | 100% | 100% | 100% |
| Demand | | | | | |
| Recycled Demand^[4] | | | | | |
| Cerritos | 1,850 | 1,850 | 1,850 | 1,850 | 1,850 |
| Lakewood | 450 | 450 | 550 | 550 | 550 |
| Subtotal Recycled Demand | 2,300 | 2,300 | 2,400 | 2,400 | 2,400 |
| Potable Demand^[5] | | | | | |
| GSWC Usage | 1,630 | 1,630 | 1,630 | 1,630 | 1,630 |
| Norwalk Usage | 190 | 190 | 190 | 190 | 190 |
| County Usage | 740 | 740 | 740 | 740 | 740 |
| County Interconnection Usage | 100 | 100 | 100 | 100 | 100 |
| Cerritos Usage | 10,050 | 10,050 | 10,050 | 10,050 | 10,050 |
| Subtotal Potable Demand | 12,710 | 12,710 | 12,710 | 12,710 | 12,710 |
| Import Portion of Potable Demand (21.2%) ^[2] | 2,690 | 2,690 | 2,690 | 2,690 | 2,690 |
| Groundwater Portion of Potable Demand (78.8%) ^[3] | 10,020 | 10,020 | 10,020 | 10,020 | 10,020 |
| Recycled Demand | 2,300 | 2,300 | 2,400 | 2,400 | 2,400 |
| Total Demand | 15,010 | 15,010 | 15,110 | 15,110 | 15,110 |
| % of Year 2005 Demand (13,987 AF) ^[6] | 107.3 | 107.3 | 108.0 | 108.0 | 108.0 |
| Supply/ Demand Difference | 830 | 720 | 900 | 690 | 480 |
| Difference as % of Supply | 5.2 | 4.6 | 5.6 | 4.4 | 3.1 |
| Difference as % of Demand | 5.5 | 4.8 | 6.0 | 4.6 | 3.2 |

[1] From Table 4.2-1, Row I

[2] Imported water supply = (imported water demand) x (MWD Projected Supply Available During an Average Year as a % of Demand During an Average Year (from Table 4.2-1, Row I)); Imported demand = 21.2% of total potable demand based on average import demand over the FY00-FY04 period (FY05 data is not included because it was an extremely wet year with lower than normal demands)

[3] Groundwater supply is assumed to equal demand; groundwater demand = 78.8% of total potable demand based on average groundwater demand over the FY00-FY04 period (FY05 data is not included because it was an extremely wet year with lower than normal demands); City owns 4,600 AF in adjudicated water rights in the Central Basin; additional groundwater will come from short term leases, which is in keeping with recent historical precedent.

[4] Recycled water supplies are assumed to equal demand; recycled water demands are based on average demands for both Cerritos and Lakewood over the FY02 through FY05 period. Lakewood's recycled demands are projected to increase based on data obtained from 2005 Lakewood UWMP which assumes expansion of their recycled water system beginning in 2010.

[5] Potable water breakdown for Golden State Water Company (GSWC), Norwalk and County Water is based on average breakdown for these retailers over the FY00 through FY04 period

[6] 13,987 AF is actual total demand for FY05 (including potable and recycled)

Table 4.2-5
City of Cerritos
Projected Water Supply and Demand
Single Dry Water Year

(AFY – All projections rounded to nearest 10 AF)

| Water Sources | 2010 | 2015 | 2020 | 2025 | 2030 |
|---|---------------------------|---------------|---------------|---------------|---------------|
| Supply | Normal Water Years | | | | |
| MWD Projected Supply During an Average Year as a % of Demand During an Average Year ^[1] | 116.3 | 113.0 | 118.8 | 112.3 | 106.6 |
| MWD Projected Supply Available During a Single Dry Year as a % of Single Dry Year Demand (including surplus) ^[2] | 123.9 | 131.8 | 134.3 | 125.6 | 119.3 |
| Imported ^[3] | 4,360 | 4,490 | 4,820 | 4,250 | 3,780 |
| Local (Groundwater) ^[4] | 10,190 | 10,190 | 10,190 | 10,190 | 10,190 |
| Recycled ^[5] | 2,340 | 2,340 | 2,440 | 2,440 | 2,440 |
| Total Supply | 16,890 | 17,020 | 17,450 | 16,880 | 16,410 |
| % of Normal Year ^[4] | 107% | 108% | 109% | 107% | 105% |
| Demand | | | | | |
| Recycled Demand ^[5] | | | | | |
| Cerritos | 1,880 | 1,880 | 1,880 | 1,880 | 1,880 |
| Lakewood | 460 | 460 | 560 | 560 | 560 |
| Subtotal Recycled Demand | 2,340 | 2,340 | 2,440 | 2,440 | 2,440 |
| Potable Demand ^[6] | | | | | |
| GSWC Usage | 1,660 | 1,660 | 1,660 | 1,660 | 1,660 |
| Norwalk Usage | 190 | 190 | 190 | 190 | 190 |
| County Usage | 750 | 750 | 750 | 750 | 750 |
| County Interconnection Usage | 100 | 100 | 100 | 100 | 100 |
| Cerritos Usage | 10,230 | 10,230 | 10,230 | 10,230 | 10,230 |
| Subtotal Potable Demand | 12,930 | 12,930 | 12,930 | 12,930 | 12,930 |
| Import Portion of Potable Demand (21.2%) ^[7] | 2,740 | 2,740 | 2,740 | 2,740 | 2,740 |
| Groundwater Portion of Potable Demand (78.8%) ^[7] | 10,190 | 10,190 | 10,190 | 10,190 | 10,190 |
| Recycled Demand | 2,340 | 2,340 | 2,440 | 2,440 | 2,440 |
| Total Demand | 15,270 | 15,270 | 15,370 | 15,370 | 15,370 |
| % of Year 2005 Demand (13,987 AF) ^[8] | 109.2 | 109.2 | 109.9 | 109.9 | 109.9 |
| Supply/ Demand Difference | 1,620 | 1,750 | 2,080 | 1,510 | 1,040 |
| Difference as % of Supply | 9.6 | 10.3 | 11.9 | 8.9 | 6.3 |
| Difference as % of Demand | 10.6 | 11.5 | 13.5 | 9.8 | 6.8 |

[1] From Table 4.2-1, Row J

[2] From Table 4.2-1, Row K (includes MWD surplus supplies)

[3] Available Imported supply is estimated to equal MWD's September 2005 Draft RUWMP projected available supplies including surplus supplies = (normal year import supply) x (MWD projected supply as a % of the single dry year demand); Imported demand is projected to be 21.2% of total demand based on average import demand over the FY00-FY04 period (FY05 data is not included because it was an extremely wet year with lower than normal demands)

[4] Groundwater supply is assumed to equal demand; groundwater demand = 101.8% of normal year groundwater demand based on increase in demand experienced in the City during the single dry year 2002 (one of the driest years on record)

[5] Recycled water supplies are assumed to equal demand; recycled water demands = 101.8% of normal year recycled water demand based on overall increase in demand experienced in the City during the single dry year 2002.

[6] All potable water demands are projected to be 101.8% of normal year demands based on based on overall increase in demand experienced in the City during the single dry year 2002.

[7] Import and Groundwater demands are assumed to be 21.2% and 78.8%, respectively, similar to normal years.

[8] 13,987 AF is actual total demand for FY05 (including potable and recycled)

Table 4.2-6
City of Cerritos
Projected Water Supply and Demand
Multiple Dry Water Years 2006-2010

(AFY – All projections rounded to nearest 10 AF)

| Water Sources | 2006 | 2007 | 2008 | 2009 | 2010 |
|---|--------------------|---------------|------------------|---------------|---------------|
| Supply | Normal Year | | Dry Years | | |
| MWD Projected Supply Available During a Multiple Dry Year as a % of Average Supply ^[1] | | | 98.2 | 98.2 | 98.2 |
| Imported ^[2] | 3,610 | 3,590 | 3,090 | 3,280 | 3,460 |
| Local (Groundwater) ^[3] | 10,020 | 10,020 | 10,190 | 9,790 | 10,160 |
| Recycled ^[4] | 2,300 | 2,300 | 2,340 | 2,250 | 2,340 |
| Total Supply | 15,930 | 15,910 | 15,620 | 15,320 | 15,960 |
| % of Normal Year ^[5] | 100% | 100% | 98% | 97% | 101% |
| Demand | | | | | |
| MWD Projected Multiple Dry Year Demand as a % of Normal Year ^[6] | | | 116.5 | 116.5 | 116.5 |
| Recycled Demand ^[4] | | | | | |
| Cerritos | 1,850 | 1,850 | 1,880 | 1,810 | 1,880 |
| Lakewood | 450 | 450 | 460 | 440 | 460 |
| Subtotal Recycled Demand | 2,300 | 2,300 | 2,340 | 2,250 | 2,340 |
| Potable Demand ^[7] | | | | | |
| GSWC Usage | 1,630 | 1,630 | 1,660 | 1,590 | 1,650 |
| Norwalk Usage | 190 | 190 | 190 | 190 | 190 |
| County Usage | 740 | 740 | 750 | 720 | 750 |
| County Interconnection Usage | 100 | 100 | 100 | 100 | 100 |
| Cerritos Usage | 10,050 | 10,050 | 10,230 | 9,820 | 10,200 |
| Subtotal Potable Demand | 12,710 | 12,710 | 12,930 | 12,420 | 12,890 |
| Import Portion of Potable Demand (21.2%) ^[8] | 2,690 | 2,690 | 2,740 | 2,630 | 2,730 |
| Groundwater Portion of Potable Demand (78.8%) ^[8] | 10,020 | 10,020 | 10,190 | 9,790 | 10,160 |
| Recycled Demand | 2,300 | 2,300 | 2,340 | 2,250 | 2,340 |
| Total Demand | 15,010 | 15,010 | 15,270 | 14,670 | 15,230 |
| % of Year 2005 Demand (13,987 AF) ^[9] | 107.3 | 107.3 | 109.2 | 104.9 | 108.9 |
| Supply/ Demand Difference | 920 | 900 | 350 | 650 | 730 |
| Difference as % of Supply | 5.8 | 5.7 | 2.2 | 4.2 | 4.6 |
| Difference as % of Demand | 6.1 | 6.0 | 2.3 | 4.4 | 4.8 |

[1] From Table 4.2-2, Row C

[2] Imported supply = (imported supply interpolated from Table 4.2-4) x (escalation factor from Table 4.2-2, Row C); Imported demand = (21.2% of normal year demand) x (101.8%, 97.7% or 101.5% Year 1, 2 and 3 multiple dry year demand factors determined from historical records for three year dry period occurring in 2002-2004)

[3] Groundwater supply is assumed to equal demand; groundwater demand = 101.8%, 97.7% or 101.5% Year 1, 2 and 3 multiple dry year demand factors determined from historical records for three year dry period occurring in 2002-2004)

[4] Recycled water supply assumed to be equal to recycled water demand. Recycled water demand = (normal year recycled water demand from Table 4.2.4) x 101.8%, 97.7% or 101.5% Year 1, 2 and 3 multiple dry year demand factors).

[5] Interpolated from Table 4.2-4 and average demand data over the period 2000-2004

[6] From Table 4.2-2, Row F; In its September 2005 Draft UWMP Multiple Dry Year Projections, MWD only projected demands for Year 3, therefore Years 1 and 2 are assumed to equal Year 3 demand; percentages are presented only to reflect the fact that the City's demand is well below the factor presented in the table, e.g., 101.8%, 97.7% or 101.5% in Years 1, 2 and 3 compared with MWD's projected demand of 116.5%

[7] Potable water demands are = (normal water year demands interpolated from Table 2.2-4) x (101.8%, 97.7% or 101.5% Year 1, 2 and 3 multiple dry year demand factors).

[8] Import and Groundwater demands are assumed to be 21.2% and 78.8%, respectively, similar to normal years.

[9] 13,987 AF is actual total demand for FY05 (including potable and recycled)

Table 4.2-7
City of Cerritos
Projected Water Supply and Demand
Multiple Dry Water Years 2011-2015
(AFY – All projections rounded to nearest 10 AF)

| Water Sources | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|--------------------|---------------|------------------|---------------|---------------|
| Supply | Normal Year | | Dry Years | | |
| MWD Projected Supply Available During a Multiple Dry Year as a % of Average Supply ^[1] | | | 106.8 | 106.8 | 106.8 |
| Imported ^[2] | 3,500 | 3,480 | 3,690 | 3,670 | 3,640 |
| Local (Groundwater) ^[3] | 10,020 | 10,020 | 10,190 | 9,790 | 10,160 |
| Recycled ^[4] | 2,300 | 2,300 | 2,340 | 2,250 | 2,340 |
| Total Supply | 15,820 | 15,800 | 16,220 | 15,710 | 16,140 |
| % of Normal Year ^[5] | 100% | 100% | 103% | 100% | 103% |
| Demand | | | | | |
| MWD Projected Multiple Dry Year Demand as a % of Normal Year ^[6] | | | 116.4 | 116.4 | 116.4 |
| Recycled Demand^[4] | | | | | |
| Cerritos | 1,850 | 1,850 | 1,880 | 1,810 | 1,880 |
| Lakewood | 450 | 450 | 460 | 440 | 460 |
| Subtotal Recycled Demand | 2,300 | 2,300 | 2,340 | 2,250 | 2,340 |
| Potable Demand^[7] | | | | | |
| GSWC Usage | 1,630 | 1,630 | 1,660 | 1,590 | 1,650 |
| Norwalk Usage | 190 | 190 | 190 | 190 | 190 |
| County Usage | 740 | 740 | 750 | 720 | 750 |
| County Interconnection Usage | 100 | 100 | 100 | 100 | 100 |
| Cerritos Usage | 10,050 | 10,050 | 10,230 | 9,820 | 10,200 |
| Subtotal Potable Demand | 12,710 | 12,710 | 12,930 | 12,420 | 12,890 |
| Import Portion of Potable Demand (21.2%) ^[8] | 2,690 | 2,690 | 2,740 | 2,630 | 2,730 |
| Groundwater Portion of Potable Demand (78.8%) ^[8] | 10,020 | 10,020 | 10,190 | 9,790 | 10,160 |
| Recycled Demand | 2,300 | 2,300 | 2,340 | 2,250 | 2,340 |
| Total Demand | 15,010 | 15,010 | 15,270 | 14,670 | 15,230 |
| % of Year 2005 Demand (13,987 AF) ^[9] | 107.3 | 107.3 | 109.2 | 104.9 | 108.9 |
| Supply/ Demand Difference | 810 | 790 | 950 | 1,040 | 910 |
| Difference as % of Supply | 5.1 | 5.0 | 5.9 | 6.6 | 5.6 |
| Difference as % of Demand | 5.4 | 5.3 | 6.2 | 7.1 | 6.0 |

[1] From Table 4.2-2, Row C

[2] Imported supply = (imported supply interpolated from Table 4.2-4) x (escalation factor from Table 4.2-2, Row C); Imported demand = (21.2% of normal year demand) x (101.8%, 97.7% or 101.5% Year 1, 2 and 3 multiple dry year demand factors determined from historical records for three year dry period occurring in 2002-2004)

[3] Groundwater supply is assumed to equal demand; groundwater demand = 101.8%, 97.7% or 101.5% Year 1, 2 and 3 multiple dry year demand factors determined from historical records for three year dry period occurring in 2002-2004)

[4] Recycled water supply assumed to be equal to recycled water demand. Recycled water demand = (normal year recycled water demand from Table 4.2-4) x 101.8%, 97.7% or 101.5% Year 1, 2 and 3 multiple dry year demand factors).

[5] Interpolated from Table 4.2-4 and average demand data over the period 2000-2004

[6] From Table 4.2-2, Row F; In its September 2005 Draft UWMP Multiple Dry Year Projections, MWD only projected demands for Year 3, therefore Years 1 and 2 are assumed to equal Year 3 demand; percentages are presented only to reflect the fact that the City's demand is well below the factor presented in the table, e.g., 101.8%, 97.7% or 101.5% in Years 1, 2 and 3 compared with MWD's projected demand of 116.4%

[7] Potable water demands are = (normal water year demands interpolated from Table 2.2-4) x (101.8%, 97.7% or 101.5% Year 1, 2 and 3 multiple dry year demand factors).

[8] Import and Groundwater demands are assumed to be 21.2% and 78.8%, respectively, similar to normal years.

[9] 13,987 AF is actual total demand for FY05 (including potable and recycled)

Table 4.2-8
City of Cerritos
Projected Water Supply and Demand
Multiple Dry Water Years 2016-2020

(AFY – All projections rounded to nearest 10 AF)

| Water Sources | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|--------------------|---------------|------------------|---------------|---------------|
| Supply | Normal Year | | Dry Years | | |
| MWD Projected Supply Available During a Multiple Dry Year as a % of Average Supply ^[1] | | | 103.3 | 103.3 | 103.3 |
| Imported ^[2] | 3,450 | 3,480 | 3,630 | 3,670 | 3,710 |
| Local (Groundwater) ^[3] | 10,020 | 10,020 | 10,190 | 9,790 | 10,160 |
| Recycled ^[4] | 2,320 | 2,340 | 2,360 | 2,270 | 2,360 |
| Total Supply | 15,790 | 15,840 | 16,180 | 15,730 | 16,230 |
| % of Normal Year ^[5] | 100% | 100% | 102% | 99% | 101% |
| Demand | | | | | |
| MWD Projected Multiple Dry Year Demand as a % of Normal Year ^[6] | | | 116.5 | 116.5 | 116.5 |
| Recycled Demand ^[4] | | | | | |
| Cerritos | 1,850 | 1,850 | 1,880 | 1,810 | 1,880 |
| Lakewood | 470 | 490 | 480 | 460 | 480 |
| Subtotal Recycled Demand | 2,320 | 2,340 | 2,360 | 2,270 | 2,360 |
| Potable Demand ^[7] | | | | | |
| GSWC Usage | 1,630 | 1,630 | 1,660 | 1,590 | 1,650 |
| Norwalk Usage | 190 | 190 | 190 | 190 | 190 |
| County Usage | 740 | 740 | 750 | 720 | 750 |
| County Interconnection Usage | 100 | 100 | 100 | 100 | 100 |
| Cerritos Usage | 10,050 | 10,050 | 10,230 | 9,820 | 10,200 |
| Subtotal Potable Demand | 12,710 | 12,710 | 12,930 | 12,420 | 12,890 |
| Import Portion of Potable Demand (21.2%) ^[8] | 2,690 | 2,690 | 2,740 | 2,630 | 2,730 |
| Groundwater Portion of Potable Demand (78.8%) ^[8] | 10,020 | 10,020 | 10,190 | 9,790 | 10,160 |
| Recycled Demand | 2,320 | 2,340 | 2,360 | 2,270 | 2,360 |
| Total Demand | 15,030 | 15,050 | 15,290 | 14,690 | 15,250 |
| % of Year 2005 Demand (13,987 AF) ^[9] | 107.5 | 107.6 | 109.3 | 105.0 | 109.0 |
| Supply/ Demand Difference | 760 | 790 | 890 | 1,040 | 980 |
| Difference as % of Supply | 4.8 | 5.0 | 5.5 | 6.6 | 6.0 |
| Difference as % of Demand | 5.1 | 5.2 | 5.8 | 7.1 | 6.4 |

[1] From Table 4.2-2, Row C

[2] Imported supply = (imported supply interpolated from Table 4.2-4) x (escalation factor from Table 4.2-2, Row C); Imported demand = (21.2% of normal year demand) x (101.8%, 97.7% or 101.5% Year 1, 2 and 3 multiple dry year demand factors determined from historical records for three year dry period occurring in 2002-2004)

[3] Groundwater supply is assumed to equal demand; groundwater demand = 101.8%, 97.7% or 101.5% Year 1, 2 and 3 multiple dry year demand factors determined from historical records for three year dry period occurring in 2002-2004)

[4] Recycled water supply assumed to be equal to recycled water demand. Recycled water demand = (normal year recycled water demand from Table 4.2.4) x 101.8%, 97.7% or 101.5% Year 1, 2 and 3 multiple dry year demand factors).

[5] Interpolated from Table 4.2-4 and average demand data over the period 2000-2004

[6] From Table 4.2-2, Row F; In its September 2005 Draft UWMP Multiple Dry Year Projections, MWD only projected demands for Year 3, therefore Years 1 and 2 are assumed to equal Year 3 demand; percentages are presented only to reflect the fact that the City's demand is well below the factor presented in the table, e.g., 101.8%, 97.7% or 101.5% in Years 1, 2 and 3 compared with MWD's projected demand of 116.5%

[7] Potable water demands are = (normal water year demands interpolated from Table 2.2-4) x (101.8%, 97.7% or 101.5% Year 1, 2 and 3 multiple dry year demand factors).

[8] Import and Groundwater demands are assumed to be 21.2% and 78.8%, respectively, similar to normal years.

[9] 13,987 AF is actual total demand for FY05 (including potable and recycled)

Table 4.2-9
City of Cerritos
Projected Water Supply and Demand
Multiple Dry Water Years 2021-2025

(AFY – All projections rounded to nearest 10 AF)

| Water Sources | 2021 | 2022 | 2023 | 2024 | 2025 |
|---|--------------------|---------------|------------------|---------------|---------------|
| Supply | Normal Year | | Dry Years | | |
| MWD Projected Supply Available During a Multiple Dry Year as a % of Average Supply ^[1] | | | 102.4 | 102.4 | 102.4 |
| Imported ^[2] | 3,550 | 3,510 | 3,550 | 3,500 | 3,460 |
| Local (Groundwater) ^[3] | 10,020 | 10,020 | 10,190 | 9,790 | 10,160 |
| Recycled ^[4] | 2,400 | 2,400 | 2,440 | 2,350 | 2,440 |
| Total Supply | 15,970 | 15,930 | 16,180 | 15,640 | 16,060 |
| % of Normal Year ^[5] | 100% | 100% | 102% | 99% | 102% |
| Demand | | | | | |
| MWD Projected Multiple Dry Year Demand as a % of Normal Year ^[6] | | | 116.0 | 116.0 | 116.0 |
| Recycled Demand ^[4] | | | | | |
| Cerritos | 1,850 | 1,850 | 1,880 | 1,810 | 1,880 |
| Lakewood | 550 | 550 | 560 | 540 | 560 |
| Subtotal Recycled Demand | 2,400 | 2,400 | 2,440 | 2,350 | 2,440 |
| Potable Demand ^[7] | | | | | |
| GSWC Usage | 1,630 | 1,630 | 1,660 | 1,590 | 1,650 |
| Norwalk Usage | 190 | 190 | 190 | 190 | 190 |
| County Usage | 740 | 740 | 750 | 720 | 750 |
| County Interconnection Usage | 100 | 100 | 100 | 100 | 100 |
| Cerritos Usage | 10,050 | 10,050 | 10,230 | 9,820 | 10,200 |
| Subtotal Potable Demand | 12,710 | 12,710 | 12,930 | 12,420 | 12,890 |
| Import Portion of Potable Demand (21.2%) ^[8] | 2,690 | 2,690 | 2,740 | 2,630 | 2,730 |
| Groundwater Portion of Potable Demand (78.8%) ^[8] | 10,020 | 10,020 | 10,190 | 9,790 | 10,160 |
| Recycled Demand | 2,400 | 2,400 | 2,440 | 2,350 | 2,440 |
| Total Demand | 15,110 | 15,110 | 15,370 | 14,770 | 15,330 |
| % of Year 2005 Demand (13,987 AF) ^[9] | 108.0 | 108.0 | 109.9 | 105.6 | 109.6 |
| Supply/ Demand Difference | 860 | 820 | 810 | 870 | 730 |
| Difference as % of Supply | 5.4 | 5.1 | 5.0 | 5.6 | 4.5 |
| Difference as % of Demand | 5.7 | 5.4 | 5.3 | 5.9 | 4.8 |

[1] From Table 4.2-2, Row C

[2] Imported supply = (imported supply interpolated from Table 4.2-4) x (escalation factor from Table 4.2-2, Row C); Imported demand = (21.2% of normal year demand) x (101.8%, 97.7% or 101.5% Year 1, 2 and 3 multiple dry year demand factors determined from historical records for three year dry period occurring in 2002-2004)

[3] Groundwater supply is assumed to equal demand; groundwater demand = 101.8%, 97.7% or 101.5% Year 1, 2 and 3 multiple dry year demand factors determined from historical records for three year dry period occurring in 2002-2004)

[4] Recycled water supply assumed to be equal to recycled water demand. Recycled water demand = (normal year recycled water demand from Table 4.2.4) x 101.8%, 97.7% or 101.5% Year 1, 2 and 3 multiple dry year demand factors).

[5] Interpolated from Table 4.2-4 and average demand data over the period 2000-2004

[6] From Table 4.2-2, Row F; In its September 2005 Draft UWMP Multiple Dry Year Projections, MWD only projected demands for Year 3, therefore Years 1 and 2 are assumed to equal Year 3 demand; percentages are presented only to reflect the fact that the City's demand is well below the factor presented in the table, e.g., 101.8%, 97.7% or 101.5% in Years 1, 2 and 3 compared with MWD's projected demand of 116.0%

[7] Potable water demands are = (normal water year demands interpolated from Table 2.2-4) x (101.8%, 97.7% or 101.5% Year 1, 2 and 3 multiple dry year demand factors).

[8] Import and Groundwater demands are assumed to be 21.2% and 78.8%, respectively, similar to normal years.

[9] 13,987 AF is actual total demand for FY05 (including potable and recycled)

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

| Water Sources | 2026 | 2027 | 2028 | 2029 | 2030 |
|---|--------------------|---------------|------------------|---------------|---------------|
| Supply | Normal Year | | Dry Years | | |
| MWD Projected Supply Available During a Multiple Dry Year as a % of Average Supply ^[1] | | | 102.4 | 102.4 | 102.4 |
| Imported ^[2] | 3,340 | 3,300 | 3,330 | 3,290 | 3,250 |
| Local (Groundwater) ^[3] | 10,020 | 10,020 | 10,190 | 9,790 | 10,160 |
| Recycled ^[4] | 2,400 | 2,400 | 2,440 | 2,350 | 2,440 |
| Total Supply | 15,760 | 15,720 | 15,960 | 15,430 | 15,850 |
| % of Normal Year ^[5] | 100% | 100% | 102% | 99% | 102% |
| Demand | | | | | |
| MWD Projected Multiple Dry Year Demand as a % of Normal Year ^[6] | | | 115.0 | 115.0 | 115.0 |
| Recycled Demand^[4] | | | | | |
| Cerritos | 1,850 | 1,850 | 1,880 | 1,810 | 1,880 |
| Lakewood | 550 | 550 | 560 | 540 | 560 |
| Subtotal Recycled Demand | 2,400 | 2,400 | 2,440 | 2,350 | 2,440 |
| Potable Demand^[7] | | | | | |
| GSWC Usage | 1,630 | 1,630 | 1,660 | 1,590 | 1,650 |
| Norwalk Usage | 190 | 190 | 190 | 190 | 190 |
| County Usage | 740 | 740 | 750 | 720 | 750 |
| County Interconnection Usage | 100 | 100 | 100 | 100 | 100 |
| Cerritos Usage | 10,050 | 10,050 | 10,230 | 9,820 | 10,200 |
| Subtotal Potable Demand | 12,710 | 12,710 | 12,930 | 12,420 | 12,890 |
| Import Portion of Potable Demand (21.2%) ^[8] | 2,690 | 2,690 | 2,740 | 2,630 | 2,730 |
| Groundwater Portion of Potable Demand (78.8%) ^[8] | 10,020 | 10,020 | 10,190 | 9,790 | 10,160 |
| Recycled Demand | 2,400 | 2,400 | 2,440 | 2,350 | 2,440 |
| Total Demand | 15,110 | 15,110 | 15,370 | 14,770 | 15,330 |
| % of Year 2005 Demand (13,987 AF) ^[9] | 108.0 | 108.0 | 109.9 | 105.6 | 109.6 |
| Supply/ Demand Difference | 650 | 610 | 590 | 660 | 520 |
| Difference as % of Supply | 4.1 | 3.9 | 3.7 | 4.3 | 3.3 |
| Difference as % of Demand | 4.3 | 4.0 | 3.8 | 4.5 | 3.4 |

[1] From Table 4.2-2, Row C

[2] Imported supply = (imported supply interpolated from Table 4.2-4) x (escalation factor from Table 4.2-2, Row C); Imported demand = (21.2% of normal year demand) x (101.8%, 97.7% or 101.5% Year 1, 2 and 3 multiple dry year demand factors determined from historical records for three year dry period occurring in 2002-2004)

[3] Groundwater supply is assumed to equal demand; groundwater demand = 101.8%, 97.7% or 101.5% Year 1, 2 and 3 multiple dry year demand factors determined from historical records for three year dry period occurring in 2002-2004)

[4] Recycled water supply assumed to be equal to recycled water demand. Recycled water demand = (normal year recycled water demand from Table 4.2-4) x 101.8%, 97.7% or 101.5% Year 1, 2 and 3 multiple dry year demand factors).

[5] Interpolated from Table 4.2-4 and average demand data over the period 2000-2004

[6] From Table 4.2-2, Row F; In its September 2005 Draft UWMP Multiple Dry Year Projections, MWD only projected demands for Year 3, therefore Years 1 and 2 are assumed to equal Year 3 demand; percentages are presented only to reflect the fact that the City's demand is well below the factor presented in the table, e.g., 101.8%, 97.7% or 101.5% in Years 1, 2 and 3 compared with MWD's projected demand of 115.0%

[7] Potable water demands are = (normal water year demands interpolated from Table 2.2-4) x (101.8%, 97.7% or 101.5% Year 1, 2 and 3 multiple dry year demand factors).

[8] Import and Groundwater demands are assumed to be 21.2% and 78.8%, respectively, similar to normal years.

[9] 13,987 AF is actual total demand for FY05 (including potable and recycled)

4.3 VULNERABILITY OF SUPPLY FOR SEASONAL OR CLIMATIC SHORTAGE

As presented in Section 1, the City of Cerritos is situated in a semi-arid environment. Climatological data in California has been recorded since the year 1858. During the twentieth century, California has experienced three periods of severe drought: 1928-34, 1976-77 and 1987-91. The year 1977 is considered to be the driest year of record in the Four Rivers Basin by DWR. These rivers flow into the San Francisco Bay Delta and are the source of water for the SWP. Southern California sustained few adverse impacts from the 1976-77 drought, due in large part to the availability of Colorado River water and groundwater stored in the basin. Flows in the Colorado River are also impacted by climatic changes. From 2000 to 2004, the average annual flows from the Colorado River Basin have been the lowest experienced since 1906. Because the SWP is Metropolitan's largest and most variable supply, Metropolitan utilize the hydrologic conditions of the SWP for its drought analyses and determination of dry years.

It's likely that the City is vulnerable to water shortages from higher than normal water demands due to extensive droughts. While the data in Tables 4.2-5 through 4.2-10 identify water availability during single and multiple dry year scenarios, response to a future drought may require Metropolitan's implementation of the water use efficiency mandates of its Water Surplus and Drought Management (WSDM) Plan, along with implementation of the appropriate stage of the City's Emergency Water Conservation Plan. These programs are more specifically discussed in Section 7.

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

4.4.1 City of Cerritos Projects

The City continually reviews practices that will provide its customers with adequate and reliable supplies. Trained staff ensures the water is safe and the supply will meet present and future needs in an environmentally and economically responsible manner. The City coordinates its long-term and water shortage planning with CBMWD and WRD. The reliability of the City's water supply is dependent on the reliability of both groundwater and imported water supplies, managed by WRD and Metropolitan, respectively.

The City projects water demands within its service area could remain relatively constant over the next 20 years due to minimal growth combined with water use efficiency measures and the use of recycled water. Water use efficiency measures described in Section 6 and recycled water use described in Section 8 of this Plan have the potential to reduce overall demand on potable water. Any new water supply sources will be to replace or upgrade insufficient wells rather than to support population growth and new development. The projects that have been identified to improve the City's water supply reliability and enhance the operations of the City's facilities include the following:

- Structural upgrades to the City’s three reservoirs (2007 – 2009)
- Replacement of the building at well C-1 to house a chlorine containment system (2006)
- Remodel well site C-2 to house a chlorine containment system (2007)
- Implementation of construction projects related to the National Pollutant Discharge Elimination System (NPDES) Municipal Storm Water Permit (2006 – 2009)

The City will also complete the construction of a new supply well, C-5 in 2006. This well will be used for peak summer demands and allow the City to lease additional groundwater rights from the Basin thus reducing the demand on imported water. The capacity of the well is anticipated to be 2,200 gpm. Table 4.4.1-1 summarizes the capacity of the well during normal, single-dry, and multiple-dry years.

Table 4.4.1-1
City of Cerritos Future Water Supply Projects
(AF)

| Project Name | Normal-year | Single-year | Multiple-Dry Years | | |
|--------------|-------------|-------------|--------------------|--------|--------|
| | | | Year 1 | Year 2 | Year 3 |
| Well C-5 | 3,550 | 3,550 | 3,550 | 3,550 | 3,550 |

Note: Well C-5 will add capacity to the City; however, the City is limited to its adjudicated water rights and therefore the well is not necessarily new water unless the City acquires groundwater rights from others in the Basin.

4.4.2 Regional Agency Projects

Since the City purchases imported water through Metropolitan’s member agency CBMWD, the projects implemented by Metropolitan and CBMWD to secure their water supplies have a direct effect on the City. In addition, WRD’s planned projects and programs for groundwater will also impact the City.

Metropolitan Water District of Southern California (Metropolitan)

Metropolitan is implementing alternative water supply strategies for the region and on behalf of their member agencies to ensure available water in the future. Some of the strategies identified in Metropolitan’s 2005 UWMP include:

- Conservation
- Water recycling and groundwater recovery
- Storage and groundwater management programs within the Southern California region
- Storage programs related to the SWP and the Colorado River
- Other water supply management programs outside of the region

Metropolitan has made investments in conservation, water recycling, storage, and supply that are all part of Metropolitan's long-term water management strategy. Metropolitan's approach to a long-term water management strategy is to develop an Integrated Resource Plan that depended on many sources of supply. Metropolitan's implementation approach for achieving the goals of the Integrated Resource Plan Update is summarized in Table 4.4.2-1. A comprehensive description of Metropolitan's implementation approach is contained in their 2003 report on Metropolitan water supplies "A Blueprint for Water Reliability" as well as their 2005 Regional Urban Water Management Plan. A brief description of the various programs implemented by Metropolitan is provided in Table 4.4.2-1.

**Table 4.4.2-1
Metropolitan Integrated Resource Plan Update Resources Status**

| Target | Programs and Status |
|---|---|
| <ul style="list-style-type: none"> • Conservation | <p>Current</p> <ul style="list-style-type: none"> - Conservation Credits Program - Residential; Non-residential Landscape Water Use Efficiency; Commercial, Industrial, and Institutional Programs - Grant Programs <p>In Development or Identified</p> <ul style="list-style-type: none"> - Innovative Conservation Program |
| <ul style="list-style-type: none"> • Recycling • GW Recovery • Desalination | <p>Current</p> <ul style="list-style-type: none"> - LRP Program <p>In Development or Identified</p> <ul style="list-style-type: none"> - Additional LRP Requests for Proposals - Seawater Desalination Program - Innovative Supply Program |
| <ul style="list-style-type: none"> • In Region Dry-Year Surface Water Storage | <p>Current</p> <ul style="list-style-type: none"> - Diamond Valley Reservoir, Lake Mathews, Lake Skinner - SWP Terminal Reservoirs (Monterey Agreement) |
| <ul style="list-style-type: none"> • In Region Groundwater Conjunctive Use | <p>Current</p> <ul style="list-style-type: none"> - North Las Posas (Eastern Ventura County) - Cyclic Storage - Replenishment Deliveries - Proposition 13 Programs (short listed) <p>In Development or Identified</p> <ul style="list-style-type: none"> - Raymond Basin GSP - Proposition 13 Programs (wait listed) - Expanding existing programs - New groundwater storage programs |
| <ul style="list-style-type: none"> • State Water Project | <p>Current</p> <ul style="list-style-type: none"> - SWP Deliveries - San Luis Carryover Storage (Monterey Agreement) - SWP Call Back with DWCV Table A transfer <p>In Development or Identified</p> <ul style="list-style-type: none"> - Sacramento Valley Water Management Agreement - CALFED Delta Improvement Program (Phase 8 Agreement) |

| Target | Programs and Status |
|---|--|
| <ul style="list-style-type: none"> • Colorado River Aqueduct | <p>Current</p> <ul style="list-style-type: none"> - Base Apportionment - IID/Metropolitan Conservation Program - Coachella and All American Canal Lining Programs - PVID Land Management Program <p>In Development or Identified</p> <ul style="list-style-type: none"> - Lower Coachella Storage Program - Hayfield Storage Program - Chuckwalla Storage Program - Storage in Lake Mead |
| <ul style="list-style-type: none"> • CVP/SWP Storage and Transfers • Spot Transfers and Options | <p>Current</p> <ul style="list-style-type: none"> - Arvin Edison Program - Semitropic Program - San Bernardino Valley Municipal Water District Program - Kern Delta Program <p>In Development or Identified</p> <ul style="list-style-type: none"> - Mojave Storage Program - Other Central Valley Transfer Programs |

Conservation Target

Metropolitan’s conservation policies and practices are shaped by Metropolitan’s Integrated Resource Plan and the California Urban Water Conservation Council *Memorandum of Understanding Regarding Water Conservation in California*.

Recycled Water, Groundwater Recover, and Desalination Target

Metropolitan supports the use of alternative water supplies such as recycled water and degraded groundwater when there is a regional benefit to offset imported water supplies. Currently 355,000 AF of recycled water is permitted for use within Metropolitan service area. Metropolitan estimates that an additional 480,000 AF per year of new recycled water could be developed and used by 2025 with an additional 130,000 AF per year by 2050. Approximately 30 percent of the recycled water use within Metropolitan’s service area is for groundwater replenishment and seawater barriers. In the future it is anticipated that up to 90 percent of all water used for seawater barriers will be recycled water.

Metropolitan recognizes the importance of member agencies developing local supplies and has implemented several programs to provide financial assistance. Metropolitan’s incentive programs include:

- **Competitive LRP:** Supports the development of cost-effective water recycling and groundwater recovery projects that reduce demands for imported supplies.
 - » According to Metropolitan’s 2005 Regional UWMP, thirteen projects were selected in 2004 for implementation under the Competitive LRP. None of the projects are within the City’s service area or in CBMWD’s service area.

- **Seawater Desalination Program (SDP):** Supports the development of seawater desalination within Metropolitan's service area.
 - » Metropolitan initiated the SDP in 2001. According to Metropolitan's 2005 UWMP, five member agencies have submitted proposals for about 126,000 AF per year of desalinated seawater: San Diego County Water Authority, Long Beach Water Department, Los Angeles Department of Water and Power, West Basin Municipal Water District (WBMWD), and the Municipal Water District of Orange County. The Metropolitan Board has directed Metropolitan staff to develop contracts to pursue projects proposed under this program.
- **Innovative Supply Program:** Encourages investigations into alternative approaches to increasing the region's water supply.
 - » Under the Innovative Supply Program, Metropolitan selected 10 projects for grant funding. Proposals included harvesting storm runoff, onsite recycling, and desalination. The project findings will be presented to member agencies in 2006.

Regional Groundwater Conjunctive Use Target

Other programs within Metropolitan to maximize water supplies include storage and groundwater management programs. The Integrated Resource Plan Update identified the need for dry-year storage within surface water reservoirs and the need for groundwater storage. In 2002, Diamond Valley Lake reached its full storage capacity of 800,000 AF. Approximately 400,000 AF are dedicated for dry-year storage. Metropolitan has developed a number of local programs to increase storage in the groundwater basins. The programs include:

- **North Las Posas** – In 1995, Metropolitan and Calleguas Municipal Water District developed facilities for groundwater storage and extraction from the North Las Posas Basin. Metropolitan has the right to store up to 210,000 AF of water. The wellfields are expected to be fully operational in 2007 with Phases I and II already complete. It is expected the North Las Posas program will yield 47,000 AF of groundwater from the basin each year.
- **Proposition 13 Projects** – In 2000, DWR selected Metropolitan to receive financial funding to help fund the Southern California Water Supply Reliability Projects Program. Although outside the City, the program coordinates eight conjunctive use projects with a total storage capacity of 195,000 AF and a dry-year yield of 65,000 AF per year. CBMWD is sponsoring two of the projects with the City of Long Beach and together the projects have a storage capacity of 16,600 AF.
- **Raymond Basin** – In January 2000, Metropolitan entered into agreements with the City of Pasadena and Foothill Municipal Water District to implement a groundwater storage program that is anticipated to yield 22,000 AF per year by 2010.

- **Other Programs** – Metropolitan intends to expand the conjunctive use programs to add another 80,000 AF to groundwater storage. Other basins in the area are being evaluated for possible conjunctive use projects.

State Water Project Target

The major actions Metropolitan is completing to improve SWP reliability include the following:

- **Delta Improvements Package** – The actions outlined in this package are related to water project operations in the Delta. The actions are designed to allow the SWP to operate the Banks Pumping Plant in the Delta at 8,500 CFS. Currently Banks Pumping Plant operates at 6,680 CFS. Metropolitan anticipates that increased diversions from the Delta will result in an increase of 130,000 AF per year that will be available for groundwater and surface water storage.
- **Phase 8 Settlement** – This agreement includes various recommended water supply projects that meet demand and water quality objectives within the Sacramento Valley. The various conjunctive use projects will yield approximately 185,000 AF per year in the Sacramento Valley of which approximately 55,000 AF would be available to Metropolitan through its SWP allocation.
- **Monterey Amendment** – The Monterey Amendment enables Metropolitan to use a portion of the San Luis Reservoir’s capacity for carryover storage. This will increase SWP delivery to Metropolitan by 93,000 to 285,000 AF depending on supply conditions.
- **SWP Terminal Storage** – Metropolitan has water rights for storage at Lake Perris and Castaic Lake. The storage provides Metropolitan with options for managing SWP deliveries and store up to 73,000 to 219,000 AF of carryover water.
- **Desert Water Agency/Coachella Valley Water District (DWCV) SWP Table A Transfer** – This transfer to DWCV includes 100,000 AF of Metropolitan SWP Table A amount in exchange for other rights such as its full carryover amounts in San Luis and full use of flexible storage in Castaic and Perris Reservoirs. It is anticipated that the call-back provision of the entitlement transfer can provide between 5,000 and 26,000 AF of water depending on the water year.
- **Desert Water Agency/Coachella Valley Water District (DWCV) Advance Delivery Program** – Under this program Metropolitan delivers Colorado River water to the DWCV in exchange for their SWP Contract Table A allocations. Metropolitan can expect increases in SWP Table A deliveries of 6,000 to 18,000 AF depending on the water year.

Colorado River Aqueduct Target

Metropolitan also receives imported water from the CRA. Metropolitan, IID, and Coachella Valley Water District executed the QSA in October 2003. The QSA established the baseline water use for each agency and facilitated the transfer agricultural

water to urban uses. A number of programs have been identified to assist Metropolitan meet their target goal of 1.2 MAF per year from the CRA. These programs include:

- **Coachella and All-American Canal Lining Project** – The Coachella Canal Lining Project, as proposed, is anticipated to be completed in January 2007 and is expected to conserve 26,000 AFY. The All-American Canal Lining Project, as proposed, is anticipated to be completed in 2008 and is expected to conserve 67,700 AFY. The conserved water will be made available in Lake Havasu for diversion from Metropolitan. In exchange, Metropolitan will supply a like amount to the San Luis Rey Settlement Parties and San Diego County Water Authority.
- **IID/San Diego County Water Authority Transfer** – IID has agreed to implement a conservation program and transfer water to San Diego County Water Authority. The transfer began in 2003 with 10,000 AF and will increase yearly until 2023 where the transfer will be 200,000 AF annually. Water will be conserved through land fallowing and irrigation efficiency measures. Metropolitan will supply the water conserved to San Diego County Water Authority in exchange for a like amount out of Lake Havasu.
- **IID/Metropolitan Conservation Program** – The program originally provided funding from Metropolitan to implement water efficiency improvements within IID. Metropolitan in turn would reserve the right to divert the water conserved by those investments. Execution of the QSA extended the term of the program to 2078 and guaranteed Metropolitan at least 80,000 AF per year.
- **Palo Verde Land Management and Crop Rotation Program** – This program offers financial incentives to farmers with Palo Verde Irrigation District to not irrigate a portion of their land. A maximum of 29 percent of lands within Palo Verde Irrigation District can be fallowed in any year. The water conserved will be available to Metropolitan with a maximum of 111,000 AF per year expected.
- **Hayfield Groundwater Storage Program** – Metropolitan will divert Colorado River water and store it in the Hayfield Groundwater Basin in east Riverside County. Currently there is 73,000 AF of water in storage. Metropolitan expects the program to eventually develop a storage capacity of approximately 500,000 AF.
- **Chuckwalla Groundwater Storage Program** – Metropolitan proposes to store water when available in the Upper Chuckwalla Groundwater Basin for future delivery to Metropolitan.
- **Lower Coachella Valley Groundwater Storage Program** – Metropolitan, Coachella Valley Water District, and the Desert Water Agency are investigating the feasibility of a conjunctive use program in the Lower Coachella Groundwater Basin. The basin has the potential to store 500,000 AF of groundwater for Metropolitan.
- **Salton Sea Restoration Transfer** – A transfer of up to 1.6 MAF would be conserved by IID and made available to Metropolitan. The proceeds from the DWR transfer would be placed in the Salton Sea Restoration Fund.

- **Lake Mead Storage** – Metropolitan is exploring options for storing water in Lake Mead.

Central Valley Project / State Water Project Storage and Transfers Target

Metropolitan has focused on voluntary short and long-term transfer and storage programs with CVP and other SWP contractors. Currently, Metropolitan has enough transfer and storage programs to meet their 2010 target goal of 300,000 AF. Metropolitan has four CVP/SWP transfer and storage programs in place for a total of 317,000 AF of dry-year supply. Metropolitan is also pursuing a new storage program with Mojave Water Agency and continues to pursue Central Valley water transfers on an as needed basis. The operational programs include:

- Semitropic – 107,000 AF dry-year supply
- Arvin-Edison – 90,000 AF dry-year supply
- San Bernardino Valley Municipal Water District – 70,000 AF dry-year supply
- Kern Delta Water District – 50,000 AF dry-year supply
- Mojave Storage Program – 35,000 AF dry-year supply
- Central Valley Transfer Program – 160,000 AF dry-year supply

Water Replenishment District of Southern California (WRD)

WRD is dedicated to maintaining a reliable groundwater supply for those users of the basin. WRD has identified reliability measures to help mitigate water shortages or increase water supply, including the following:

- **Leo J. Vander Lans Water Treatment Facility Project (formerly known as the Alamitos Barrier Recycled Water Project)** – WRD recently completed the construction of this facility that will provide advanced treatment of recycled water for injection at the Alamitos Seawater Intrusion Barrier. The water from this facility will replace approximately 3,000 AF of imported water each year.
- **Caltrans Highway 105 Dewatering Project** – Caltrans owns and operates 13 extraction wells along Interstate 105 for dewatering purposes. The wells produce approximately 2,000 AF of water that if treated could be put to beneficial use instead of discharging to the Los Angeles River for disposal to the ocean. The project would treat the groundwater for injection at the Dominguez Gap Barrier located in the West Coast groundwater basin. This project is in the feasibility stage.
- **Conjunctive Use/Storage Project** – In 2003, the Conjunctive Use Working Group was created to address issues related to storing water within the Central and West Coast Groundwater Basins. The group included WRD, CBMWD, WBMWD, DWR as the Watermaster, LA County Department of Public Works, Central and West Basin Water Associations, and several large groundwater producers within both groundwater basins. The group recognized that there is

potential to store water within the Basin; however, there are differences in opinion on how the stored water should be managed and accessed.⁵² The group continues to meet and it is anticipated resolution on some of the major issues will occur in the near future.

- **Alamitos Barrier Deep Soil Mixing Pilot Study (Physical Barrier Project)** – This project would create a physical barrier at Alamitos Gap to replace the seawater injection barrier operations. The barrier would be a deep soil-slurry mix. Phase I has been completed which determined the site is feasible for such a project. If the project moves forward, Phase II will be implemented and a pilot study conducted.

Central Basin Municipal Water District (CBMWD)

The projects identified in CBMWD's fiscal year budget for 2005/2006 include improvements to their recycled water system, a new reservoir, and the Southeast Water Reliability Project. This project will supply recycled water to users in the northern part of CBMWD's service area. The project is expected to be online in 2009 and serve an additional 5,600 AFY of recycled water.

CBMWD is also actively involved in conjunctive use programs for the Central groundwater basin. Conjunctive use programs are designed to coordinate the management of surface water and groundwater supplies. Conjunctive use increases total available water supplies, and enhances water supply reliability. Because the Basin is adjudicated, DWR has determined that stored water above the pumping allocation has no legal standing under the Central Basin Judgment. The conjunctive use plan proposed for the Basin, which requires court approval, would allow for conjunctive use water storage and recovery programs. The exact amount of water available to any groundwater producer through such a storage program is undetermined at this time. However, preliminary projections of total storage space available may be equal to or exceed the allowable extraction under the Judgment.

4.5 EXCHANGE OR TRANSFER OPPORTUNITIES

In addition to the 4,680 AF of groundwater rights the City owns, it often enters into lease agreements with other pumpers for additional groundwater supplies. These leases are on a short-term basis and the City takes advantage of them if they are made available. Outside of groundwater leases, the City has not entered into any agreements for the transfer or exchange of water. However, Metropolitan and WRD are exploring options that would benefit the region. These exchanges were discussed earlier under proposed projects for the region.

⁵² WRD, Engineering Survey and Report, March 2005

4.6 DESALINATED WATER OPPORTUNITIES

Desalination is viewed as a way to develop a local, reliable source of water that assists agencies reduce their demand on imported water, reduce groundwater overdraft, and in some cases make unusable groundwater available for municipal uses. Currently, there are no identified City projects for desalination of seawater, given that the City is located at a distance from the ocean. Additionally there are no identified projects for impaired groundwater, since the City has been fortunate to have exceptionally good groundwater resources in the past and does not anticipate any changes because of the continued efforts of the City, WRD, CBMWD, and Metropolitan. However, from a regional perspective, desalination projects within the region benefit the City. The following presents regional activities to advance desalinated water projects.

Department of Water Resources Desalination Task Force

Assembly Bill 2717 called for DWR to establish a Desalination Task Force to evaluate the following: 1) Potential opportunities for desalination of seawater and brackish water in California, 2) Impediments to using desalination technology, and 3) the role of the State in furthering the use of desalination.⁵³ The task force was comprised of 27 organizations and in October 2003 the task force provided a list of recommendations related to the following issues: general, energy, environment, planning, and permitting. The list of recommendations can be found at DWR's water use efficiency website, www.owue.water.ca.gov/recycle/index.cfm.

Metropolitan's Seawater Desalination Program

In August 2001, Metropolitan launched its Seawater Desalination Program. The program objectives were to provide financial and technical support for the development of cost-effective seawater desalination projects that will contribute to greater water supply reliability. Metropolitan's IRP Update includes a target of 150,000 AFY for seawater desalination projects to meet future demands. A call for proposals under the SDP produced five projects by member agencies including the Los Angeles Department of Water and Power, Long Beach Water Department, MWDOC, San Diego County Water Authority, and WBMWD. Collectively, the projects could produce approximately 126,000 AFY. This additional source of water supply would provide greater water reliability for Southern California residents.

Metropolitan has also provided funding to five member agencies to research specific aspects of seawater desalination. The agencies are reviewing and assessing treatment technologies, pretreatment alternatives, brine disposal, permitting, and regulatory approvals associated with delivery of desalinated water to the local distribution system.⁵⁴ Metropolitan continues to work with its member agencies to develop local projects, inform decision makers about the role of desalinated seawater on future supplies, and secure funding from various state and federal programs.

⁵³ DWR, California Water Plan Update 2005, Volume 2 – Resource Management Strategies

⁵⁴ Metropolitan Water District of Southern California, Regional UWMP, 2005

Department of Water Resources Proposition 50 Funding

In January 2005, DWR received 42 eligible applications requesting \$71.3 million from funds available through Proposition 50. Proposition 50, the Water Quality, Supply and Safe Drinking Water Projects, Coastal Wetlands Purchase and Protection Act was passed by voters in 2002. Projects eligible for the program include construction projects, research and development, feasibility studies, pilot projects, and demonstration programs. Local agencies, water districts, academic and research institution will be able to use the funds in the development of new water supplies through brackish water and seawater desalination.

DWR is recommending funding for 25 of the 42 projects with the available \$25 million under the current desalination grant cycle. With this funding recommendation, 54 percent of the fund will support brackish water desalination related projects and 46 percent will support ocean desalination related projects. The projects recommended for funding include facilities in Marin, Alameda and San Bernardino counties. Pilot projects in Long Beach, Santa Cruz, San Diego and Los Angeles are among those that will receive grants under the proposed funding plan. Research and development activities at the Lawrence Livermore National Laboratory and the University of California, Los Angeles are included in the recommendations, as are feasibility studies by agencies in the Bay Area, Monterey, and Riverside County.

The Draft 2006 Water Desalination Proposal Solicitation Package (PSP) was originally released on October 13, 2005. Refinements were made and the second Draft 2006 Water Desalination PSP was released on December 16, 2005. A final PSP is anticipated to be released in early 2006, with proposals due to DWR sometime in February (date to be determined in final PSP). The 2006 funding cycle, the second and last cycle of this funding program, includes \$21.5 million for eligible projects similar to those in the first funding cycle: brackish water and seawater desalination construction projects; research and development; feasibility studies; and pilot and demonstration projects for the development of local potable water supplies.

West Basin Municipal Water District (WBMWD)

As mentioned earlier, the City is a member agency of CBMWD. CBMWD is a sister agency to the WBMWD. WBMWD has been operating a desalination pilot project since May 2003 to identify optimal performance conditions and evaluate the water quality of the water produced. The project is located at the El Segundo Power Plant and processes 40 gallons per minute.

WBMWD recently received Proposition 50 funding for a seawater desalination demonstration project. The project is a demonstration of integrated membrane seawater desalination using single-pass reverse osmosis for the Los Angeles region. This project will span over three years and produce an estimated 560 AFY of desalinated water. The

outcome of this project will be to identify and mitigate issues that factor in the design and siting of a full-scale desalination facility.⁵⁵

United States Desalination Coalition

The United States Desalination Coalition was created to bring nationwide attention to desalination efforts. The original members of the coalition were WBMWD, LADWP, Municipal Water District of Orange County, Metropolitan, and San Diego County Water Authority. The coalition has since been joined by the American Water Western Region and regional water management districts in the state of Florida. The coalition continues to inform and promote desalination projects across the nation to meet future water supply demands.⁵⁶

Long Beach Water Department

In addition to WBMWD's pilot project in the region, the Long Beach Water Department has constructed a 300,000 gpd prototype desalination facility in conjunction with USBR and LADWP.⁵⁷ This facility is the largest seawater desalination research and development facility of its kind in United States. The primary research at this facility is related to membrane technology and energy efficiency. The facility is located at LADWP's Haynes Generation Station and began operating on September 30, 2005. The Long Beach Water Department will study the project's effectiveness through 2009 at which time a full-scale desalination facility may be considered.

Water Replenishment District of Southern California (WRD)

In the region, WRD owns and operates the Goldsworthy Desalter to remove impacted groundwater from a saline plume trapped behind the West Coast Basin Barrier. The Goldsworthy Desalter Project is located within the City of Torrance and began treating saline groundwater from the West Coast groundwater basin in 2001. The plant treats saline water using microfiltration and reverse osmosis. The product water meets all state and federal drinking water standards and is used as potable water for the City of Torrance.

⁵⁵ DWR, Summaries of Awarded Projects for Proposition 50, Chapter 6(a) Desalination grants – 2005 Funding Cycle

⁵⁶ Central Basin and West Basin Municipal Water Districts, 2002-2003 Annual Report.

⁵⁷ <http://www.lbwater.org/desalination/desalination.html>

This page intentionally left blank.

**SECTION 5
WATER USE PROVISIONS**

5.1 PAST, CURRENT AND PROJECTED WATER USE AMONG SECTORS

**Table 5.1-1
Number of Water Service Connections by Sector**

| Customer Class | 2000 | 2004 | 2010 | 2015 | 2020 | 2025 | 2030 |
|--------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Single Family Residential | 13,964 | 13,992 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 |
| Multi-Family Residential | 249 | 264 | 265 | 265 | 265 | 265 | 265 |
| Commercial / Institutional | 790 | 787 | 790 | 790 | 790 | 790 | 790 |
| Industrial | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Landscape Irrigation (Potable) | 329 | 335 | 335 | 335 | 335 | 335 | 335 |
| Other | 270 | 286 | 290 | 290 | 290 | 290 | 290 |
| Agricultural Irrigation | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Recycled | 227 | 236 | 240 | 240 | 240 | 240 | 240 |
| Total Connections | 15,830 | 15,901 | 15,921 | 15,921 | 15,921 | 15,921 | 15,921 |

Source: 2000 and 2004 data obtained from annual Public Water System Statistics Reports submitted by City to DWR; 2005 data is not yet available so 2004 data has been used. 2000 and 2004 data is for calendar years; 2000 data for "Other" is estimated; projections for all future years are estimated based on no projected increase in City population.

**Table 5.1-2
Past, Current and Projected Water Use by Sector
(AF)**

| Customer Class | 2000 | 2004 | 2010 | 2015 | 2020 | 2025 | 2030 |
|---------------------------------|----------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Single Family Residential | 6,291 | 6,078 | 6,500 | 6,500 | 6,500 | 6,500 | 6,500 |
| Multi-Family Residential | 411 | 493 | 500 | 500 | 500 | 500 | 500 |
| Commercial / Institutional | 2,033 | 2,129 | 2,200 | 2,200 | 2,200 | 2,200 | 2,200 |
| Industrial | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Landscape Irrigation (Potable) | 588 | 603 | 700 | 700 | 700 | 700 | 700 |
| Other | 42 | 88 | 120 | 120 | 120 | 120 | 120 |
| Agricultural Irrigation | 40 | 19 | 30 | 30 | 30 | 30 | 30 |
| Recycled (Cerritos) | 2,479 ^[1] | 1,917 | 1,850 | 1,850 | 1,850 | 1,850 | 1,850 |
| Recycled (Lakewood) | NA | 374 | 450 | 450 | 550 | 550 | 550 |
| Wholesale Sales to Others | 2,422 | 3,043 | 2,660 | 2,660 | 2,660 | 2,660 | 2,660 |
| Total Water Use by Class | 14,306 | 14,744 | 15,010 | 15,010 | 15,110 | 15,110 | 15,110 |
| Unaccounted for System Losses | 525 | 541 | 550 | 550 | 555 | 555 | 555 |
| Total System Water Use | 14,831 | 15,285 | 15,560 | 15,560 | 15,665 | 15,665 | 15,665 |

Source: 2000 and 2004 data obtained from annual Public Water System Statistics Reports submitted by City to DWR; 2005 data is not yet available so 2004 data has been used. 2000 and 2004 data is for calendar years; 2000 data for "Other" is estimated; projections for all future years are estimated based on no projected increase in City population. Unaccounted for System losses are estimated based on 3.67% average loss for calendar years 2000 through 2004.

[1] Recycled water breakdown between Cerritos and Lakewood is not available for 2000; 2,479 AF total shown under Cerritos is overall total for both cities

This page intentionally left blank.

SECTION 6 WATER DEMAND MANAGEMENT MEASURES

6.1 INTRODUCTION

The City recognizes water use efficiency as an integral component of current and future water strategy for the service area. Demand management measures (DMM) refer to policies, programs, rules, regulation and ordinances, and the use of devices, equipment and facilities that, over the long term; have been generally justified and accepted by the industry as providing a “reliable” reduction in water demand. This means providing education, tools, and incentives to help the homeowner, apartment owner and business owner reduce the amount of water used on their property. Demand management is as important to ensuring water supply reliability as is providing a new water supply. The City has aggressively pursued conservation in an effort to reduce demand and stretch existing water supplies.

DMMs are equivalent to the 14 Best Management Practice’s (BMP) as established by the California Urban Water Conservation Council (CUWCC). The BMPs are technically and economically reasonable and not environmentally or socially unacceptable, and are not otherwise unreasonable for most water suppliers to carry out.

While the City of Cerritos is not signatory to the Memorandum of Understanding (MOU) regarding Urban Water Conservation in California with the CUWCC, the City’s wholesaler, CBMWD, is signatory. The City has and continues to work toward compliance with all of the urban water conservation DMMs. CBMWD has made state-mandated DMMs the cornerstone of its conservation programs and a key element in the overall regional water resource management strategy for the region.

CBMWD implements many of the DMMs on behalf of its member agencies, including the City of Cerritos. The City also coordinates its activities with established conservation organizations and programs. The principal agencies funding the programs are Metropolitan, CBMWD and WBMWD.

6.2 DETERMINATION OF DMM IMPLEMENTATION

The City has continued to work with CBMWD towards implementing the 14 cost-effective DMMs, which are incorporated in regional water agencies rate surcharges. These 14 DMMs include technologies and methodologies that have been sufficiently documented in multiple demonstration projects that result in more efficient water use and conservation. The City’s 2000 UWMP did not indicate what level of BMP activity would occur between the years 2000 and 2005. Therefore, the following section generally describes the level of BMP implementation by the City and/or by CBMWD on behalf of the City.

6.3 DEMAND MANAGEMENT MEASURES

The City's DMM implementation efforts combined with CBMWD regional BMP implementation efforts are described in the following DMM sections. Current CBMWD conservation programs are saving over 4.5 billion gallons of imported water every year, since the 1990's.⁵⁸ These savings relate directly to additional available water for beneficial use within the CBMWD service area, including the City of Cerritos.

DMM 1 – Water Survey Programs for Single-Family Residential and Multi-Family Residential Customers

Residential surveys have been conducted in the City's service area on an informal basis by customer request through a high water bill complaint or meter reading that indicated higher than normal usage. When such a request is made, City staff reviews (re-reads) past billing records for the account in question and compares them with the current bill. If it appears that a significant recent increase has occurred, City staff first looks for signs of a possible leak. They also question the customer about possible internal plumbing problems (leaking faucets, running toilets, etc) and make recommendations to reduce landscape irrigation where appropriate. Since this program is informal and responsive, no data on quantities of surveys is currently available. The City has implemented this program on an ongoing basis for several years, and as a result, there is not a definite initiation date for when this program began. The program will continue to be incorporated into the City's regular operations.

CBMWD provides support to the water retailers to carry out water surveys. Metropolitan currently provides funding for residential survey devices, and if requested, CBMWD will act as the liaison to Metropolitan and provide retailers with funding available through Metropolitan. It is anticipated that CBMWD will review the market strategy for promoting residential water use surveys within its Conservation Master Plan.

Based on the CUWCC's savings rates, set forth in its BMP Costs & Savings Study (December 2003), savings from untargeted intensive home surveys results in an average of 21 gpd per household (both single family and multi-family) total savings for future projections. Table 6.3-1 shows the City's historical and projected (through 2010) residential survey activity.

Table 6.3-1
DMM 1 – Single Family and Multi-Family Survey Program
Implementation Schedule

| City of Cerritos | Historical (2004-2005) | Projected (2006-2010) |
|------------------------------|---------------------------|--------------------------|
| # of Re-reads/yr | 350 | 375 |
| # of High Bill Complaints/yr | 50 | 60 |
| Expenditures/yr (\$) | \$8,445 | \$10,370 |

⁵⁸ Central Basin Municipal Water District, Draft Urban Water Management Plan Update, June 2005.

The City will measure the effectiveness of water survey programs through analyzing the number of high bill complaints and number of water bill re-reads distributed and the difference in water consumption for the families after the surveys are conducted. The program will continue on an ongoing basis through 2010 and beyond.

DMM 2 – Residential Plumbing Retrofits

Through CBMWD, the City participates in the distribution of showerheads, aerators, and toilet tank leak detection tablets at community events, including local fairs and during Water Awareness Month. At these events, the City also emphasizes water use surveys and ultra-low flush toilet replacement programs (refer to DMM 1 and 14). In the mid-1990s, the City offered free water conservation kits with low flow showerheads. The City will distribute conservation kits during the 2005/06 fiscal year.

Since 1990, it is estimated that CBMWD has distributed a total of 1,154 faucet aerators and 244,549 low-flow showerheads as shown in Table 6.3-2.

**Table 6.3-2
CBMWD Residential Plumbing Retrofit Devices**

| Devices | 1990 - 2000 | | 2000 - 2005 | | Total | |
|-----------------------------|-------------|-------|-------------|----|---------|-------|
| | # units | AF | # units | AF | # units | AF |
| Faucet Aerators | 1,154 | 3.6 | 0 | 0 | 1,154 | 3.6 |
| Low-flow Showerheads | 237,049 | 1,115 | 7,500 | 35 | 244,549 | 1,150 |

Source: CBMWD Draft 2005 Urban Water Management Plan Update. June 2005.

Table 6.3-3 lists the water conservation kits distributed throughout the City’s water service area.

**Table 6.3-3
DMM 2 – Residential Plumbing Retrofit – Water Conservation Kits**

| Water Conservation Kits | Historical (2000/01-04/05) | Projected (2005/06-09/10) |
|-----------------------------------|-------------------------------|------------------------------|
| Number of Kits Distributed | 2,000 | 2,000 |

The method to evaluate effectiveness will consist of calculating estimated water savings for each DMM and comparing historic water demand with the current water demand and see if the quantity in savings is apparent.

DMM 3 – System Water Audits, Leak Detectors, and Repair

The City's surveillance of its water system to detect leaks is an on-going operation. The City recognizes the urgency of repairing leaks and responds to any leak in an expedient manner. The City's water system is relatively new, as the main distribution line was completed in the late 1960s and the residential distribution lines were completed in the late 1970s and early 1980s. The system is designed to operate with 80 pounds of pressure, and includes steel lines coated with cement. As a result, the system rarely experiences leaks. However, should a leak occur, the City's SCADA system would immediately alert City staff.

The City's SCADA system monitors all pumping stations and the MWD connection. The SCADA system allows the City to monitor the water system 24 hours a day. In the circumstance that the water supply is disrupted (via leak, break, etc.), an alarm will notify the City operators within ten minutes. This immediate response system allows the City to respond within 30 minutes. In 2004, the City only had two main breaks, which shows both the reliability of the City's relatively new water system and the accuracy of the City's SCADA monitoring system. There have been very few distribution line breaks in the City's system, and therefore, the amount of time and expenditures dedicated to leak detection has been limited and not significant enough where the City has detailed records of the few breaks that have occurred.

In 1996, CBMWD and WBMWD partnered with the USBR and hired a consultant to develop and provide a Water Audit and Leak Detection Program (Program). The Program was offered to 40 water purveyors. Of the 40, only 10 participated in the audit, and of the 10, only three agencies found their unaccounted-for water to be above 10 percent. As part of its Conservation Master Plan, CBMWD will seek input from its water retailers regarding support for this program.

The effectiveness of this conservation measures has been proven to be very effective, given the reliable use of the SCADA system and the limited number of line breaks. The CUWCC has established a standard rate of water savings based on the repair of a distribution line: a 1-inch crack in a distribution main at 100 psi can leak 57 gallons per minute. Cost and savings depend on the age of infrastructure for the water system. Since the system is relatively new, costs and savings are minimal. Should line breaks become more regular, the staff will look into developing a regular system water audits, leak detection, and repair.

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

The City requires meters for all new water connections and bills by volume of use. All water service connections, with the exception of dedicated fire services, are metered. The City has retrofitted all existing unmetered connections to be metered. The City bills its customers according to meter consumption. Meter calibration and periodic replacement

insures that customers are paying for all of the water they consume, and therefore encourages conservation. Metering allows the City to conserve a total of 20-30 percent of the water demand overall, and up to 40 percent savings during peak demand periods, as estimated by the CUWCC's BMP Costs and Savings Study (December 2003). The measure of effectiveness will include a comparison of water use before and after meter calibration.

DMM 5 – Large Landscape Conservation Programs and Incentives

The City's large landscape conservation program is based on its recycled water supply, which was the first to be implemented in Southern California during the mid-1980s. Recycled water accounts for ninety percent of the water supply used for irrigating the City's center medians, parkway, and side medians; schools; and cemeteries. The City converts approximately 3-5 services per year to the recycled water. The use of recycled water for landscape irrigation throughout the City's service area provides significant savings of water demand. Table 6.3-4 shows the amount of water saved through the use of recycled water for large landscape irrigation.

**Table 6.3-4
DMM 5 – Large Landscape Conservation Program Water Savings**

| Water Savings | 2001/02 | 2002/03 | 2003/04 | 2004/05 |
|----------------------|----------------|----------------|----------------|----------------|
| Recycled Water (AFY) | 2,385 | 2,099 | 2,337 | 2,060 |

The City provides recycled water to the Central Basin Municipal Water District, which in turn implements large landscape conservation programs that benefit the City's service area. In order to conserve water consumption, CBMWD is currently implementing the following three programs throughout its service area, which collectively have the potential to save 19 to 35 percent of total irrigation water demand.

Irrigation Controller Programs

In 2004, Metropolitan was awarded a Proposition 13 grant for a new Weather-Based Irrigation Controller (WBIC) Program. Metropolitan and its member agencies developed a Project Advisory Committee (PAC) to work on developing the program, which includes marketing, reporting, databasing, and implementing. Metropolitan allocated a limited amount of funding to each member agency for this program. CBMWD has been working with the PAC to develop the program. CBMWD recognizes the water savings potential and is beginning to test WBIC in sites that use potable imported water. The plan is to use the new controllers in areas where recycled water cannot reach. The funding incentives provided vary on the number of stations and acreage at each site. The funding is used to help pay for the hardware and to help motivate cities, parks, and schools to participate in the program.

Protector Del Agua Irrigation Program

CBMWD also partners with Metropolitan on the “Protector Del Agua” or “Protector of Water” landscape classes. In partnership with cities, classes are offered to residents as a way to teach them about various topics that help conserve water and reduce urban runoff. Residents learn about gardening with native plants and using WBICs to conserve water and reduce runoff.

Over 50 percent of the potable water used in southern California goes to maintain landscaping; therefore offering these classes is an ideal way to reduce outdoor water waste. By educating the public on properly maintaining the irrigation system, troubleshooting problems, such as over-watering, that are simple yet difficult to address, can be solved without spending additional funding.

Wireless Irrigation Controllers

CBMWD, along with its partners, submitted and received Proposition 50 funding for a research project to test how wireless irrigation controllers can be used to conserve water in outdoor landscaping. CBMWD will partner with cities and water retailers to offer wireless irrigation controllers to schools, parks, businesses, and other large landscape areas that are currently using older hydraulic-type irrigation systems. By providing wireless irrigation controllers, sites will have the ability to inexpensively retrofit their current irrigation systems. Wireless irrigation controllers use weather data to irrigate and can save between 20-50 percent of outdoor water use, and also reduce urban runoff by up to 70 percent. This research program will be implemented in 2006.

As a member agency of CBMWD, these programs are offered to customers throughout the City. The measure of effectiveness for the City in implementing this BMP will consist of the amount of increase in class participation. The City will continue encouraging customer participation in these programs through 2010.

DMM 6 – High-Efficiency Washing Machine Rebate Programs

The City promotes use of High-Efficiency Washing Machines (HEWM) through consumer education and manufacturer incentives, which are offered by CBMWD. Table 6.3-5 reflects the City’s historical and projected program participation from present through 2010.

**Table 6.3-5
DMM 6 – City’s Historical and Projected HEWM Rebates**

| | 2003 | 2004 | 2005 | 2006-2010 |
|----------------------------|-------|-------|-------|-----------|
| \$ per Rebate | \$100 | \$100 | \$100 | \$100 |
| # of Rebates | 59 | 122 | 70 | 84 |
| Water Savings (AFY) | 1 | 2 | 1 | 1 |

Beginning in 1999, CBMWD participated with Metropolitan in a pilot program with Southern California Edison (Edison) to offer rebates to residents who replaced their existing clothes washer with a high efficiency model. The rebate from Edison varied according to the model purchased (which was tied into the total energy savings), but the amount offered by CBMWD and Metropolitan at the time was capped at \$35 per washer. That pilot program ended in September 1999.

In 2003, CBMWD again partnered with Metropolitan on a new program. Metropolitan received funding from CALFED and provided a higher rebate incentive. CBMWD developed the program and offered residents a \$100 rebate.

The CALFED portion of the funding expired, but the program was so successful that, at the request of the Metropolitan member agencies, Metropolitan continued to provide funding at the current level. The HEWM Program has exceeded all expectations and continues to be one of CBMWD's more successful programs. When HEWM's first hit the market, they were quite expensive. But market demand has helped to drive the price down. The new HEWM's cost twice as much as regular inefficient models, but by providing a \$100 rebate (along with other utility/store incentives), consumers are incentivized to purchase the new HEWM's. In addition to saving 50 percent water, the HEWM's also have other benefits – they save 60% electricity and use less detergent. Consumer acceptance has been very positive.

In 2004, the Metropolitan Board of Directors, along with the support of CBMWD, approved additional funding to continue the program through 2005. At the same time, Metropolitan applied for Proposition 50 funding in an effort to continue the program for several additional years. In order to promote the purchase of higher water saving washers, CBMWD began offering rebates on washers that had a Water Factor (WF) of 6.0 or less. The WF is a measurement of water usage: the lower the number, the higher the efficiency.

In 2003, the Governor of California signed a regulation that would require clothes washer manufacturers to only manufacture and provide washers with a WF of 8.5 in 2007 and 6.0 by 2010. Due to adjustments to regulations with the current administration, this regulation may change. Regardless of these challenges, CBMWD and Metropolitan are seeking greater water savings by only incentivizing washers with a WF of 6.0 AF or less.

Metropolitan will continued to provide CBMWD with a \$110 level incentive through December 2005, and will then reconsider the program. CBMWD currently contributes an additional \$15 per rebate to enhance the program's benefits. Table 6.3-6 illustrates the number of rebates Central Basin has been able to distribute over the past two years.

**Table 6.3-6
High Efficiency Washing Machine Rebates
In CBMWD Service Area for 2003 and 2004**

| | 2003 | 2004 | Total |
|----------------------------|-------|-------|-----------|
| \$ per Rebate | \$100 | \$100 | \$129,900 |
| # of Rebates | 541 | 758 | 1,299 |
| Water Savings (AFY) | 8 | 11 | 19 |

In an effort to continue the successful washer rebate program, Metropolitan along with its member agencies, applied for and received Proposition 50 funding from DWR in the amount of \$1,660,000. This funding will allow CBMWD to continue its rebate program through 2006.

The water savings will continue at an average of 85 to 109 gallons per week per machine, with 14.4 to 28.7 gpd/machine for single family residences. It is anticipated that customer participation will increase as awareness of the programs and water saving opportunities continues to expand.

The method to measure effectiveness of this DMM will include quantifying the number of HEWM's distributed and the total potential water savings, and then analyzing the water demand after one year of implementation to observe how the water demand changed.

DMM 7 – Public Information Programs

The City recognizes the continued need for a public information program to maintain and increase the public's awareness of water and the need to use it wisely. The City promotes water conservation and other resource efficiencies in coordination with CBMWD, WBMWD, American Water Works Association (AWWA), the National Association of Water Companies and the California Association of Water Companies.

In addition, CBMWD operates a strong outreach program to disseminate public information about CBMWD and its mission, programs and events. CBMWD, in collaboration with and support of multiple local agencies, directs the following programs to promote water conservation:

- **Public Information Committee:** The first significant method is the PIC, formed several years ago. The Committee is made up of Public Information and Public Affairs Officers from cities and water agencies within CBMWD's service area. The purpose is to share information on a variety of topics that would be of interest to customers.
- **Inspection Tours:** CBMWD, in cooperation with Metropolitan, also provide inspection tours of the CRA and the SWP to legislators, local elected officials, retail agency staff, and the general public on various dates throughout the year. The

purpose of the three-day trips is to give local decision-makers a better understanding and appreciation of the water supply throughout the State.

- **Speaker’s Bureau:** CBMWD, through its Speaker’s Bureau, provides speakers to local community groups, service clubs, and schools when requested. In addition, CBMWD operates a very successful and aggressive school education program that promotes the importance of conservation and recycled water.
- **CWAC:** CBMWD is also active in the California Water Awareness Campaign (CWAC), which is an association formed several years ago to coordinate efforts throughout the state during “May is Water Awareness Month.” With this effort, water agencies throughout the State, large and small, can tap into a large pool of knowledge and materials to promote a water awareness message not only in May, but throughout the year.
- **Local Media:** CBMWD maintains a strong link with the local news media through press releases on important subjects and periodic meetings with newspaper editorial boards.

The method to measure effectiveness of implementing this DMM for the City will include quantifying the number of participants in the public programs, as well the number of public announcements/brochures distributed throughout the service area. An increase in participation and distribution of materials will indicate heightened public water conservation awareness and may correlate with decrease water demand.

DMM 8 – School Education Programs

The City participates in CBMWD’s school education programs. The City anticipates active participation in the future and plans work towards expanding the program through working with ABC School District and CBMWD to create a partnership for conducting more frequent school presentations. CBMWD promotes educational programs about water conservation to elementary through high school students.

Table 6.3-7 provides historic and projected number of students that will participate in the school education programs throughout the City’s service area through the year 2010.

**Table 6.3-7
DMM 8 – School Education Program**

| Grade | # of Presentations | | | |
|-------|--------------------|------|------|-----------|
| | 2001 | 2003 | 2005 | 2006-2010 |
| 3 | 1 | 2 | 2 | 8 |
| 6 | 0 | 0 | 1 | 4 |

As shown in Table 6.3-7 above, participation in the School Education Program is anticipated to continue through 2010.

As stated in CBMWD's 2005 UWMP, the objectives of *Planet Protector Water Explorations* are:

1. To increase the awareness of water as a valuable and limited resource.
2. To encourage water conservation efforts.
3. To introduce the concept of water recycling.
4. To introduce the concept of ocean water desalination.
5. To increase the awareness of urban runoff pollution.
6. To teach about local marine life.
7. To promote the concept of stewardship of the environment and its resources.

By the end of the 2004-2005 school year, over 25,000 students will have experienced *Planet Protector Water Explorations*, since the program began in September 1995. Table 6.3-8 quantifies the number of students that are educated through the *Planet Protector Water Exploration* program. Beginning in fiscal year 2004-05, additional programs have become available to students, therefore increasing the number of students that are educated through the various programs.

Table 6.3-8
CBMWD School Education Program
(Number of Students)

| Grade Level | FY 2000-01 | FY 2001-02 | FY 2002-03 | FY 2003-04 | FY 2004-05 ¹ | Total |
|----------------|---------------|---------------|---------------|---------------|----------------------------|--------------|
| Grades K-3rd | 250 | 110 | 190 | 330 | 1,014 ² | 1,894 |
| Grades 4th-6th | 1121 | 872 | 830 | 1190 | 1,632 | 5,645 |
| Grades 7th-8th | 140 | 95 | 105 | 60 | 876 | 1,276 |
| High School | 0 | 0 | 0 | 0 | 174 | 174 |
| Total | 1,511 | 1,077 | 1,125 | 1,580 | 3,696 | 8,989 |

[1] Program includes *Planet Protector Water Exploration* in addition to *Think Earth It's Magic*, *Conservation Connection*, and *Think Earth* curriculum kits for Fiscal Year 2004-05 only.

[2] Only third graders participate in this program.

In addition, CBMWD has implemented the following new programs, which are available to residents within the City's service area:

- **Think Earth It's Magic:** Through CBMWD's membership as part of the Think Earth Environmental Education Foundation, *Think Earth It's Magic* is a collaborative program between CBMWD, LACSD, and Metropolitan. *Think Earth It's Magic* combines Think Earth's award winning environmental education curriculum, which is designed to promote conservation behaviors and stewardship of the environment, with an environmental magic show that cleverly ties together what students learn in the classroom. By the end of the 2004-2005 school year, over 500 elementary school students will have participated in this program.

- **Conservation Connection:** This program focuses on showing the connections between California, water and energy supply, and humans. The goal of the curriculum is to get students actively involved – in their homes and at school – in conserving water and energy. Within the program, students survey their family’s water and energy use, as well as water and energy use at their school. After the data is gathered, the students analyze their findings, and review recommendations. Then, students make, implement, and monitor plans to decrease water and energy use. By participating in this action-based curriculum, students learn to look critically at important environmental issues and take responsibility for finding solutions. By the end of the 2004-2005 school year, over 500 middle school students will have participated in *Conservation Connection*.
- **Think Earth Curriculum Kits:** Through CBMWD’s membership as part of the Think Earth Environmental Education Foundation, all teachers that participate in *Planet Protector Water Explorations* receive a grade appropriate *Think Earth* curriculum unit. *Think Earth* units are usually distributed each March, so that teachers have them prior to Earth Day in April. Each *Think Earth* unit contains a video, two color posters, a teacher’s guide, and student booklets. The entire *Think Earth* curriculum is correlated to the California State Content Standards for the following content areas: Language Arts, Science, Social Science, and Mathematics. Over the past ten years over 25,000 students within West Basin’s service area have participated in *Think Earth*.
- **Water Awareness Month Poster Contest:** CBMWD’s Water Awareness Month Poster Contest is also offered to all residents throughout its service area. All teachers who have or will participate in *Planet Protector Water Explorations* are notified each February, which provides enough time to allow students to participate in the “Water Is Life” Poster Contest, which is sponsored by Central Basin and MWD each May. In addition, all teachers at each of Central Basin’s primary and secondary schools will also be notified in February. As in previous years, one grand-prize winner is selected from each School District and receives a fully-loaded laptop computer during an award ceremony in June. Each grand-prize winner will also have his or her artwork featured in MWD’s “Water Is Life” annual calendar. Over the past ten years, more than 25,000 students within CBMWD’s service area have participated in this program.

CBMWD will also offer the following programs to the City of Cerritos, along with its other member agencies in the future:

- **Water Wanderings: A Journey Through Water:** Water Wanderings is a collaborative classroom visitation program between CBMWD and the S.E.A. Lab in Redondo Beach. This collaborative hands-on classroom program will take fourth graders on a two and one-half hour journey through California’s water. The program will be correlated to many of the fourth grade State standards for social science and science. Included in the program will also be a “touring tide pool,” a van outfitted with touch tanks that will enable students to touch live marine creatures and plants. Programs will be scheduled from September 2005 through June 2006.

- **Sewer Science:** Staff is currently exploring the possibility of partnering with LACSD on this exciting high school science program. *Sewer Science* is a hands-on laboratory program that teaches students about wastewater treatment. During a week-long lab, students create wastewater; treat it through the use of tanks employing physical, biological, and chemical methods; and apply analytical procedures to test its quality. *Sewer Science* is correlated to the California State Content Standards for the following high school sciences: chemistry, physics, and microbiology. Programs will be scheduled from September 2005 through June 2006.

The method to evaluate effectiveness will consist of consumer demand for public programs and increases in public participation.

DMM 9 – Conservation Programs for Commercial, Industrial and Institutional (CII) Accounts

CBMWD, in partnership with Metropolitan, participates in Metropolitan's region-wide CII rebate program. CBMWD helps promote these rebates to the businesses, schools and facilities throughout its service area. Rebates are offered for commercial clothes washers, waterbrooms, cooling tower conductivity controllers, pre-rinse spray nozzles, x-ray machine recirculating devices and commercial toilets and urinals.

In 2002, the CUWCC pursued and received a \$2.3 million grant from the California Public Utilities Commission (CPUC) to purchase and install restaurant pre-rinse spray nozzle valves. The new nozzles use 1.6 gpm compared to 2 to 6 gpm valves. These valves conserve water, heating costs, and reduce waste-water discharge. CBMWD supported CUWCC's efforts in marketing the program. The nozzles and installations were provided free of charge to the food services sector.

In 2003, CBMWD applied for and received a \$780,000 Proposition 13 grant for the purchase and installation of 2,600 Waterfree Urinals. Waterfree urinals can save an average of 40,000 gallons of water per year. CBMWD is currently working with cities, water purveyors, schools, businesses, and other facilities to install the devices.

In 2005, CBMWD entered into a 10-year agreement with Metropolitan to help support the on-going regional marketing efforts of the CII rebate program. As a way to increase the success of this program, CBMWD offers the cities and water purveyors with partnering opportunities to increase the rebate amounts. Over the years, agencies have partnered to provide higher rebate incentives in an effort to increase program participation of their customers.

The City participates in all CBMWD's CII Rebate Program. In 2005, the City initiated its Rinse and Save Program for CII customers through CBMWD. Through this program, the City provides pre-rinse spray valves to customers to install. As of May 2005, 15 pre-rinse spray valves were installed to CII customers throughout the City's service area. Table

6.3-9 provides historic and projected number of CII rebates and/or replacements to occur within the City's service area and the associated water savings through 2009.

**Table 6.3-9
DMM 9 – CII Rebate Program**

| CII Rebates | Historic 2000-2004 | Projected 2005-2010 |
|-------------------------------|-------------------------------|--------------------------------|
| # of HEWM | 46 | 46 |
| # of Spray Nozzle (Valve) | 0 | 16 |
| # of Conductivity Controllers | 1 | 1 |
| Water-free Urinals | 9 | 4 |
| Water Savings (AFY) | 9 | 11 |

Each HEWM results in a savings of 0.11 AFY per device, the spray nozzle (spray valve) saves 0.22 AFY, the conductivity controller results in 2.24 AFY, and the water-free urinal results in an average of 0.12 AFY.

To measure the effectiveness of this DMM, the City will perform a water savings analysis by calculating the total number of rebates distributed and the estimated water savings for each. The total of this calculation will show the amount of water saved and should be reflected in the overall water use before and after implementation of the DMM.

DMM 10 – Wholesale Agency Assistance Program

The City is not a wholesale agency. However, the programs provided by CBMWD are done in partnership with and benefit the retail water agencies that are located within the 24 cities served by CBMWD.

Among the 14 BMPs CBMWD provides assistance for are:

- BMP 3 - System Audits
- BMP 5 - Landscape Programs
- BMP 6 - Washing Machines
- BMP 7 - Public Information
- BMP 8 - School Education
- BMP 9 - CII Rebates
- BMP 10 - Wholesaler Incentives
- BMP 12 - Water Conservation Coordinator
- BMP 14 - ULFT Replacement

Since 2000, CBMWD has acquired more than \$1 million from State and local grant funding sources for program development and implementation. Furthermore, CBMWD markets, designs and implements a majority of the BMPs within its service area. CBMWD has also invested over \$1 million to provide conservation programs that help

increase water supply reliability for the region. CBMWD plans on expanding its conservation programs and the support it provides to cities and water retailers in their conservation program efforts.

DMM 11 – Conservation Pricing

The City implements a rate structure that includes a uniform charge of \$7.50 for 10 units and \$1.28 for each additional unit. A definition of conservation pricing is “rates designed to recover the cost of providing service.” The City’s rates have been designed to recover the full cost of water service and will continue to be implemented into the future.

In 2003, CBMWD passed-through Metropolitan’s two-tiered rate structure to its member agencies to develop a reasonable budget for the Tier 1 annual maximum limit for imported water. Through voluntary purchase agreements, these customers will pay a higher price (Tier 2) for purchases that exceed their Tier 1 allotment. In an effort with other agencies, CBMWD helps prevent member agencies, including the City, from exceeding their Tier 1 allocation limits by conservation, education, and the development of recycled water use. As a member agency, the City supports CBMWD’s two-tiered rate structure.

DMM 12 – Conservation Coordinator

The City conservation activities are provided through the CBMWD Conservation Coordinator. The CBMWD Conservation Coordinator investigates Federal, State, and local funding to develop new programs throughout CBMWD’s service area, benefiting the City’s service area through program implementation.

DMM 13 – Water Waste Prohibition

The City of Cerritos enforces water waste prohibition, as described in section 13.04.100 of the City’s Municipal Code. The Code prohibits wasting of water by stating that “no person, firm or corporation shall waste, cause, permit or allow to be wasted, any water in any cooling system, ornamental fountain, or other device of any kind whatsoever, nor shall such person fail, refuse or neglect to recirculate the water through such cooling system, ornamental fountain or other device; provided, further that no person shall cause, permit or allow any water furnished through the facilities of the water system, as herein defined, to be wasted in any manner whatsoever.” In addition, drawing water from fire hydrants, tampering or removing of meters, tapping of mains (Ordinance No. 165, Section 10, 1966), or turning water on (after water has been turned off by City staff) are all limited through various prohibitions.

DMM 14 – Residential ULFT Replacement Program

The City and its customers have participated in the Metropolitan and CBMWD Ultra-Low Flush Toilet (ULFT) Replacement Program. CBMWD’s ULFT program includes

free one-day toilet distributions and rebates based on available funding. From 2000 to 2005 (as of May 2005), the City has distributed an average of 68 ULFT rebates per year, with a water savings of 0.029 AF per ULFT rebate. In addition, the City distributed five ULFTs in 2001, and one by May 2005, as part of CBMWD’s ULFT Replacement Program, further discussed below.

Table 6.3-10 shows historic and projected ULFT rebates in the City’s service area.

**Table 6.3-10
DMM 14 – City Historical and Projected Residential
ULFT Rebates**

| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006-2010 |
|----------------------------|------|------|------|------|------|------|-----------|
| # of Single Family Rebates | 36 | 33 | 138 | 75 | 49 | 11 | 285 |
| # of Multi-Family Rebates | 7 | 2 | 0 | 0 | 1 | 0 | 8 |
| Water Savings (AFY) | 1 | 1 | 4 | 2 | 1.4 | .3 | 8 |

In 2004, CBMWD partnered with Metropolitan on a joint-project to identify areas where the devices could be installed. Due to the large areas of high density and numerous multi-family facilities, CBMWD will continue to partner with cities and member agencies, including the City, to offer a \$50 rebate for the purchase and installation of ULFTs.

CBMWD also provides a \$70 rebate for the purchase and installation of dual-flush toilets, which have the ability of flushing at either 0.8 of a gallon for liquids and 1.6 gallons for solids. Tables 6.3-11 and 6.3-12 illustrate the overall CBMWD ULFT Rebate Program and the overall CBMWD ULFT Replacement Program for the last five years.

**Table 6.3-11
CBMWD ULFT Rebate Program – Historic Rebates**

| | 2000 | 2001 | 2002 | 2003 | 2004 | Total |
|--------------------|------|------|------|------|------|-------|
| \$ per Rebate | \$50 | \$50 | \$50 | \$50 | \$50 | \$50 |
| # of Rebates | 662 | 895 | 619 | 493 | 649 | 3,318 |
| Water Savings (AF) | 19 | 26 | 18 | 14 | 18 | 95 |

**Table 6.3-12
CBMWD ULFT Replacement Program – Historic Distribution
(Free ULFT Distributions to the Public)**

| | 2000 | 2001 | 2002 | 2003 | 2004 | Total |
|--------------------|-------|-------|-------|-------|-------|--------|
| # of Devices | 7,250 | 5,975 | 3,650 | 2,574 | 2,608 | 22,057 |
| Water Savings (AF) | 211 | 174 | 106 | 74 | 75 | 640 |

CBMWD plans on continuing to provide ULFTs and rebates as long as funding is available, programs continue to be cost-effective, and a significant saturation level has not been met. Due to the large areas of high density and numerous multi-family facilities, there are still many older toilets that need replacing. CBMWD will continue to partner with cities and water purveyors in order to implement these programs. In addition, CBMWD will continue to offer its \$50 rebate for the purchase and installation of ULFTs.

The method of effectiveness for the ULFT Program will include an analysis of water savings based on decreases in water demand as a result of the device implementation.

CBMWD New Conservation Programs

In order to conserve water in CBMWD's entire service area, including the City's service area, CBMWD has developed new conservation programs in partnership with Metropolitan. These programs include the Synthetic Turf Program and Synthetic Turf Replacement Program, which provide funding to promote, install, and study artificial turf on municipal and other public lands; the Community Partnering Program, which contributes funding for water-related, educational outreach on regional water resources issues, such as conservation, watershed or water quality; and California friendly garden projects.

In addition, the Southern California Heritage Landscape Program was launched in 2002 and includes a public outreach campaign targeting outdoor water use. The campaign, coordinated with participating member agencies, includes funding for the promotion of efficient residential watering through irrigation controllers, a watering index to assist in estimating efficient watering times, and a native and California-friendly plant program. Metropolitan expanded these programs in 2003 and 2004 with an extensive media and outreach campaign and launched a consumer-oriented outdoor conservation savings web site. The landscape program is expected to reduce summer and fall outdoor water use.

CBMWD also proposed the Commercial Landscape Wireless Valve End Use Management Research Project to enhance water conservation. The project is proposed for funding under the DWR Water Use Efficiency Grant Program. The project will fund 45 wireless valve evapotranspiration (ET) controllers throughout the CBMWD service area, which are used for water use management.

In addition, Metropolitan proposed four water conservation programs for funding under the DWR Water Use Efficiency Grant Program for FY 2004/05. The programs and the status of funding are listed as follows:

- **Residential High Efficiency Clothes Washer Rebate Program** - The Residential High Efficiency Clothes Washer Rebate Program offers rebates toward the purchase of water- and energy-saving clothes washing machines, which will reduce the demand on water imported from the Bay Delta by 12,275 AFY. This 2-year program was funded at \$1.66 million.

- **California Friendly Communities** - The program will result in CALFED Benefits, which include avoiding Bay Delta diversions. California Friendly Communities is a grant program in which cities receive funding to transform their landscape to increase water conservation. A maintenance plan, enhanced irrigation and controllers, and landscaping techniques are exercised through this program. This program received \$424,150 in funding for 1,650 valves for multi-family residences.
- **High-Efficiency Toilet Rebate Program** – A rebate is given to customers who purchase a new High Efficiency Toilet. The toilet uses a minimum of 20% less water than standard toilets and will supply 41 AFY of water savings. This program was funded at \$1.0 million for a total of 10,000 ULFTs.
- **Online/Web-Based Irrigation Efficiency Training** – This program will provide two class courses for residential and professional participants, as well as educate individuals about water use, efficiency training, and educational programs. DWR funded one residential series class and two classes from the professional course for a total of \$77,500.

6.4 WATER USE EFFICIENCY EFFECTIVENESS

CBMWD adapts and applies the Metropolitan-Main Model, which forecasts water demands on both a regional basis and at the retail level to produce an estimate of future water demand, the identification of potential benefits, and costs associated with implementation of the DMMs. The conservation potential by each retail water agency is used to develop DMM implementation plans using a “least cost approach” to develop a “most cost effective” package of DMM programs customized for each retail agency. A Conservation Savings Model estimates the potential water conservation from implementation of the DMMs. Once the potential water savings are quantified, programs can be developed to target potential savings.

Quantifiable DMM programs include ULFT and low-flow showerhead retrofits, water audits and conservation pricing. Programs and activities that are not quantifiable, but known to save water, include public information, school education, conservation coordinator, water waste prohibitions, and metering with commodity rates.

Water use efficiency is an integral part of water supply planning and operations. The City works to improve the understanding of costs and benefits of conservation so that investment decisions are efficient and effective at meeting program goals. As a cooperative member of California’s conservation community, the City supports CBMWD’s significant contributions to the development and coordination of water use efficiency activities for its member agencies and the region.

Many of the DMMs have been implemented based upon the MOU schedule, others are being implemented, and all DMMs will continue on an ongoing basis. The City will continue to work cooperatively with CBMWD to implement cost-effective DMMs. Schedules for implementation were shown in the discussion of individual DMMs, as applicable.

This page intentionally left blank.

SECTION 7 WATER SHORTAGE CONTINGENCY PLAN

7.1 INTRODUCTION

California's extensive system of water supply infrastructure, its reservoirs, groundwater basins, and inter-regional conveyance facilities, mitigates the effect of short-term dry periods. Defining when a drought begins is a function of drought impacts to water users. Drought is a gradual phenomenon. Although droughts are sometimes characterized as emergencies, they differ from typical emergency events. Droughts occur slowly, over a multiyear period. Drought impacts increase with the length of a drought, as carry-over supplies in reservoirs are depleted and water levels in groundwater basins decline. In addition to climate, other factors that can cause water supply shortages are earthquakes, chemical spills, and energy outages at treatment and pumping facilities. The City has included the probability of catastrophic outages in its reliability planning.

7.2 URBAN WATER SHORTAGE CONTINGENCY PLAN

City of Cerritos Water Shortage Response

The City has implemented a water conservation program to reduce water demands since the drought period of the early 1990s. The "Emergency Water Conservation Plan" was adopted as Resolution No 91-6 to implement a two-phased approach to reduce water use to meet anticipated shortage in water supply. In the event of a water shortage, the City Council will implement the appropriate water conservation phase by resolution.

Stages of Action

During water shortages, the City has the ability to meet its demands by applying the appropriate phase of the Emergency Water Conservation Plan. The plan imposes phases of mandatory water use reduction of up to 50 percent and consists of two phases that help reduce water use within the City's system in order to meet a conservative target. The City of Cerritos' City Council will implement the provisions of the Emergency Water Conservation Plan, following a public hearing, upon determination that the projected water shortage and the appropriate measures should be implemented. The following provides details of each phase of the plan.

Phase I – The following actions will be deemed improper water use:

1. Washing of walkways, driveways, or parking areas with a hose.
2. Using water to clean, fills, or maintain levels in decorative fountains unless a recycling system is used.

3. Serving drinking water to any customer in a restaurant or other public place where food is served, sold, or offered for sale unless expressly requested by the customer.
4. Failing to repair all water leaks as soon as possible.
5. Watering or irrigating lawns, turf, or landscape areas beyond saturation causing runoff.
6. Allowing a hose to run continuously while washing vehicles.
7. Allowing sprinklers to direct water to areas other than landscape causing runoff.

Phase II – Includes measures listed under Phase I, as well as the following:

1. Bimonthly, each 5/8" x 3/4" or 1" water meter shall be billed at a base consumption of 30 units, under the current water rate structure. All billing units of water used over the 30-unit base consumption will be billed at one and one half times the quantity rate in existence in the current rate structure.
2. Bimonthly, each 1-1/2" water meter shall be billed at a base consumption of 119 units under the current water rate structure.
3. Bimonthly, each 2" water meter shall be billed at a base consumption of 277 units under the current water rate structure.
4. Bimonthly, each 3" water meter shall be billed at a base consumption of 511 units under the current water rate structure.
5. Bimonthly, each 4" water meter shall be billed at a base consumption of 1,080 units under the current water rate structure.

Under each of the conditions listed above, if the bimonthly usage exceeds the 30-unit base consumption, a comparison to the previous year's water consumption during a similar bimonthly period will be made. The customer will be allowed ninety percent (90%) of the previous year's use. Any water used in excess of the greater of the following, will be billed at one and one half times the quantity rate in existence under the current rate structure: a) The base consumption for a 1-1/2", 2", 3", or 4" meter as applicable, or b) Ninety percent (90%) of the previous year's use comparison. As a member of agency of CBMWD, the City will also follow emergency consumption reduction methods imposed by Metropolitan through its WSDM Plan.

The City shall determine the extent of the conservation required through implementation and/or termination of particular water conservation phases in order to plan for and supply water to its customers, including consumption reduction up to 50 percent. As consumption reduction is required beyond 10% (provided by Phase I and II above), Phase III and Phase IV will be enforced through penalties, as outlined in Section 7.5. Table 7.2-1 shows the use reduction stages as a guideline for recommending the appropriate conservation stage and water conservation target.

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

| % Shortage Condition | Water Conservation Stage | Type of Use Reduction Program |
|-----------------------------|---------------------------------|--------------------------------------|
| Up to 10% | Phase I & II | Voluntary/ Mandatory |
| 10% to 15% | Phase III | Mandatory |
| 15% to 50% | Phase IV | Mandatory |

Metropolitan WSDM Plan

The WSDM Plan guides the operations of water resources (local resources, CRA, SWP, and regional storage) to ensure regional reliability. It identifies the expected sequence of resource management actions Metropolitan will take during surpluses and shortages of water to minimize the probability of severe shortages that require curtailment of full-service demands. Mandatory allocations are avoided to the extent practicable, however, in the event of an extreme shortage an allocation plan will be adopted in accordance with the principles of the WSDM Plan.

The WSDM Plan distinguishes between *Surpluses*, *Shortages*, *Severe Shortages*, and *Extreme Shortages*. Within the WSDM Plan, these terms have specific meaning relating to Metropolitan’s capability to deliver water to the City.

Surplus: Metropolitan can meet full-service and interruptible program demands, and it can deliver water to local and regional storage.

Shortage: Metropolitan can meet full-service demands and partially meet or fully meet interruptible demands, using stored water or water transfers as necessary.

Severe Shortage: Metropolitan can meet full-service demands only by using stored water, transfers, and possibly calling for extraordinary conservation. In a Severe Shortage, Metropolitan may have to curtail Interim Agricultural Water Program (IAWP) deliveries in accordance with IAWP.

Extreme Shortage: Metropolitan must allocate available supply to full-service customers.

The WSDM Plan also defines five surplus management stages and seven shortage management stages to guide resource management activities. Each year, Metropolitan will consider the level of supplies available and the existing levels of water in storage to determine the appropriate management stage for that year. Each stage is associated with specific resource management actions designed to: 1) avoid an Extreme Shortage to the maximum extent possible; and 2) minimize adverse impacts to retail customers should an “Extreme Shortage” occur. The current sequencing outlined in the WSDM Plan reflects anticipated responses based on detailed modeling of Metropolitan’s existing and expected resource mix. This sequencing may change as the resource mix evolves.

Shortage Actions by WDSM Plan Shortage Stage

When Metropolitan must make net withdrawals from storage, it is considered to be in a shortage condition. However, under most of these stages, it is still able to meet all end-use demands for water. The following summaries describe water management actions to be taken under each of the seven shortage stages:

Shortage Stage 1. Metropolitan will continue storage deliveries to Diamond Valley and SWP terminal reservoirs. Draws from Diamond Valley may be necessary to fully or partially meet interruptible demands.

Shortage Stage 2. Metropolitan will continue Shortage Stage 1 actions and may draw from Semitropic and Arvin-Edison groundwater storage to meet anticipated demands.

Shortage Stage 3. Metropolitan will continue Shortage Stage 2 actions and may curtail or temporarily suspend deliveries to Long-Term Seasonal and Replenishment Groundwater Storage Programs.

Shortage Stage 4. Metropolitan will continue Shortage Stage 3 actions and may draw from contractual groundwater storage and SWP terminal reservoirs to meet full-service demands.

Severe Shortage Stages

Shortage Stage 5. Metropolitan will continue Shortage Stage 4 actions. Metropolitan Board of Directors may call for extraordinary conservation and may curtail Interim Agricultural Water Program deliveries. In the event of a call for extraordinary conservation, Metropolitan's Drought Program Officer will coordinate public information activities with member agencies and monitor the effectiveness of ongoing conservation programs. The Drought Program Officer will implement monthly reporting on conservation program activities and progress and will provide quarterly estimates of conservation water savings.

Shortage Stage 6. Metropolitan will continue Shortage Stage 5 actions and may exercise water supply option contracts and/or buy water on the market either for consumptive use or for delivery to regional storage facilities.

Extreme Shortage Stage

Shortage Stage 7. Metropolitan will discontinue deliveries to regional storage facilities, continue extraordinary conservation efforts, and develop a plan to allocate available supply fairly and efficiently to full-service customers. Metropolitan will enforce these allocations using rate surcharges. The surcharges will be set at a minimum of \$175 per acre-foot for any deliveries exceeding a member agency's allotment. Any deliveries exceeding 102 percent of the allotment will be assessed a surcharge equal to three times Metropolitan's full-service rate.

The overriding goal of the WSDM Plan is to never reach Shortage Stage 7, an Extreme Shortage. Given present resources, Metropolitan fully expects to achieve this goal over the next ten years.

Reliability Modeling of the WSDM Plan

Using a technique known as “sequentially indexed Monte Carlo simulation,” Metropolitan undertook an extensive analysis of system reservoirs, forecasted demands, and probable hydrologic conditions to estimate the likelihood of reaching each Shortage Stage through 2010. The results of this analysis demonstrated the benefits of coordinated management of regional supply and storage resources. Expected occurrence of a Severe Shortage is four percent or less in most years and never exceeds six percent; equating to an expected shortage occurring once every 17 to 25 years. An Extreme Shortage was avoided in every simulation run.

Metropolitan also tested the WSDM Plan by analyzing its ability to meet forecasted demands given a repeat of two of the most severe California droughts in recent history. Hydrologic conditions for the years 1923–34 and 1980–91 were used in combination with demographic projections to generate two hypothetical supply and demand forecasts for the period 1999–2010. Metropolitan then simulated operation to determine the extent of regional shortage, if any. The results again indicate 100 percent reliability for full-service demands through the forecast period.

Health and Safety Requirements

The primary goal of the City’s water system is to preserve the health and safety of its personnel and the public. Meeting this goal is a continuous function of the system – before, during and after a disaster or water shortage. Fire suppression capabilities will continue to be maintained during any water shortage contingency stage. Some water needs are more immediate than others. The following list of public health needs and the allowable time without potable water is a guideline and will depend on the magnitude of the water shortage:

- Hospitals – continuous need
- Emergency shelters – immediate need
- Kidney dialysis – 24 hours
- Drinking water – 72 hours
- Personal hygiene, waste disposal – 72 hours

Based on commonly accepted estimates of interior residential water use in the United States, Table 7.2-2 indicates per capita health and safety water requirements. During the initial stage of a shortage, customers may adjust either interior and/or outdoor water use in order to meet the voluntary water reduction goal.

**Table 7.2-2
Per Capita Health and Safety Water Quantity Calculations**

| | Non-Conserving Fixtures | | Habit Changes ^[1] | | Conserving Fixtures ^[2] | |
|-------------------------|-------------------------|------|------------------------------|------|------------------------------------|------|
| | | | | | | |
| Toilet | 5 flushes x 5.5 gpf | 27.5 | 3 flushes x 5.5 gpf | 16.5 | 5 flushes x 1.6 gpf | 8.0 |
| Shower | 5 min. x 4.0 gpm | 20.0 | 4 min. x 3.0 gpm | 12.0 | 4 min. x 2.5 gpm | 10.0 |
| Washer | 12.5 gpcd | 12.5 | 11.5 gpcd | 11.5 | 11.5 gpcd | 11.5 |
| Kitchen | 4 gpcd | 4.0 | 4 gpcd | 4.0 | 4 gpcd | 4.0 |
| Other | 4 gpcd | 4.0 | 4 gpcd | 4.0 | 4 gpcd | 4.0 |
| Total | | 68.0 | | 48.0 | | 37.5 |
| CCF per capita per year | | 33.0 | | 23.0 | | 18.0 |

gpcd = gallons per capita per day

gpf = gallons per flush

gpm = gallons per minute

ccf = hundred cubic feet

^[1] Reduced shower use results from shorter and reduced flow. Reduced washer use results from fuller loads.

^[2] Fixtures include ULF 1.6 gpf toilets, 2.5 gpm showerheads, and efficient clothes washers.

Priority by Use

Priorities for use of available potable water during shortages are based on the legal requirements set forth in the California Water Code, Sections 350-358, that conserve the water supply for the greatest public benefit with particular regard to domestic use, sanitation, and fire protection.

Conditions prevailing in the City's service area require that the water resources available be put to maximum beneficial use to the extent to which they are capable. The waste or unreasonable use, or unreasonable method of use, of water should be prevented and that water conservation and water use efficiency is encouraged with a view to the maximum reasonable and beneficial use thereof in the interests of the people of the City and for the public welfare. Preservation of health and safety will be a top priority for the City.

Water allocations would abide by the following ranking system:

- Minimum health and safety allocations for interior residential needs (includes single family, multi-family, hospitals and convalescent facilities, retirement and mobile home communities, student housing, and fire fighting and public safety).
- Commercial, industrial, institutional/governmental operations (where water is used for manufacturing and for minimum health and safety allocations for employees and visitors) to maintain jobs and economic base of the community (not for landscape uses).
- Existing landscaping.
- New customers, proposed projects without permits when shortage is declared.

7.3 ESTIMATE OF MINIMUM SUPPLY FOR NEXT THREE YEARS

Metropolitan has projected a reliable supply of water during all multiple dry years through 2030. Consequently, Metropolitan does not anticipate any problems in meeting the City's demands during multiple dry years occurring over the next three years. With that in mind, the information presented below has been extracted from Table 4.2-6.

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

| Source | Base Year | | | Multiple Dry Years | | |
|--------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| | 2006 | 2007 | 2008 | 2006 | 2007 | 2008 |
| Imported | 3,610 | 3,590 | 3,570 | 3,550 | 3,530 | 3,510 |
| Groundwater | 10,020 | 10,020 | 10,020 | 10,190 | 9,790 | 10,160 |
| Recycled | 2,300 | 2,300 | 2,300 | 2,340 | 2,290 | 2,330 |
| Total | 15,930 | 15,910 | 15,890 | 16,080 | 15,610 | 16,000 |

7.4 CATASTROPHIC SUPPLY INTERRUPTION PLAN

Water Shortage Emergency Response

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

Cerritos recognizes that in the event of an emergency, such as an earthquake, the integrity of the water system can be breached causing disruptions in water supply. Because of the possibility of emergencies from both man-made and natural causes, water utility emergency planning is of utmost importance. The City's 2002 Emergency Response and Recovery Plan (Department of Public Works Water Division) sets forth emergency procedures and operations for the various water system components of each water program which can be affected in an emergency, such as power, personnel, materials and supplies, communications, equipment and structures.

The plan describes policies, procedures, and staff assignments needed to respond to possible emergencies – earthquakes, floods, and other disasters, both natural and man-made – that may result in catastrophic damage to the facilities and operations of the City of Cerritos (City). The Emergency Response and Recovery Plan (ERRP), for the Department of Public Works Water Division, covers only operational aspects of emergency response; additional policies and procedures are in place to handles financial and administrative matters.

In the event of major disaster, Water Division emergency response personnel will be coordinating their activities within the City (SEMS Program). If necessary, assistance from external agencies will be requested by the City's Emergency Operations Center (EOC). The City's EOC is to be activated in situations where the normal channels of command have been disrupted by damage to City facilities. The EOC will serve as a central location for the collection of damage assessments, and will coordinate the assignment of emergency response personnel and equipment. The EOC will also coordinate City response action with all City personnel and report to the Los Angeles County Emergency Operations Center (LACEOC).

The EOC will be activated in the event of any of the following situations: 1) Activation of LACEOC response network 2) Declaration of local emergency situation, which affects City operations and/or facilities 3) Major disruption of City operational facilities or communications systems. The EOC Management consists of the City Manager, Deputy City Manager/Director of Public Works, and Water Superintendent.

Management staff will report into the EOC as ready, and working through EOC assignments implement the following:

- Perform quick assessment to determine severity of the emergency situation
- Determine ability of Water Division personnel to deal with emergency repairs
- Determine need to request activation the City's EOC and Emergency Response teams
- Assist the City EOC in coordinating emergency response with LACEOC

Overall, the Water Division's Emergency Response and Recovery Program depends upon a coordinated team approach, which assigns specific duties to employees who are divided into Emergency Response and Recovery (ERR) Teams. The teams are organized along functional lines and mirror the City Organization Chart. The ERR Teams will be trained in their specific duties and assignments, and in the event of an emergency situation, the ERR Teams are expected to perform their functions without instructions or orders from supervisors. In the event of an emergency, the Emergency Response Managers will include: 1) Water Superintendent 2) Water Supervisor 3) Water Maintenance Leadworker 4) Senior Production/Distribution Maintenance Operator.

Through the Emergency Response Plan, the City will carry out effective means of addressing emergency situations through careful assignment. The City is currently updating its Emergency Response Plan, which will be completed June 30, 2006.

7.5 PROHIBITIONS, PENALTIES, AND CONSUMPTION REDUCTION METHODS

The City implements measures to curtail water consumption during times of supply shortages. On February 22, 1991 the City adopted Resolution No. 91-6 (Appendix G) establishing an ordinance to prohibit specific actions that would reduce consumption during water supply shortages. Resolution 91-6 sets forth the following prohibited measures for Phase I and Phase II of the Emergency Water Conservation Plan:

1. Washing of walkways, driveways, or parking areas with a hose.
2. Using water to clean, fills, or maintain levels in decorative fountains unless a recycling system is used.
3. Serving drinking water to any customer in a restaurant or other public place where food is served, sold, or offered for sale unless expressly requested by the customer.
4. Failing to repair all water leaks as soon as possible.
5. Watering or irrigation lawns, turf, or landscape areas beyond saturation causing runoff.
6. Allowing a hose to run continuously while washing vehicles.
7. Allowing sprinklers to direct water to areas other than landscape causing runoff.

Penalties will be imposed on customers who perform the prohibited actions. For each occurrence of improper water use, the City shall send to the customer a notice of improper water use specifying the section of the Resolution No 91-6 that applies. Failure to comply will result in the following penalties:

Phase I

1. First Violation: The City shall issue a written notice of the improper water use to the customer.
2. Second Violation: For a second violation during any one water shortage emergency, the City shall impose a \$25 penalty, payable with the next subsequent water bill.
3. Third and Subsequent Violations: For a third and each subsequent violation during any one water shortage emergency, the City shall install a flow restricting device of one (1) gallon per minute capacity for services up to one and one-half (1-1/2) inch size, and comparatively sized for larger services, on the service of the customer at the premises at which the violation occurred for a period of not less than forty-eight (48) hours. The City shall charge the customer the reasonable costs incurred for installing and for restoration of normal service. The charge shall be paid before the normal service can be restored.
4. Failure to pay penalties will result in discontinuation of water service until all previous penalties are paid in full. In addition, a reactivation fee will be imposed.

Phase II

A flow restricting device may be installed for a period of three (3) months in the water service of any customer whose bill shows an excess rate for three (3) consecutive months. The charge shall be as established for Phase I.

7.6 REVENUE AND EXPENDITURE IMPACTS AND MEASURES TO OVERCOME THOSE IMPACTS

The City has a Water Fund that is maintained as a separate enterprise from the City. The Water Fund serves as an emergency source of funds in the event of an extreme water shortage. Should an extreme shortage be declared and a large reduction in water sales occur for an extended period of time, the City would reexamine its water rate structure and monitor projected expenditures. If needed, the City would additionally increase rates to overcome revenue lost.

7.7 WATER SHORTAGE CONTINGENCY ORDINANCE

On February 21, 1991, the City adopted Ordinance No. 703 to implement several measures in order to curtail water consumption during times of supply shortages. The Ordinance enforces specific stages of actions to be implemented, as set forth in Resolution No. 91-6, during a declared water shortage, as well as prohibited actions, and penalties for violations of the Ordinance. A resolution will be utilized to implement a specific stage of the Emergency Water Conservation Plan. A draft resolution is included in Appendix H.

7.8 MECHANISMS TO DETERMINE REDUCTIONS IN WATER USE

In normal water supply conditions, production figures are recorded daily and are incorporated into the water production report. During rationing conditions, water shortages will continue to be closely monitored on a daily or hourly basis depending on the severity of the drought. Production from the Metropolitan connections and well production can be retrieved on an hourly basis. This allows City staff to determine the effects of reduction on water production within the system.

During a disaster shortage, production figures will be monitored on an ongoing basis. The City's SCADA system will warn of any critical conditions instantly. Once a shortage stage is implemented, actual reductions in water supply will be determined based on the SCADA system, which will allow monitoring on a daily basis. Reports will be provided on a daily basis to the City's Water Superintendent.

SECTION 8 WATER RECYCLING

8.1 RECYCLED WATER IN SOUTHERN CALIFORNIA

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

8.2 COORDINATION OF RECYCLED WATER IN SERVICE AREA

Recycled water is defined as domestic wastewater purified through primary, secondary and tertiary treatment. Recycled water is acceptable for most non-potable water purposes such as irrigation and commercial and industrial processes. The current distribution system developed by the City allows the supply of recycled water to some of its water customers. This helps to alleviate increased demands on current sources of potable water.

Since 1978, the City has been purchasing recycled water from LACSD for the irrigation of the City's Iron-Wood Nine Golf Course. In 1988, the City constructed a 15,000 gpm pump station at LACSD's Los Coyotes Water Reclamation Plant to directly provide recycled water throughout the City. The Reclamation Plant produces approximately 37 MGD of tertiary-treated effluent and is located in the City of Cerritos. In 1990, the City expanded its recycled water system with over 25 miles of recycled water pipelines to provide additional recycled water to users throughout Cerritos. That expansion also serves two additional connections for the City of Lakewood with recycled water. Although the Cerritos has been actively engaged in recycled water planning, the City does not currently have a recycled water master plan.

8.3 WASTEWATER COLLECTION AND TREATMENT

The City does not provide wastewater services within its service area, but instead relies on the LACSD to collect, treat, and dispose of wastewater. LACSD operates one wastewater treatment plant and six water reclamation plants in the Los Angeles Basin. The City's wastewater collection system consists of approximately 110 miles of pipeline ranging from 8-inches to 15-inches in diameter.

Because of a gravity flow system, wastewater from the City's service area is conveyed to the Long Beach Water Reclamation Plant. The Long Beach Water Reclamation Plant

provides primary, secondary, and tertiary treatment for 25 MG of wastewater per day. Any wastewater not diverted to the Long Beach Water Reclamation Plant plus the byproducts of treatment are conveyed to the LACSD Joint Water Pollution Control Plant. The Joint Water Pollution Control Plant provides advanced primary and partial secondary treatment for 350 MGD of wastewater prior to ocean disposal. The treated wastewater is discharge through a network of outfalls that extend two miles off the Palos Verdes Peninsula to a depth of 200 feet.⁵⁹

Municipal wastewater is generated in the City's service area from a combination of residential, commercial, and industrial sources. The quantities of wastewater generated are generally proportional to the population and the water used in the service area. It is estimated that customers within the City's service area generate wastewater based on 80 percent of potable water demand. As shown in Table 8.3-1 the wastewater generated within the City's service area is estimated through 2030. All wastewater generated from the City's service area is treated to recycled water standards at the Long Beach Water Reclamation Plant although it is not reused within the City's service area.

**Table 8.3-1
Wastewater Collection Within the City's Service Area**

| | 2005 | 2010 | 2015 | 2020 | 2025 | 2030 |
|-----------------------------------|----------|--------|--------|--------|--------|--------|
| Potable Water Demand (afy) | 9,127.65 | 10,050 | 10,050 | 10,050 | 10,050 | 10,050 |
| Wastewater Flow (afy) | 7,300 | 8,040 | 8,040 | 8,040 | 8,040 | 8,040 |

Note: Wastewater collected is assumed to equal 80% of the potable water demand. Potable water demand excludes demand of Golden State Water, Norwalk and County Water systems.

8.4 CITY OF CERRITOS RECYCLED WATER PLANNING

The City irrigates more than 200 acres of City-owned property, including most parks, parkways and medians with recycled water. In addition to City-owned property, the recycled water is also used for landscape irrigation at schools, a community college, a county park, a cemetery, freeway landscaping and privately owned landscaped areas, such as the Cerritos Towne Center and commercial nurseries.

The City's recycled water sales in 2004/2005 totaled 1,708 AF within the City and 352 AF to the City of Lakewood. The City of Lakewood is projecting an expansion of their recycled water system beginning in 2010 with an additional expansion in 2020. With this expansion in place, Lakewood's 2005 UWMP projects a recycled water demand in 2010 and 2015 of 450 AFY and a demand of 550 AFY in 2020, 2025 and 2030.

⁵⁹ Sanitation Districts of LA website: <http://www.lacsd.org/waswater/wrp/jwpcp1.htm>

Because Cerritos has been successful in encouraging large landscape water users, public authorities and others to consider using recycled water, the City’s recycled water system is essentially built-out. As a result, the City anticipates the future demands for recycled water to be relatively consistent with past demands. Recycled water demands may increase slightly in the future with the connection of a few commercial buildings for landscape irrigation.

The current and projected uses of recycled water used within the City’s service area are summarized in Table 8.4-1. The City has approximately 240 connections to the recycled water system. Because of the large number of connections, City connections are combined into major categories in Table 8.4-1. All recycled water is treated to tertiary levels and used to meet landscape irrigation demands.

**Table 8.4-1
City of Cerritos Recycled Water Customers
Current and Projected
(AFY)**

| Current Users | 2005 | 2010 | 2015 | 2020 | 2025 | 2030 |
|--|--------------|--------------|--------------|--------------|--------------|--------------|
| City of Cerritos Recycled Water Users | | | | | | |
| City of Cerritos Accounts | 666 | 750 | 750 | 750 | 750 | 750 |
| Private Accounts | 290 | 300 | 300 | 300 | 300 | 300 |
| Caltrans Accounts | 211 | 200 | 200 | 200 | 200 | 200 |
| School District Accounts | 450 | 500 | 500 | 500 | 500 | 500 |
| LA County Regional Park | 91 | 100 | 100 | 100 | 100 | 100 |
| City of Cerritos Recycled Water Use | 1,708 | 1,850 | 1,850 | 1,850 | 1,850 | 1,850 |
| City of Lakewood¹ | 352 | 450 | 450 | 550 | 550 | 550 |
| Total Current Recycled Water Use | 2,060 | 2,300 | 2,300 | 2,400 | 2,400 | 2,400 |

⁽¹⁾ The City of Lakewood maintains 39 irrigation connections. (City of Lakewood 2005 UWMP)

8.4.1 2000 Projection Comparison to 2005 Actual Recycled Water Use

Table 8.4.1-1 compares the 2000 projections of recycled water use with the actual recycled water use in 2005 within the City’s service area. The City’s 2000 UWMP projected 2,947 AF of recycled water usage in 2005. The actual usage in 2005 was 2,060 AF; however, 2005 was a very wet year (second highest rainfall total since 1880), which resulted in reduced usage. Additionally, the average recycled water usage of the past four years has been 2,211 AFY, thus suggesting that the 2000 projection may have been high.

**Table 8.4.1-1
City 2000 Projections for 2005 Compared to 2005 Actual Use
(AFY)**

| Type of Use | 2000 Projection for 2005 | 2005 Actual Use |
|--------------|--------------------------|-----------------|
| Total | 2,947 | 2,060 |

It should also be noted that the City of Lakewood estimated in 2000 that its 2004/05 recycled water demand would be 501 AF. Actual City of Lakewood use in 2004/05 was 352 AF. The decrease in demand can be attributed to the record high rainfall.

8.4.2 Potential Additional Uses of Recycled Water

Currently the only identified potential additional uses of recycled water within the City include a few commercial buildings. The irrigation demands at these locations are not known at this time. Future recycled water demands are not anticipated to increase because the large users of non-potable water supplies are already connected to the City's recycled water system.

8.4.3 Encouraging and Optimizing Recycled Water Use

The City has prepared and adopted a reclaimed water ordinance, Ordinance No. 621. This ordinance has been incorporated into the City's Municipal Code under Chapter 13.04. This chapter provides information related to establishing and maintaining recycled water service with the City. The City is committed to encouraging recycled water use by providing financial incentives. Financial incentives include wholesaling recycled water at a rate lower than potable water and setting aside funds within the budget each year to assist customers in converting their potable water connection to a recycled water system connection. The City's recycled water rate is set below potable water rates to encourage recycled water use at a rate of 55 percent of the potable water rate.

The City's recycled water system has been in operation for over 15 years and there is little opportunity for the system to expand and for new users to connect to the system. Although the City will continue to encourage recycled water use within its service area, the City does not anticipate an increase in recycled water demands.

With the recycled water system built-out, the City does not have an optimization plan. The City, however, recognizes the importance of optimizing recycled water within the region. Because the implementation of recycled water projects involves a substantial upfront capital investment for planning studies, environmental impact reports, engineering design, and construction; the City supports the establishment of funding sources for these types of projects. Funding sources through federal, state and regional programs currently provide significant financial incentives for local agencies to develop and make use of recycled water. Current potential funding sources include the USBR, California Proposition 50 Water Bond, and Metropolitan's LRP. These funding opportunities may be sought by the City or possibly more appropriately by regional agencies. The City will continue to support seeking funding for regional water recycling projects and programs.

APPENDIX A

***CALIFORNIA URBAN WATER
MANAGEMENT ACT OF 1983
AS AMENDED TO 2005***

Established: AB 797, Klehs, 1983

Amended: AB 2661, Klehs, 1990

AB 11X, Filante, 1991

AB 1869, Speier, 1991

AB 892, Frazee, 1993

SB 1017, McCorquodale, 1994

AB 2853, Cortese, 1994

AB 1845, Cortese, 1995

SB 1011, Polanco, 1995

AB 2552, Bates, 2000

SB 553, Kelley, 2000

SB 610, Costa, 2001

AB 901, Daucher, 2001

SB 672, Machado, 2001

SB 1348, Brulte, 2002

SB 1384, Costa, 2002

SB 1518, Torlakson, 2002

AB 105, Wiggins, 2004

SB 318, Alpert, 2004

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

CHAPTER 1. GENERAL DECLARATION AND POLICY

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

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

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

(2) The conservation and efficient use of urban water supplies are of statewide concern; however, the planning for that use and the implementation of those plans can best be accomplished at the local level.

(3) A long-term, reliable supply of water is essential to protect the productivity of California's businesses and economic climate.

(4) As part of its long-range planning activities, every urban water supplier should make every effort to ensure the appropriate level of reliability in its water service sufficient to meet the needs of its various categories of customers during normal, dry, and multiple dry water years.

(5) Public health issues have been raised over a number of contaminants that have been identified in certain local and imported water supplies.

(6) Implementing effective water management strategies, including groundwater storage projects and recycled water projects, may require

specific water quality and salinity targets for meeting groundwater basins water quality objectives and promoting beneficial use of recycled water.

(7) Water quality regulations are becoming an increasingly important factor in water agencies' selection of raw water sources, treatment alternatives, and modifications to existing treatment facilities.

(8) Changes in drinking water quality standards may also impact the usefulness of water supplies and may ultimately impact supply reliability.

(9) The quality of source supplies can have a significant impact on water management strategies and supply reliability.

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

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

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

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

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

CHAPTER 2. DEFINITIONS

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

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

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

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

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

10615. "Plan" means an urban water management plan prepared pursuant to this part. A plan shall describe and evaluate sources of supply, reasonable and practical efficient uses, reclamation and demand management activities. The

components of the plan may vary according to an individual community or area's characteristics and its capabilities to efficiently use and conserve water. The plan shall address measures for residential, commercial, governmental, and industrial water demand management as set forth in Article 2 (commencing with Section 10630) of Chapter 3. In addition, a strategy and time schedule for implementation shall be included in the plan.

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

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

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

CHAPTER 3. URBAN WATER MANAGEMENT PLANS

Article 1. General Provisions

10620.

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

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

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

(d)

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

- (2) Each urban water supplier shall coordinate the preparation of its plan with other appropriate agencies in the area, including other water suppliers that share a common source, water management agencies, and relevant public agencies, to the extent practicable.
- (e) The urban water supplier may prepare the plan with its own staff, by contract, or in cooperation with other governmental agencies.
- (f) An urban water supplier shall describe in the plan water management tools and options used by that entity that will maximize resources and minimize the need to import water from other regions.

10621.

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

Article 2. Contents of Plans

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

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

- (a) Describe the service area of the supplier, including current and projected population, climate, and other demographic factors affecting the supplier's water management planning. The projected population estimates shall be based upon data from the state, regional, or local service agency population projections within the service area of the urban water supplier and shall be in five-year increments to 20 years or as far as data is available.
- (b) Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five-year increments described in subdivision (a). If groundwater is identified as an existing or planned source of water available to the supplier, all of the following information shall be included in the plan:
 - (1) A copy of any groundwater management plan adopted by the urban water supplier, including plans adopted pursuant to Part

2.75 (commencing with Section 10750), or any other specific authorization for groundwater management.

- (2) A description of any groundwater basin or basins from which the urban water supplier pumps groundwater. For those basins for which a court or the board has adjudicated the rights to pump groundwater, a copy of the order or decree adopted by the court or the board and a description of the amount of groundwater the urban water supplier has the legal right to pump under the order or decree.

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

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

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

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

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

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

(e)

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

- (A) Single-family residential.
 - (B) Multifamily.
 - (C) Commercial.
 - (D) Industrial.
 - (E) Institutional and governmental.
 - (F) Landscape.
 - (G) Sales to other agencies.
 - (H) Saline water intrusion barriers, groundwater recharge, or conjunctive use, or any combination thereof.
 - (I) Agricultural.
- (2) The water use projections shall be in the same five-year increments described in subdivision (a).
- (f) Provide a description of the supplier's water demand management measures. This description shall include all of the following:
- (1) A description of each water demand management measure that is currently being implemented, or scheduled for implementation, including the steps necessary to implement any proposed measures, including, but not limited to, all of the following:
 - (A) Water survey programs for single-family residential and multifamily residential customers.
 - (B) Residential plumbing retrofit.
 - (C) System water audits, leak detection, and repair.
 - (D) Metering with commodity rates for all new connections and retrofit of existing connections.
 - (E) Large landscape conservation programs and incentives.
 - (F) High-efficiency washing machine rebate programs.
 - (G) Public information programs.
 - (H) School education programs.
 - (I) Conservation programs for commercial, industrial, and institutional accounts.
 - (J) Wholesale agency programs.
 - (K) Conservation pricing.
 - (L) Water conservation coordinator.
 - (M) Water waste prohibition.
 - (N) Residential ultra-low-flush toilet replacement programs.
 - (2) A schedule of implementation for all water demand management measures proposed or described in the plan.
 - (3) A description of the methods, if any, that the supplier will use to evaluate the effectiveness of water demand management measures implemented or described under the plan.
 - (4) An estimate, if available, of existing conservation savings on water use within the supplier's service area, and the effect of the savings on the supplier's ability to further reduce demand.
- (g) An evaluation of each water demand management measure listed in paragraph (1) of subdivision (f) that is not currently being

implemented or scheduled for implementation. In the course of the evaluation, first consideration shall be given to water demand management measures, or combination of measures, that offer lower incremental costs than expanded or additional water supplies. This evaluation shall do all of the following:

- (1) Take into account economic and noneconomic factors, including environmental, social, health, customer impact, and technological factors.
- (2) Include a cost-benefit analysis, identifying total benefits and total costs.
- (3) Include a description of funding available to implement any planned water supply project that would provide water at a higher unit cost.
- (4) Include a description of the water supplier's legal authority to implement the measure and efforts to work with other relevant agencies to ensure the implementation of the measure and to share the cost of implementation.

(h) Include a description of all water supply projects and water supply programs that may be undertaken by the urban water supplier to meet the total projected water use as established pursuant to subdivision (a) of Section 10635. The urban water supplier shall include a detailed description of expected future projects and programs, other than the demand management programs identified pursuant to paragraph (1) of subdivision (f), that the urban water supplier may implement to increase the amount of the water supply available to the urban water supplier in average, single-dry, and multiple-dry water years. The description shall identify specific projects and include a description of the increase in water supply that is expected to be available from each project. The description shall include an estimate with regard to the implementation timeline for each project or program.

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

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

(k) Urban water suppliers that rely upon a wholesale agency for a source of water, shall provide the wholesale agency with water use projections from that agency for that source of water in five-year

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

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

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

- (a) Stages of action to be undertaken by the urban water supplier in response to water supply shortages, including up to a 50 percent reduction in water supply, and an outline of specific water supply conditions which are applicable to each stage.
- (b) An estimate of the minimum water supply available during each of the next three water years based on the driest three-year historic sequence for the agency's water supply.
- (c) Actions to be undertaken by the urban water supplier to prepare for, and implement during, a catastrophic interruption of water supplies including, but not limited to, a regional power outage, an earthquake, or other disaster.
- (d) Additional, mandatory prohibitions against specific water use practices during water shortages, including, but not limited to, prohibiting the use of potable water for street cleaning.
- (e) Consumption reduction methods in the most restrictive stages. Each urban water supplier may use any type of consumption reduction methods in its water shortage contingency analysis that would reduce water use, are appropriate for its area, and have the ability to achieve a water use reduction consistent with up to a 50 percent reduction in water supply.
- (f) Penalties or charges for excessive use, where applicable.

- (g) An analysis of the impacts of each of the actions and conditions described in subdivisions (a) to (f), inclusive, on the revenues and expenditures of the urban water supplier, and proposed measures to overcome those impacts, such as the development of reserves and rate adjustments.
- (h) A draft water shortage contingency resolution or ordinance.
- (i) A mechanism for determining actual reductions in water use pursuant to the urban water shortage contingency analysis.

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

- (a) A description of the wastewater collection and treatment systems in the supplier's service area, including a quantification of the amount of wastewater collected and treated and the methods of wastewater disposal.
- (b) A description of the quantity of treated wastewater that meets recycled water standards, is being discharged, and is otherwise available for use in a recycled water project.
- (c) A description of the recycled water currently being used in the supplier's service area, including, but not limited to, the type, place, and quantity of use.
- (d) A description and quantification of the potential uses of recycled water, including, but not limited to, agricultural irrigation, landscape irrigation, wildlife habitat enhancement, wetlands, industrial reuse, groundwater recharge, and other appropriate uses, and a determination with regard to the technical and economic feasibility of serving those uses.
- (e) The projected use of recycled water within the supplier's service area at the end of 5, 10, 15, and 20 years, and a description of the actual use of recycled water in comparison to uses previously projected pursuant to this subdivision.
- (f) A description of actions, including financial incentives, which may be taken to encourage the use of recycled water, and the projected results of these actions in terms of acre-feet of recycled water used per year.
- (g) A plan for optimizing the use of recycled water in the supplier's service area, including actions to facilitate the installation of dual distribution systems, to promote recirculating uses, to facilitate the increased use of treated wastewater that meets recycled water standards, and to overcome any obstacles to achieving that increased use.

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

Article 2.5 Water Service Reliability

10635.

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

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

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

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

Article 3. Adoption and Implementation of Plans

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

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

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

10642. Each urban water supplier shall encourage the active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of the plan. Prior to adopting a plan, the urban water supplier shall make the plan available for public inspection and shall hold a public hearing thereon. Prior to the hearing, notice of the time

and place of hearing shall be published within the jurisdiction of the publicly owned water supplier pursuant to Section 6066 of the Government Code. The urban water supplier shall provide notice of the time and place of hearing to any city or county within which the supplier provides water supplies. A privately owned water supplier shall provide an equivalent notice within its service area. After the hearing, the plan shall be adopted as prepared or as modified after the hearing.

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

10644.

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

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

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

CHAPTER 4. MISCELLANEOUS PROVISIONS

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

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

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

10651. In any action or proceeding to attack, review, set aside, void, or annul a plan, or an action taken pursuant to the plan by an urban water supplier on the grounds of noncompliance with this part, the inquiry shall extend only to whether there was a prejudicial abuse of discretion. Abuse of discretion is established if

the supplier has not proceeded in a manner required by law or if the action by the water supplier is not supported by substantial evidence.

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

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

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

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

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

10657.

(a) The department shall take into consideration whether the urban water supplier has submitted an updated urban water management plan that is consistent with Section 10631, as amended by the act that adds this section, in determining whether the urban water supplier is eligible for funds made available pursuant to any program administered by the department.

(b) This section shall remain in effect only until January 1, 2006, and as of that date is repealed, unless a later enacted statute, that is enacted before January 1, 2006, deletes or extends that date.

APPENDIX B

***DWR 2005 URBAN WATER MANAGEMENT PLAN
“REVIEW FOR COMPLETENESS” FORM***

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

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

- Yes
 Participated in area, regional, watershed or basin wide plan
 Name of plan 2005 UWMP Lead Agency City of Cerritos Sec 1, p.1-2 Reference & Page Number
 Describe the coordination of the plan preparation and anticipated benefits. Sec 1, p.1-2 Reference & Page Number

| Table 1 Coordination with Appropriate Agencies | | | | | | | |
|---|-------------------------------------|------------------------|--------------------------|------------------------------|--|---|-------------------------------|
| Check at least one box on each row | Participated in developing the plan | Commented on the draft | Attended public meetings | Was contacted for assistance | Sent and/or copy available of the draft plan | Was sent a notice of intention to adopt | Not Involved / No Information |
| City Water Division | X | X | X | X | X | X | |
| City Planning Department | X | X | X | X | X | X | |
| City Clerk | | | X | X | X | X | |
| CBMWD | | | | X | X | X | |
| Metropolitan WD of So CA | | | | X | X | X | |
| WRD | | | | X | X | X | |
| LACSD | | | | X | X | X | |
| General Public | | | | | X | X | |

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

- Describe how water management tools / options maximize resources & minimize need to import water Sec 2, p.2-3 Reference & Page Number

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

- Date updated and adopted plan received 3/9/2006 (enter date) Sec 1, p.1-2 Reference & Page Number

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

- Notify any city or county within service area of UWMP of plan review & revision Sec 1, p.1-2 Reference & Page Number
 Consult and obtain comments from cities and counties within service area Sec 1, p.1-2 Reference & Page Number

Service Area Information

Water Code § 10631 (a)

Include current and projected population
 Population projections were based on data from state, regional or local agency

Sec 1, p.1-5 Reference & Page Number
Sec 1, p.1-5 Reference & Page Number

| Table 2 Population - Current and Projected | | | | | | | | |
|---|--------|--------|--------|--------|--------|--------|--------|--------|
| | 1990 | 2000 | 2004 | 2010 | 2015 | 2020 | 2025 | 2030 |
| Service Area Population | 53,240 | 51,488 | 52,898 | 53,000 | 53,000 | 53,000 | 53,000 | 53,000 |

Describe climate characteristics that affect water management
 Describe other demographic factors affecting water management

Sec 1, p.1-4 Reference & Page Number
Sec 1, p.1-4 Reference & Page Number

| Table 3 Climate | | | | | | |
|-----------------------------|---------|----------|-------|-------|------|------|
| | January | February | March | April | May | June |
| Standard Average ETo | 1.86 | 2.24 | 3.41 | 4.8 | 5.58 | 6.3 |
| Average Rainfall | 3.3 | 3.1 | 2.9 | 1.1 | 0.3 | 0 |
| Average Temperature | 66 | 67 | 68 | 71 | 74 | 77 |

| Table 3 (continued) Climate | | | | | | | |
|--------------------------------|------|--------|-----------|---------|----------|----------|--------------|
| | July | August | September | October | November | December | Annual |
| Average ETo | 6.51 | 6.2 | 4.8 | 3.72 | 2.4 | 1.86 | 49.68 |
| Average Rainfall | 0 | 0.1 | 0.4 | 0.4 | 1.9 | 2.3 | 15.8 |
| Average Temperature | 82 | 84 | 82 | 78 | 72 | 67 | 74 |

Water Sources

(Water Code § 10631 (b))

- Identify existing and planned water supply sources Sec 2, p.2-1 Reference & Page Number
- Provide current water supply quantities Sec 2, p.2-3 Reference & Page Number
- Provide planned water supply quantities Sec 2, p.2-3 Reference & Page Number

| Table 4 | | | | | | |
|--|---------------|---------------|---------------|---------------|---------------|---------------|
| Current and Planned Water Supplies - AFY | | | | | | |
| Water Supply Sources | 2005 | 2010 | 2015 | 2020 | 2025 | 2030 - opt |
| Water purchased from: | | | | | | |
| CBMWD through MWD - Imported | 1,493 | 3,520 | 3,410 | 3,590 | 3,380 | 3,170 |
| Central Basin Aquifer - Groundwater | 10,434 | 10,020 | 10,020 | 10,020 | 10,020 | 10,020 |
| Recycled Water | 2,060 | 2,300 | 2,300 | 2,400 | 2,400 | 2,400 |
| Total (Potable + Recycled) | 13,987 | 15,840 | 15,730 | 16,010 | 15,800 | 15,590 |

If Groundwater identified as existing or planned source

(Water Code §10631 (b)(1-4))

- Has management plan Reference & Page Number
- Attached management plan (b)(1) Reference & Page Number
- Description of basin(s) (b)(2) Sec 2, p.2-4 Reference & Page Number
- Basin is adjudicated Reference & Page Number
- If adjudicated, attached order or decree (b)(2) Reference & Page Number
- Quantified amount of legal pumping right (b)(2) Sec 2, p.2-4 Reference & Page Number

| Table 5 | |
|--------------------------------------|---------------------|
| Groundwater Pumping Rights - AF Year | |
| Basin Name | Pumping Right - AFY |
| Central Groundwater Basin | 4,680 |
| Total | 4,680 |

-
-
-
-

DWR identified, or projected to be, in overdraft (b)(2)
 Plan to eliminate overdraft (b)(2)
 Analysis of location, amount & sufficiency, last five years (b)(3)
 Analysis of location & amount projected, 20 years (b)(4)

Sec 2, p.2-5 Reference & Page Number
Sec 2, p.2-5 Reference & Page Number
Sec 2, p.2-7 Reference & Page Number
Sec 2, p.2-7 Reference & Page Number

| Table 6 Amount of Groundwater pumped - AFY | | | | | | |
|---|-------|-------|--------|-------|--------|--------|
| Basin Name (s) | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
| Central Groundwater Basin | 9,515 | 9,760 | 10,504 | 9,971 | 10,349 | 10,434 |
| % of Total Water Supply | | | | | | |

| Table 7 Amount of Groundwater projected to be pumped - AFY | | | | | |
|---|--------|--------|--------|--------|------------|
| Basin Name(s) | 2010 | 2015 | 2020 | 2025 | 2030 - opt |
| Central Groundwater Basin | 10,020 | 10,020 | 10,020 | 10,020 | 10,020 |
| % of Total Water Supply | 63.3% | 63.7% | 62.6% | 63.4% | 64.3% |

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

-

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

Sec 4, p.4- Reference & Page Number

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

| Table 9 Basis of Water Year Data | | | |
|-------------------------------------|------------------|-------------|-------------|
| Water Year Type | Source name | Source name | Source name |
| Average Water Year | City of Cerritos | | |
| Single-Dry Water Year | 1977 | MWD of SC | |
| Multiple-Dry Water Years | 1990-1992 | MWD of SC | |

Sec 2, p.2-4 Reference & Page Number
Sec 4, p.4-11 Reference & Page Number
Sec 4, p.4-11 Reference & Page Number

Water Sources Not Available on a Consistent Basis

(Water Code §10631 (c))

- Describe the reliability of the water supply due to seasonal or climatic shortages Sec 4, p.4-24 Reference & Page Number
- Describe the vulnerability of the water supply to seasonal or climatic shortages Sec 4, p.4-24 Reference & Page Number
- No unreliable sources Sec 4, p.4-24 Reference & Page Number

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

- Describe plans to supplement or replace inconsistent sources with alternative sources or DMMs _____ Reference & Page Number
- No inconsistent sources _____ Reference & Page Number

Transfer or Exchange Opportunities

(Water Code §10631 (d))

- Describe short term and long term exchange or transfer opportunities Sec 4, p.4-32 Reference & Page Number
- No transfer opportunities Sec 4, p.4-32 Reference & Page Number

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

Water Use Provisions

(Water Code §10631 (e)(1)(2))

-
-
-

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

Sec 5, p.5-1 Reference & Page Number
 Sec 5, p.5-1 Reference & Page Number
 Sec 5, p.5-1 Reference & Page Number

| TABLE 12 - Past, Current and Projected Water Deliveries | | | | | | |
|---|---------------|----------------|---------------|----------------|---------------|----------------|
| | 2000 | | 2004 | | 2010 | |
| | metered | | metered | | metered | |
| Water Use Sectors | # of accounts | Deliveries AFY | # of accounts | Deliveries AFY | # of accounts | Deliveries AFY |
| Single family Residential | 13,964 | 6,291 | 13,992 | 6,078 | 14,000 | 6,500 |
| Multi-family Residential | 249 | 411 | 264 | 493 | 265 | 500 |
| Commercial/Institutional | 790 | 2,033 | 787 | 2,129 | 790 | 2,200 |
| Industrial | 0 | 0 | 0 | 0 | 0 | 0 |
| Landscape Irrigation (Potable) | 329 | 588 | 335 | 603 | 335 | 700 |
| Other | 270 | 42 | 286 | 88 | 290 | 120 |
| Agricultural Irrigation | 1 | 40 | 1 | 19 | 1 | 30 |
| Recycled | 227 | 2,479 | 236 | 2,291 | 240 | 2,300 |
| Wholesale Sales to Others | N/A | 2,422 | N/A | 3,043 | N/A | 2,660 |
| Total | 15,830 | 14,306 | 15,901 | 14,744 | 15,921 | 15,010 |

| TABLE 12 (continued) - Past, Current and Projected Water Deliveries | | | | | | | | |
|---|---------------|----------------|---------------|----------------|---------------|----------------|---------------|----------------|
| | 2015 | | 2020 | | 2025 | | 2030 - opt | |
| | metered | | metered | | metered | | metered | |
| Water Use Sectors | # of accounts | Deliveries AFY |
| Single family Residential | 14,000 | 6,500 | 14,000 | 6,500 | 14,000 | 6,500 | 14,000 | 6,500 |
| Multi-family Residential | 265 | 500 | 265 | 500 | 265 | 500 | 265 | 500 |
| Commercial/Institutional | 790 | 2,200 | 790 | 2,200 | 790 | 2,200 | 790 | 2,200 |
| Industrial | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Landscape Irrigation (Potable) | 335 | 700 | 335 | 700 | 335 | 700 | 335 | 700 |
| Other | 290 | 120 | 290 | 120 | 290 | 120 | 290 | 120 |
| Agricultural Irrigation | 1 | 30 | 1 | 30 | 1 | 30 | 1 | 30 |
| Recycled | 240 | 2,300 | 240 | 2,400 | 240 | 2,400 | 240 | 2,400 |
| Wholesale Sales to Others | N/A | 2,660 | N/A | 2,660 | N/A | 2,660 | N/A | 2,660 |
| Total | 15,921 | 15,010 | 15,921 | 15,110 | 15,921 | 15,110 | 15,921 | 15,110 |

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

_____ Reference & Page Number
Sec 5, p.5-1 Reference & Page Number

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

- Identify and quantify additional water uses

_____ Reference & Page Number

| Table 14 Additional Water Uses and Losses - AF Year | | | | | | | |
|--|------|------|------|------|------|------|------------|
| Water Use | 2000 | 2005 | 2010 | 2015 | 2020 | 2025 | 2030 - opt |
| Unaccounted-for system losses | | | | | | | |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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

2005 Urban Water Management Plan "Review of DMMs for Completeness" Form (Water Code §10631 (f))

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

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

- No non-implemented / not scheduled DMMs Sec 6, p.6-1 Reference & Page Number
- Cost-Benefit includes economic and non-economic factors (environmental, social, health, customer impact, and technological factors) _____ Reference & Page Number
- Cost-Benefit analysis includes total benefits and total costs _____ Reference & Page Number
- Identifies funding available for Projects with higher per-unit-cost than DMMs _____ Reference & Page Number
- Identifies Suppliers' legal authority to implement DMMs, efforts to implement the measures and efforts to identify cost share partners Sec 6, p.6-1 Reference & Page Number

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

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

- | | | |
|-------------------------------------|--|--|
| <input type="checkbox"/> | No future water supply projects or programs | |
| <input checked="" type="checkbox"/> | Detailed description of expected future supply projects & programs | <u>Sec 4, p.4-24</u> Reference & Page Number |
| <input checked="" type="checkbox"/> | Timeline for each proposed project | <u>Sec 4, p.4-24</u> Reference & Page Number |
| <input checked="" type="checkbox"/> | Quantification of each projects normal yield (AFY) | <u>Sec 4, p.4-24</u> Reference & Page Number |
| <input checked="" type="checkbox"/> | Quantification of each projects single dry-year yield (AFY) | <u>Sec 4, p.4-24</u> Reference & Page Number |
| <input checked="" type="checkbox"/> | Quantification of each projects multiple dry-year yield (AFY) | <u>Sec 4, p.4-24</u> Reference & Page Number |

| Table 17 Future Water Supply Projects | | | | | | | |
|--|----------------------|---------------------------|--------------------------|--------------------------|------------------------|------------------------|------------------------|
| Project Name | Projected Start Date | Projected Completion Date | Normal-year AF to agency | Single-dry year yield AF | Multiple-Dry-Year 1 AF | Multiple-Dry-Year 2 AF | Multiple-Dry-Year 3 AF |
| Well C-5 | 2005 | 2006 | 3,550 | 3,550 | 3,550 | 3,550 | 3,550 |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

Opportunities for development of desalinated water

(Water Code §10631 (i))

- Describes opportunities for development of desalinated water, including, but not limited to, ocean water, brackish water, and groundwater, as a long-term supply Sec 4, p.4-33 Reference & Page Number
- No opportunities for development of desalinated water Reference & Page Number

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

District is a CUWCC signatory

(Water Code § 10631 (j))

Urban suppliers that are California Urban Water Conservation Council members may submit the annual reports identifying water demand management measures currently being implemented, or scheduled for implementation, to satisfy the requirements of subdivisions (f) and (g).

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

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

If Supplier receives or projects receiving water from a wholesale supplier

(Water Code §10631 (k))

- ^{Yes} Agency receives, or projects receiving, wholesale water Sec 4, p.4-21 Reference & Page Number
- Agency provided written demand projections to wholesaler, 20 years Reference & Page Number

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

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

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

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

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

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

Water Shortage Contingency Plan Section

(Water Code § 10632)

Stages of Action

(Water Code § 10632 (a))

- Provide stages of action Sec 7, p.7-1 Reference & Page Number
- Provide the water supply conditions for each stage Sec 7, p.7-2 Reference & Page Number
- Includes plan for 50 percent supply shortage Sec 7, p.7-3 Reference & Page Number

| Table 23 | | |
|--|---|-------------------|
| Water Supply Shortage Stages and Conditions | | |
| RATIONING STAGES | | |
| Stage No. | Water Supply Conditions | % Shortage |
| Shortage Stage 1 | Withdrawals from Diamond Valley Lake | |
| Shortage Stage 2 | Continue with Stage 1 & out of region groundwater storage | |
| Shortage Stage 3 | Continue with Stage 2, Long Term Seasonal & Replenishment Program | |
| Shortage Stage 4 | Continue with Stage 3, gwtr. Storage, SWP terminal reservoirs | |
| Shortage Stage 5 | Continue with Stage 4, monthly reports on conservation program | |
| Shortage Stage 6 | Continue with Stage 5, water supply option contracts | |
| Shortage Stage 7 | Metropolitan discontinues deliveries to regional storage facilities | |

Three-Year Minimum Water Supply

(Water Code §10632 (b))

- Identifies driest 3-year period Sec 7, p.7-7 Reference & Page Number
- Minimum water supply available by source for the next three years Sec 7, p.7-7 Reference & Page Number

| Table 24 | | | | | | |
|--|------------------|---------------|---------------|---------------------------|---------------|---------------|
| Three-Year Estimated Minimum Water Supply - AF Year | | | | | | |
| | Base Year | | | Multiple Dry Years | | |
| source** | 2006 | 2007 | 2007 | 2006 | 2007 | 2008 |
| Imported | 3,610 | 3,590 | 3,570 | 3,550 | 3,530 | 3,510 |
| Groundwater | 10,020 | 10,020 | 10,020 | 10,190 | 9,790 | 10,160 |
| Recycled | 2,300 | 2,300 | 2,300 | 2,340 | 2,290 | 2,330 |
| Total | 15,930 | 15,910 | 15,890 | 16,080 | 15,610 | 16,000 |

Preparation for catastrophic water supply interruption

(Water Code §10632 (c))

Provided catastrophic supply interruption plan

Sec 7, p.7-7 Reference & Page Number

| Table 25 Preparation Actions for a Catastrophe | |
|---|--------------------|
| Possible Catastrophe | Check if Discussed |
| Regional power outage | X |
| Earthquake | X |

Prohibitions

(Water Code § 10632 (d))

List the mandatory prohibitions against specific water use practices during water shortages

Sec 7, p.7-1/2 Reference & Page Number

| Table 26 Mandatory Prohibitions | |
|--|--|
| Examples of Prohibitions | Stage When Prohibition Becomes Mandatory |
| Using potable water for street, drive, parking washing | I, II |
| Using water for decorative fountains unless recycled | I, II |
| Serving drinking water in restaurants unless requested | I, II |
| Failing to repair wate leaks as soon as possible | I, II |
| Watering lawns, turf, etc causing runoff | I, II |
| Allowing hose to run continuously while washing vehicles | I, II |
| Allowing sprinklers to cause runoff | I, II |
| Bimonthly, each 5/8" x 3/4" or 1" water meter shall be billed at a base consumption of 30 unites | II |
| Bimonthly, each 1-1/2" water meter shall be billed at a base consumptino of 119 units | II |
| Bimonthly, each 2" water meter shall be billed at a bas consumption of 277 units | II |
| Bimonthly, each 3" water meter shall be billed at a base consumption of 511 units | II |
| Bimonthly, each 4" water meter shall be billed at a base consumption of 1,080 units | II |

Consumption Reduction Methods**(Water Code § 10632 (e))**

List the consumption reduction methods the water supplier will use to reduce water use in the most restrictive stages with up to a 50% reduction.

Sec 7, p.7-2 Reference & Page Number

| Table 27 Consumption Reduction Methods | | |
|---|--------------------------------|-------------------------|
| Consumption Reduction Methods | Stage When Method Takes Effect | Projected Reduction (%) |
| Water billed above set base consumption at substantial increase | II | |
| | | |
| | | |
| | | |
| | | |
| | | |

Penalties**(Water Code § 10632 (f))**

List excessive use penalties or charges for excessive use

Sec 7, p.7-8 Reference & Page Number

| Table 28 Penalties and Charges | |
|-----------------------------------|---------------------------------|
| Penalties or Charges | Stage When Penalty Takes Effect |
| Penalty for excess use | |
| Charge for excess use | |

Revenue and Expenditure Impacts

(Water Code § 10632 (g))

- Describe how actions and conditions impact revenues
- Describe how actions and conditions impact expenditures
- Describe measures to overcome the revenue and expenditure impacts

Sec 7, p. 7-9 Reference & Page Number
Sec 7, p. 7-9 Reference & Page Number
Sec 7, p. 7-9 Reference & Page Number

| Table 29 Proposed measures to overcome revenue impacts | |
|---|--------------------|
| Names of measures | Check if Discussed |
| Rate adjustment | X |
| Development of reserves | X |

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

Water Shortage Contingency Ordinance/Resolution

(Water Code § 10632 (h))

- Attach a copy of the draft water shortage contingency resolution or ordinance.

Sec 7, p.7-10 Reference & Page Number

Reduction Measuring Mechanism**(Water Code § 10632 (i))** Provided mechanisms for determining actual reductionsSec 7, p.7-10 Reference & Page Number

| Table 31 Water Use Monitoring Mechanisms | |
|--|------------------------------|
| Mechanisms for determining actual reductions | Type data expected (pop-up?) |
| Daily/Weekly/Monthly Reports | Estimated water savings |
| Drought Program Stages | Monitor |

Recycling Plan Agency Coordination**Water Code § 10633** Describe the coordination of the recycling plan preparation information to the extent availableSec 8, p.8-1 Reference & Page Number

| Table 32 Participating agencies | |
|------------------------------------|--------------|
| | participated |
| Water agencies | X |
| Wastewater agencies | X |
| Groundwater agencies | |
| Planning Agencies | |

Wastewater System Description**(Water Code § 10633 (a))** Describe the wastewater collection and treatment systems in the supplier's service areaSec 8, p.8-1 Reference & Page Number Quantify the volume of wastewater collected and treatedSec 8, p.8-2 Reference & Page Number

| Table 33 Wastewater Collection and Treatment - AF Year | | | | | | | |
|---|---------|--------|--------|--------|--------|--------|------------|
| Type of Wastewater | 2000 | 2005 | 2010 | 2015 | 2020 | 2025 | 2030 - opt |
| Potable Water Demand (afy) | 9127.65 | 10,050 | 10,050 | 10,050 | 10,050 | 10,050 | 10,050 |
| Wastewater collected & treated in service area | 7,300 | 8,040 | 8,040 | 8,040 | 8,040 | 8,040 | 8,040 |
| Volume that meets recycled water standard | 100% | 100% | 100% | 100% | 100% | 100% | 100% |

Projected Uses of Recycled Water

(Water Code § 10633 (e))

Projected use of recycled water, 20 years

Sec 8, p.8-3 Reference & Page Number

| Table 36 | | | | | | |
|---|--------------|--------------|--------------|--------------|--------------|--------------|
| Projected Future Use of Recycled Water in Service Area - AF Year | | | | | | |
| | 2005 | 2010 | 2015 | 2020 | 2025 | 2030 |
| City of Cerritos Recycled Water Users | | | | | | |
| City of Cerritos Accounts | 666 | 750 | 750 | 750 | 750 | 750 |
| Private Accounts | 290 | 300 | 300 | 300 | 300 | 300 |
| Caltrans Accounts | 211 | 200 | 200 | 200 | 200 | 200 |
| School District Accounts | 450 | 500 | 500 | 500 | 500 | 500 |
| LA County Regional Park | 91 | 100 | 100 | 100 | 100 | 100 |
| City of Cerritos Recycled Water User | 1,708 | 1,850 | 1,850 | 1,850 | 1,850 | 1,850 |
| City of Lakewood | 352 | 450 | 450 | 550 | 550 | 550 |
| Total Current Recycled Water Use | 2,060 | 2,300 | 2,300 | 2,400 | 2,400 | 2,400 |

Compare UWMP 2000 projections with UWMP 2005 actual (§ 10633 (e))

Sec 8, p.8-4 Reference & Page Number

None

Reference & Page Number

| Table 37 | | |
|--|---------------------------------|------------------------|
| Recycled Water Uses - 2000 Projection compared with 2005 actual - AFY | | |
| User type | 2000 Projection for 2005 | 2005 actual use |
| Total | 2,947 | 2,060 |

Plan to Optimize Use of Recycled Water

(Water Code § 10633 (f))

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

Sec 8, p.8-4 Reference & Page Number
Sec 8, p.8-4 Reference & Page Number

| Table 38 Methods to Encourage Recycled Water Use | | | | | |
|---|--|------|------|------|------------|
| Actions | AF of use projected to result from this action | | | | |
| | 2010 | 2015 | 2020 | 2025 | 2030 - opt |
| Financial incentives | <i>Not quantified</i> | | | | |
| name of action | | | | | |
| Total | 0 | 0 | 0 | 0 | 0 |

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

Sec 8, p.8-4 Reference & Page Number

Water quality impacts on availability of supply

(Water Code §10634)

Discusses water quality impacts (by source) upon water management strategies and supply reliability

Sec 3, p.3-1 Reference & Page Number

No water quality impacts projected

Reference & Page Number

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

Supply and Demand Comparison to 20 Years

(Water Code § 10635 (a))

Compare the projected normal water supply to projected normal water use over the next 20 years, in 5-year increments.

Sec 4, p.4-17 Reference & Page Number

| Table 40 Projected Normal Water Supply - AF Year | | | | | |
|---|--------|--------|--------|--------|------------|
| (from table 4) | 2010 | 2015 | 2020 | 2025 | 2030 - opt |
| Supply | 15,840 | 15,730 | 16,010 | 15,800 | 15,590 |
| % of year 2005 | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |

| Table 41 Projected Normal Water Demand - AF Year | | | | | |
|---|--------|--------|--------|--------|------------|
| (from table 15) | 2010 | 2015 | 2020 | 2025 | 2030 - opt |
| Demand | 15,010 | 15,010 | 15,110 | 15,110 | 15,110 |
| % of year 2005 | 107.3% | 107.3% | 108.0% | 108.0% | 108.0% |

| Table 42 Projected Supply and Demand Comparison - AF Year | | | | | |
|--|--------|--------|--------|--------|------------|
| | 2010 | 2015 | 2020 | 2025 | 2030 - opt |
| Supply totals | 15,840 | 15,730 | 16,010 | 15,800 | 15,590 |
| Demand totals | 15,010 | 15,010 | 15,110 | 15,110 | 15,110 |
| Difference | 830 | 720 | 900 | 690 | 480 |
| Difference as % of Supply | 5% | 5% | 6% | 4% | 3% |
| Difference as % of Demand | 6% | 5% | 6% | 5% | 3% |

Supply and Demand Comparison: Single-dry Year Scenario

(Water Code § 10635 (a))

Compare the projected single-dry year water supply to projected single-dry year water use over the next 20 years, in 5-year increments. Sec 4, p.4-18 Reference & Page Number

| Table 43 Projected single dry year Water Supply - AF Year | | | | | |
|--|--------|--------|--------|--------|------------|
| | 2010 | 2015 | 2020 | 2025 | 2030 - opt |
| Supply | 16,890 | 17,020 | 17,450 | 16,880 | 16,410 |
| % of projected normal | 107.0% | 108.0% | 109.0% | 107.0% | 105.0% |

| Table 44 Projected single dry year Water Demand - AF Year | | | | | |
|--|--------|--------|--------|--------|------------|
| | 2010 | 2015 | 2020 | 2025 | 2030 - opt |
| Demand | 15,270 | 15,270 | 15,370 | 15,370 | 15,370 |
| % of projected normal | 109.2% | 109.2% | 109.9% | 109.9% | 109.9% |

| Table 45 Projected single dry year Supply and Demand Comparison - AF Year | | | | | |
|--|--------|--------|--------|--------|------------|
| | 2010 | 2015 | 2020 | 2025 | 2030 - opt |
| Supply totals | 16,890 | 17,020 | 17,450 | 16,880 | 16,410 |
| Demand totals | 15,270 | 15,270 | 15,370 | 15,370 | 15,370 |
| Difference | 1,620 | 1,750 | 2,080 | 1,510 | 1,040 |
| Difference as % of Supply | 9.6% | 10.3% | 11.9% | 8.9% | 6.3% |
| Difference as % of Demand | 10.6% | 11.5% | 13.5% | 9.8% | 6.8% |

Supply and Demand Comparison: Multiple-dry Year Scenario

(Water Code § 10635 (a))

Project a multiple-dry year period (as identified in Table 9) occurring between 2006-2010 and compare projected supply and demand during those years

Sec 4, p.4-19 Reference & Page Number

| Table 46 Projected supply during multiple dry year period ending in 2010 - AF Year | | | | | |
|---|--------|--------|--------|--------|--------|
| | 2006 | 2007 | 2008 | 2009 | 2010 |
| Supply | 15,930 | 15,910 | 15,620 | 15,320 | 15,960 |
| % of projected normal | 100.0% | 100.0% | 98.0% | 97.0% | 101.0% |

| Table 47 Projected demand multiple dry year period ending in 2010 - AFY | | | | | |
|--|--------|--------|--------|--------|--------|
| | 2006 | 2007 | 2008 | 2009 | 2010 |
| Demand | 15,010 | 15,010 | 15,270 | 14,670 | 15,230 |
| % of projected normal | 107.3% | 107.3% | 105.3% | 104.9% | 108.9% |

| Table 48 Projected Supply and Demand Comparison during multiple dry year period ending in 2010- AF Year | | | | | |
|--|--------|--------|--------|--------|--------|
| | 2006 | 2007 | 2008 | 2009 | 2010 |
| Supply totals | 15,930 | 15,910 | 15,620 | 15,320 | 15,960 |
| Demand totals | 15,010 | 15,010 | 15,270 | 14,670 | 15,230 |
| Difference | 920 | 900 | 350 | 650 | 730 |
| Difference as % of Supply | 5.8% | 5.7% | 2.2% | 4.2% | 4.6% |
| Difference as % of Demand | 6.1% | 6.0% | 2.3% | 4.4% | 4.8% |

Project a multiple-dry year period (as identified in Table 9) occurring between 2011-2015 and compare projected supply and demand during those years

Sec 4, p.4-20 Reference & Page Number

| Table 49 Projected supply during multiple dry year period ending in 2015 - AF Year | | | | | |
|---|--------|--------|--------|--------|--------|
| | 2011 | 2012 | 2013 | 2014 | 2015 |
| Supply | 15,820 | 15,800 | 16,220 | 15,710 | 16,140 |
| % of projected normal | 100.0% | 100.0% | 103.0% | 100.0% | 103.0% |

| Table 50 Projected demand multiple dry year period ending in 2015 - AFY | | | | | |
|--|--------|--------|--------|--------|--------|
| | 2011 | 2012 | 2013 | 2014 | 2015 |
| Demand | 15,010 | 15,010 | 15,270 | 14,670 | 15,230 |
| % of projected normal | 107.3% | 107.3% | 109.2% | 104.9% | 108.9% |

| Table 51 Projected Supply and Demand Comparison during multiple dry year period ending in 2015- AF Year | | | | | |
|--|--------|--------|--------|--------|--------|
| | 2011 | 2012 | 2013 | 2014 | 2015 |
| Supply totals | 15,820 | 15,800 | 16,220 | 15,710 | 16,140 |
| Demand totals | 15,010 | 15,010 | 15,270 | 14,670 | 15,230 |
| Difference | 810 | 790 | 950 | 1,040 | 910 |
| Difference as % of Supply | 5.1% | 5.0% | 5.9% | 6.6% | 5.6% |
| Difference as % of Demand | 5.4% | 5.3% | 6.2% | 7.1% | 6.0% |

- Project a multiple-dry year period (as identified in Table 9) occurring between 2016-2020 Sec 4, p.4-21 Reference & Page Number and compare projected supply and demand during those years

| Table 52 Projected supply during multiple dry year period ending in 2020 - AF Year | | | | | |
|---|--------|--------|--------|--------|--------|
| | 2016 | 2017 | 2018 | 2019 | 2020 |
| Supply | 15,790 | 15,840 | 16,180 | 15,730 | 16,230 |
| % of projected normal | 100.0% | 100.0% | 102.0% | 99.0% | 101.0% |

| Table 53 Projected demand multiple dry year period ending in 2020 - AFY | | | | | |
|--|--------|--------|--------|--------|--------|
| | 2016 | 2017 | 2018 | 2019 | 2020 |
| Demand | 15,030 | 15,050 | 15,290 | 14,690 | 15,250 |
| % of projected normal | 107.5% | 107.6% | 109.3% | 105.0% | 109.0% |

| Table 54 | | | | | |
|---|-------------|-------------|-------------|-------------|-------------|
| Projected Supply and Demand Comparison during multiple dry year period ending in 2020- AF Year | | | | | |
| | 2016 | 2017 | 2018 | 2019 | 2020 |
| Supply totals | 15,790 | 15,840 | 16,180 | 15,730 | 16,230 |
| Demand totals | 15,030 | 15,050 | 15,290 | 14,690 | 15,250 |
| Difference | 760 | 790 | 890 | 1,040 | 980 |
| Difference as % of Supply | 4.8% | 5.0% | 5.5% | 6.6% | 6.0% |
| Difference as % of Demand | 5.1% | 5.2% | 5.8% | 7.1% | 6.4% |

Project a multiple-dry year period (as identified in Table 9) occurring between 2021-2025 Sec 4, p.4-22 Reference & Page Number and compare projected supply and demand during those years

| Table 55 | | | | | |
|--|-------------|-------------|-------------|-------------|-------------|
| Projected supply during multiple dry year period ending in 2025 - AF Year | | | | | |
| | 2021 | 2022 | 2023 | 2024 | 2025 |
| Supply | 15,970 | 15,930 | 16,180 | 15,640 | 16,060 |
| % of projected normal | 100.0% | 100.0% | 102.0% | 99.0% | 102.0% |

| Table 56 | | | | | |
|---|-------------|-------------|-------------|-------------|-------------|
| Projected demand multiple dry year period ending in 2025 - AFY | | | | | |
| | 2021 | 2022 | 2023 | 2024 | 2025 |
| Demand | 15,110 | 15,110 | 15,370 | 14,770 | 15,330 |
| % of projected normal | 108.0% | 108.0% | 109.9% | 105.6% | 109.6% |

| Table 57 | | | | | |
|---|-------------|-------------|-------------|-------------|-------------|
| Projected Supply and Demand Comparison during multiple dry year period ending in 2025- AF Year | | | | | |
| | 2021 | 2022 | 2023 | 2024 | 2025 |
| Supply totals | 15,970 | 15,930 | 16,180 | 15,640 | 16,060 |
| Demand totals | 15,110 | 15,110 | 15,370 | 14,770 | 15,330 |
| Difference | 860 | 820 | 810 | 870 | 730 |
| Difference as % of Supply | 5.4% | 5.1% | 5.0% | 5.6% | 4.5% |
| Difference as % of Demand | 5.7% | 5.4% | 5.3% | 5.9% | 4.8% |

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

Provided Water Service Reliability section of UWMP to cities and counties within which it provides water supplies within 60 days of UWMP submission to DWR Sec 1, p.1-2 Reference & Page Number

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

Attach a copy of adoption resolution Sec 1, p.1-2 Reference & Page Number
 Encourage involvement of social, cultural & economic community groups Sec 1, p.1-2 Reference & Page Number
 Plan available for public inspection Sec 1, p.1-2 Reference & Page Number
 Provide proof of public hearing Sec 1, p.1-2 Reference & Page Number
 Provided meeting notice to local governments Reference & Page Number

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

Reviewed implementation plan and schedule of 2000 UWMP Sec 4,6,7,8 Reference & Page Number
 Implemented in accordance with the schedule set forth in plan Sec 4,6,7,8 Reference & Page Number
 2000 UWMP not required _____ Reference & Page Number

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

Provide 2005 UWMP to DWR, and cities and counties within 30 days of adoption Sec 1, p.1-2 Reference & Page Number

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

Does UWMP or correspondence accompanying it show where it is available for public review Back Cover Reference & Page Number

APPENDIX C

***DWR 2005 URBAN WATER MANAGEMENT PLAN
“REVIEW FOR DMM COMPLETENESS” FORM***

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

Water Survey Programs for Single-Family and Multi-Family Residential Customers (10631 f(1)(a))

Implementation

(Section 10631 (f))

Describe demand management measure currently being implemented or scheduled for implementation (10631 (f) (1)(2)) Sec 6, p. 6-2 Reference & Page Number

Year program started _____ or Year program scheduled to start _____

Describes steps necessary to implement measure Sec 6, p. 6-2 Reference & Page Number

| Table A1 | | | | | |
|------------------------------|------|------|------|---------|---------|
| Actual | 2001 | 2002 | 2003 | 2004 | 2005 |
| # of Re-reads/yr | | | | 350 | 350 |
| # of High Bill Complaints/yr | | | | 50 | 50 |
| Expenditures/yr (\$) | | | | \$8,445 | \$8,445 |

| Table A2 | | | | | |
|------------------------------|----------|----------|----------|----------|----------|
| Planned | 2006 | 2007 | 2008 | 2009 | 2010 |
| # of Re-reads/yr | \$375 | \$375 | \$375 | \$375 | \$375 |
| # of High Bill Complaints/yr | \$60 | \$60 | \$60 | \$60 | \$60 |
| Expenditures/yr (\$) | \$10,370 | \$10,370 | \$10,370 | \$10,370 | \$10,370 |

Describe the methods, if any, used to evaluate the effectiveness of this demand management measure (10631 (f)(3)) Sec 6, p.6-2 Reference & Page Number

Provide estimates, if available, of existing conservation savings on water use and the effect of such savings on the supplier's ability to further reduce demand (10631(f)(4)) Sec 6, p.6-2 Reference & Page Number

Provided an evaluation for this DMM if it is not implemented

(Section 10631 (g))

- Evaluate legal authority (10631 (g)(4))
- Evaluate economic and non-economic factors (10631 (g)(1))
- Evaluate environmental, social, health factors (10631 (g)(1))
- Evaluate customer impact & technological factors (10631 (g)(1))

| Table A3 - 10631 (g)(2) | |
|----------------------------|--|
| Cost Effectiveness Summary | |
| Total Costs | |
| Total Benefits | |
| Discount Rate | |
| Time Horizon | |
| Cost of Water (\$ per AF) | |
| Water Savings (AFY) | |

- Describe efforts to work with other relevant agencies to ensure implementation of the measure and to share the cost of implementation (10631 (g)(4))
- Describe funding available to implement any planned water supply project that would provide water at a higher unit cost (10631 (g)(3) & (h))

If Another Agency Implementing

- If another Agency is implementing (10631 (g)(4))

| Agency Name |
|--|
| Central Basin Municipal Water District |

Residential Plumbing Retrofit (10631 (f)(1)(b))

Implementation

(Section 10631 (f) & (h))

- Describe demand management measure currently being implemented or scheduled for implementation (10631 (f) (1)(2)) Sec 6, p.6-3 Reference & Page Number

Year program started 1990 or Year program scheduled to start _____

- Describes steps necessary to implement measure Sec 6, p.6-3 Reference & Page Number

of pre-1992 SF accounts _____ # of pre-1992 MF accounts _____

| Table B1 | | | | | | |
|----------------------|-----------|-------|-----------|----|---------|-------|
| Devices | 1990-2000 | | 2000-2005 | | Total | |
| | # units | AF | # units | AF | # units | AF |
| Faucet Aerators | 1,154 | 3.6 | 0 | 0 | 1154 | 3.6 |
| Low-flow Showerheads | 237,049 | 1,115 | 7,500 | 35 | 244,549 | 1,150 |

| Table B2 | | | | | |
|-------------------------------|------|------|------|------|------|
| Planned | 2006 | 2007 | 2008 | 2009 | 2010 |
| # of single family devices | | | | | |
| # of multi-family devices | | | | | |
| projected expenditures - \$ | | | | | |
| projected water savings - AFY | | | | | |

- Describe the methods, if any, used to evaluate the effectiveness of this demand management measure (10631 (f)(3)) Sec 6, p.6-3 Reference & Page Number
- Provide estimates, if available, of existing conservation savings on water use and the effect of such savings on the supplier's ability to further reduce demand (10631(f)(4)) Sec 6, p.6-3 Reference & Page Number

Provided an evaluation for this DMM if it is not implemented

(Section 10631 (g))

- Evaluate legal authority (10631 (g)(4))
- Evaluate economic and non-economic factors (10631 (g)(1))
- Evaluate environmental, social, health factors (10631 (g)(1))
- Evaluate customer impact & technological factors (10631 (g)(1))

| Table B3 - 10631 (g)(2) | |
|----------------------------|--|
| Cost Effectiveness Summary | |
| Total Costs | |
| Total Benefits | |
| Discount Rate | |
| Time Horizon | |
| Cost of Water | |
| Water Savings (AFY) | |

- Describe efforts to work with other relevant agencies to ensure implementation of the measure and to share the cost of implementation (10631 (g)(4))
- Describe funding available to implement any planned water supply project that would provide water at a higher unit cost (10631 (g)(3) & (h))

If Another Agency Implementing

- If another Agency is implementing (10631 (g)(4))

| Agency Name |
|--|
| Central Basin Municipal Water District |

System Water Audits, Leak Detection and Repair (10631 (f)(1)(c))

Implementation

(Section 10631 (f) & (h))

Describe demand management measure currently being implemented or scheduled for implementation (10631 (f) (1)(2)) Sec 6, p.6-4 Reference & Page Number

Year program started _____ or Year program scheduled to start _____

Describes steps necessary to implement measure Sec 6, p.6-4 Reference & Page Number

Year of last complete audit _____ Year of next complete audit _____

| Table C1 | | | | | |
|--------------------------------------|------|------|------|------|------|
| Actual | 2001 | 2002 | 2003 | 2004 | 2005 |
| miles of distribution lines surveyed | | | | | |
| expenditures (\$) | | | | | |

| Table C2 | | | | | |
|--------------------------------------|------|------|------|------|------|
| Planned | 2006 | 2007 | 2008 | 2009 | 2010 |
| miles of distribution lines surveyed | | | | | |
| expenditures (\$) | | | | | |

Describe the methods, if any, used to evaluate the effectiveness of this demand management measure (10631 (f)(3)) Sec 6, p.6-4 Reference & Page Number

Provide estimates, if available, of existing conservation savings on water use and the effect of such savings on the supplier's ability to further reduce demand (10631(f)(4)) Sec 6, p.6-4 Reference & Page Number

Provided an evaluation for this DMM if it is not implemented

(Section 10631 (g))

- Evaluate legal authority (10631 (g)(4))
- Evaluate economic and non-economic factors (10631 (g)(1))
- Evaluate environmental, social, health factors (10631 (g)(1))
- Evaluate customer impact & technological factors (10631 (g)(1))

| Table C3 - 10631 (g)(2) | |
|----------------------------|--|
| Cost Effectiveness Summary | |
| Total Costs | |
| Total Benefits | |
| Discount Rate | |
| Time Horizon | |
| Cost of Water | |
| Water Savings (AFY) | |

- Describe efforts to work with other relevant agencies to ensure implementation of the measure and to share the cost of implementation (10631 (g)(4))
- Describe funding available to implement any planned water supply project that would provide water at a higher unit cost (10631 (g)(3) & (h))

If Another Agency Implementing

If another Agency is implementing (10631 (g)(4))

| Agency Name |
|--|
| Central Basin Municipal Water District |

Metering with Commodity Rates (10631 (f)(1)(d))

Implementation

(Section 10631 (f) & (h))

Describe demand management measure currently being implemented or scheduled for implementation (10631 (f) (1)(2)) Sec 6, p.6-5 Reference & Page Number

Year program started _____ or Year program scheduled to start _____

Describes steps necessary to implement measure Sec 6, p.6-5 Reference & Page Number

Total number of accounts _____ # of accounts w/o commodity rates _____

| Table D1 | | | | | |
|-----------------------------------|------|------|------|------|------|
| Actual | 2001 | 2002 | 2003 | 2004 | 2005 |
| # of unmetered accounts | | | | | |
| # of retrofit meters installed | | | | | |
| # of accounts w/o commodity rates | | | | | |
| actual expenditures - \$ | | | | | |
| actual water savings - AFY | | | | | |

| Table D2 | | | | | |
|-----------------------------------|------|------|------|------|------|
| Planned | 2006 | 2007 | 2008 | 2009 | 2010 |
| # of unmetered accounts | | | | | |
| # of retrofit meters installed | | | | | |
| # of accounts w/o commodity rates | | | | | |
| projected expenditures - \$ | | | | | |
| projected water savings - AFY | | | | | |

- Describe the methods, if any, used to evaluate the effectiveness of this demand management measure (10631 (f)(3)) Sec 6, p.6-5 Reference & Page Number
- Provide estimates, if available, of existing conservation savings on water use and the effect of such savings on the supplier's ability to further reduce demand (10631(f)(4)) Sec 6, p.6-5 Reference & Page Number

Provided an evaluation for this DMM if it is not implemented

(Section 10631 (g))

- Evaluate legal authority (10631 (g)(4))
- Evaluate economic and non-economic factors (10631 (g)(1))
- Evaluate environmental, social, health factors (10631 (g)(1))
- Evaluate customer impact & technological factors (10631 (g)(1))

| Table D3 - 10631 (g)(2) | |
|----------------------------|--|
| Cost Effectiveness Summary | |
| Total Costs | |
| Total Benefits | |
| Discount Rate | |
| Time Horizon | |
| Cost of Water | |
| Water Savings (AFY) | |

- Describe efforts to work with other relevant agencies to ensure implementation of the measure and to share the cost of implementation (10631 (g)(4))
- Describe funding available to implement any planned water supply project that would provide water at a higher unit cost (10631 (g)(3) & (h))

If Another Agency Implementing

- If another Agency is implementing (10631 (g)(4))

| |
|--------------------|
| Agency Name |
| |

Large Landscape Conservation Programs and Incentives (10631 (f)(1)(e))

Implementation

(Section 10631 (f) & (h))

- Describe demand management measure currently being implemented or scheduled for implementation (10631 (f) (1)(2)) Sec 6, p.6-5 Reference & Page Number
- Year program started _____ 1980 or Year program scheduled to start _____

- Describes steps necessary to implement measure Sec 6, p.6-5 Reference & Page Number

| | |
|-------------------------------|--|
| # of landscape accounts _____ | # of landscape accounts with budgets _____ |
| # of CII accounts _____ | # of CII accounts w/ landscape surveys _____ |
| | (CII mixed use meters) |

| Table E1 | | | | | |
|----------------------------|-----------|-----------|-----------|-----------|------|
| actual water savings - AFY | 2001/2002 | 2002/2003 | 2003/2004 | 2004/2005 | 2005 |
| recycled water (AFY) | 2,385 | 2,099 | 2,337 | 2,060 | |

| Table E2 | | | | | |
|-------------------------------|------|------|------|------|------|
| Planned | 2006 | 2007 | 2008 | 2009 | 2010 |
| # of budgets developed | | | | | |
| # of surveys completed | | | | | |
| # of follow-up visits | | | | | |
| projected expenditures - \$ | | | | | |
| projected water savings - AFY | | | | | |

- Describe the methods, if any, used to evaluate the effectiveness of this demand management measure (10631 (f)(3)) Sec 6, p.6-5 Reference & Page Number
- Provide estimates, if available, of existing conservation savings on water use and the effect of such savings on the supplier's ability to further reduce demand (10631(f)(4)) Sec 6, p.6-5 Reference & Page Number

Provided an evaluation for this DMM if it is not implemented

(Section 10631 (g))

- Evaluate legal authority (10631 (g)(4))
- Evaluate economic and non-economic factors (10631 (g)(1))
- Evaluate environmental, social, health factors (10631 (g)(1))
- Evaluate customer impact & technological factors (10631 (g)(1))

| Table E3 - 10631 (g)(2) | |
|----------------------------|--|
| Cost Effectiveness Summary | |
| Total Costs | |
| Total Benefits | |
| Discount Rate | |
| Time Horizon | |
| Cost of Water | |
| Water Savings (AFY) | |

- Describe efforts to work with other relevant agencies to ensure implementation of the measure and to share the cost of implementation (10631 (g)(4))
- Describe funding available to implement any planned water supply project that would provide water at a higher unit cost (10631 (g)(3) & (h))

If Another Agency Implementing

- If another Agency is implementing (10631 (g)(4))

| Agency Name |
|--|
| Central Basin Municipal Water District |

High-Efficiency Washing Machine Rebate Programs (10631 (f)(1)(f))

Implementation

(Section 10631 (f) & (h))

Describe demand management measure currently being implemented or scheduled for implementation (10631 (f) (1)(2)) Sec 6, p.6-6 Reference & Page Number
 Year program started 1999 or Year program scheduled to start _____
 Other agencies offer rebates _____ Cost-effectiveness calcs attached _____

Describes steps necessary to implement measure Sec 6, p.6-7 Reference & Page Number

| Table F1 | | | | | |
|----------------------------|------|------|-------|-------|-------|
| Actual | 2001 | 2002 | 2003 | 2004 | 2005 |
| \$ per rebate | | | \$100 | \$100 | \$100 |
| # of rebates | | | 59 | 122 | 70 |
| actual water savings - AFY | | | 1 | 2 | 1 |

| Table F2 | | | | | |
|-------------------------------|-------|-------|-------|-------|-------|
| Planned | 2006 | 2007 | 2008 | 2009 | 2010 |
| \$ per rebate | \$100 | \$100 | \$100 | \$100 | \$100 |
| # of rebates | 84 | 84 | 84 | 84 | 84 |
| projected water savings - AFY | 1 | 1 | 1 | 1 | 1 |

Describe the methods, if any, used to evaluate the effectiveness of this demand management measure (10631 (f)(3)) Sec 6, p.6-7 Reference & Page Number

Provide estimates, if available, of existing conservation savings on water use and the effect of such savings on the supplier's ability to further reduce demand (10631(f)(4)) Sec 6, p.6-7 Reference & Page Number

Provided an evaluation for this DMM if it is not implemented

(Section 10631 (g))

- Evaluate legal authority (10631 (g)(4))
- Evaluate economic and non-economic factors (10631 (g)(1))
- Evaluate environmental, social, health factors (10631 (g)(1))
- Evaluate customer impact & technological factors (10631 (g)(1))

| Table F3 - 10631 (g)(2) | |
|----------------------------|--|
| Cost Effectiveness Summary | |
| Total Costs | |
| Total Benefits | |
| Discount Rate | |
| Time Horizon | |
| Cost of Water | |
| Water Savings (AFY) | |

- Describe efforts to work with other relevant agencies to ensure implementation of the measure and to share the cost of implementation (10631 (g)(4))
- Describe funding available to implement any planned water supply project that would provide water at a higher unit cost (10631 (g)(3) & (h))

If Another Agency Implementing

- If another Agency is implementing (10631 (g)(4))

| Agency Name |
|--|
| Central Basin Municipal Water District |

Public Information Programs (10631 (f)(1)(g))

Implementation

(Section 10631 (f))

- Describe demand management measure currently being implemented or scheduled for implementation (10631 (f) (1)(2))

| | | |
|----------------------------|----|---------------------------------------|
| Year program started _____ | or | Year program scheduled to start _____ |
|----------------------------|----|---------------------------------------|

Sec 6, p.6-8 Reference & Page Number
- Describes steps necessary to implement measure

Sec 6, p.6-8 Reference & Page Number

| Table G1 | | | | | |
|--|------|------|------|------|------|
| Actual | 2001 | 2002 | 2003 | 2004 | 2005 |
| a. paid advertising | | | | | |
| b. Public Service Announcement | X | X | X | X | X |
| c. Bill Inserts / Newsletters / Brochures | X | X | X | X | X |
| d. Bill showing water usage in comparison to previous year's usage | X | X | X | X | X |
| e. Demonstration Gardens | X | X | X | X | X |
| f. Special Events, Media Events | X | X | X | X | X |
| g. Speaker's Bureau | X | X | X | X | X |
| h. Program to coordinate with other government agencies, industry and public interest groups and media | X | X | X | X | X |
| actual expenditures - \$ | | | | | |

| Table G2 | | | | | |
|--|------|------|------|------|------|
| Planned | 2006 | 2007 | 2008 | 2009 | 2010 |
| a. paid advertising | | | | | |
| b. Public Service Announcement | X | X | X | X | X |
| c. Bill Inserts / Newsletters / Brochures | X | X | X | X | X |
| d. Bill showing water usage in comparison to previous year's usage | X | X | X | X | X |
| e. Demonstration Gardens | X | X | X | X | X |
| f. Special Events, Media Events | X | X | X | X | X |
| g. Speaker's Bureau | X | X | X | X | X |
| h. Program to coordinate with other government agencies, industry and public interest groups and media | X | X | X | X | X |
| Projected expenditures - \$ | | | | | |

Describe the methods, if any, used to evaluate the effectiveness of this demand management measure (10631 (f)(3))

Sec 6, p.6-9 Reference & Page Number

Provided an evaluation for this DMM if it is not implemented

(Section 10631 (g))

- Evaluate legal authority (10631 (g)(4))
- Evaluate economic and non-economic factors (10631 (g)(1))
- Evaluate environmental, social, health factors (10631 (g)(1))
- Evaluate customer impact & technological factors (10631 (g)(1))

| Table G3 - 10631 (g)(2) | |
|----------------------------|--|
| Cost Effectiveness Summary | |
| Total Costs | |
| Total Benefits | |
| Discount Rate | |
| Time Horizon | |
| Cost of Water | |
| Water Savings (AFY) | |

- Describe efforts to work with other relevant agencies to ensure implementation of the measure and to share the cost of implementation (10631 (g)(4))
- Describe funding available to implement any planned water supply project that would provide water at a higher unit cost (10631 (g)(3) & (h))

If Another Agency Implementing

- If another Agency is implementing (10631 (g)(4))

| Agency Name |
|---|
| Coordination with CBMWD, WBMWD, AWWA, National Association of Water Companies and the California Association of Water Companies |

School Education Programs (10631 (f)(1)(h))

Implementation

(Section 10631 (f) & (h))

- Describe demand management measure currently being implemented or scheduled for implementation (10631 (f) (1)(2))
 Year program started _____ or Year program scheduled to start _____
 Sec 6, p.6-9 Reference & Page Number
- Describes steps necessary to implement measure
 Sec 6, p.6-9 Reference & Page Number

| Table H1 | | No. of class presentations | | | | |
|--------------------------|--------------|----------------------------|------|------|------|------|
| Actual | # of classes | 2001 | 2002 | 2003 | 2004 | 2005 |
| Grade 3 | | 1 | | 2 | | 2 |
| Grade 6 | | 0 | | 0 | | 1 |
| actual expenditures - \$ | | | | | | |

| Table H2 | | No. of class presentations | | | | |
|--------------------------|--------------|----------------------------|------|------|------|------|
| Actual | # of classes | 2006 | 2007 | 2008 | 2009 | 2010 |
| Grade 3 | | 8 | 8 | 8 | 8 | 8 |
| Grade 6 | | 1 | 1 | 1 | 1 | 1 |
| actual expenditures - \$ | | | | | | |

- Describe the methods, if any, used to evaluate the effectiveness of this demand management measure (10631 (f)(3)) Sec 6, p.6-10 Reference & Page Number
- Did your agency's material meet state education framework requirements? _____ Reference & Page Number

Provided an evaluation for this DMM if it is not implemented

(Section 10631 (g))

- Evaluate legal authority (10631 (g)(4))
- Evaluate economic and non-economic factors (10631 (g)(1))
- Evaluate environmental, social, health factors (10631 (g)(1))
- Evaluate customer impact & technological factors (10631 (g)(1))

| Table H3 - 10631 (g)(2) | |
|----------------------------|--|
| Cost Effectiveness Summary | |
| Total Costs | |
| Total Benefits | |
| Discount Rate | |
| Time Horizon | |
| Cost of Water | |
| Water Savings (AFY) | |

- Describe efforts to work with other relevant agencies to ensure implementation of the measure and to share the cost of implementation (10631 (g)(4))
- Describe funding available to implement any planned water supply project that would provide water at a higher unit cost (10631 (g)(3) & (h))

If Another Agency Implementing

- If another Agency is implementing (10631 (g)(4))

| Agency Name |
|--|
| Central Basin Municipal Water District |

Conservation Programs for Commercial, Industrial and Institutional (10631 (f)(1)(i))

Implementation

(Section 10631 (f) & (h))

- Describe demand management measure currently being implemented or scheduled for implementation (10631 (f) (1)(2)) Sec 6, p.6-12 Reference & Page Number
- Year program started _____ or Year program scheduled to start _____

Describes steps necessary to implement measure Sec 6, p.6-13 Reference & Page Number
 # of Commercial accounts _____ # of Industrial accounts _____ # of Institutional accounts _____

| Table I1 | | | | | | |
|-------------------------------|------|------|------|------|------|------|
| Actual | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
| # of HECW | 46 | 46 | 46 | 46 | 46 | 46 |
| # of Spray Nozle (Valve) | 0 | 0 | 0 | 0 | 0 | 16 |
| # of Conductivity Controllers | 1 | 1 | 1 | 1 | 1 | 1 |
| Water-free Urinals | 9 | 9 | 9 | 9 | 9 | 4 |
| Water Savings (AFY) | 9 | 9 | 9 | 9 | 9 | 11 |

| Table I2 | | | | | |
|-------------------------------|------|------|------|------|------|
| Planned | 2006 | 2007 | 2008 | 2009 | 2010 |
| # of HECW | 46 | 46 | 46 | 46 | 46 |
| # of Spray Nozle (Valve) | 16 | 16 | 16 | 16 | 16 |
| # of Conductivity Controllers | 1 | 1 | 1 | 1 | 1 |
| Water-free Urinals | 4 | 4 | 4 | 4 | 4 |
| Water Savings (AFY) | 11 | 11 | 11 | 11 | 11 |

Describe the methods, if any, used to evaluate the effectiveness of this demand management measure (10631 (f)(3)) Sec 6, p.6-13 Reference & Page Number

Provide estimates, if available, of existing conservation savings on water use and the effect of such savings on the supplier's ability to further reduce demand (10631(f)(4)) Sec 6, p.6-13 Reference & Page Number

Provided an evaluation for this DMM if it is not implemented

(Section 10631 (g))

- Evaluate legal authority (10631 (g)(4))
- Evaluate economic and non-economic factors (10631 (g)(1))
- Evaluate environmental, social, health factors (10631 (g)(1))
- Evaluate customer impact & technological factors (10631 (g)(1))

| Table I3 - 10631 (g)(2) | |
|----------------------------|--|
| Cost Effectiveness Summary | |
| Total Costs | |
| Total Benefits | |
| Discount Rate | |
| Time Horizon | |
| Cost of Water | |
| Water Savings (AFY) | |

- Describe efforts to work with other relevant agencies to ensure implementation of the measure and to share the cost of implementation (10631 (g)(4))
- Describe funding available to implement any planned water supply project that would provide water at a higher unit cost (10631 (g)(3) & (h))

If Another Agency Implementing

If another Agency is implementing (10631 (g)(4))

| Agency Name |
|--|
| Central Basin Municipal Water District in partnership with MWD |

Conservation Programs for Commercial, Industrial & Institutional - Toilet Replacement (10631 (f)(1)(i))

(this data is part of the Council Annual Report but is not specifically requested in the UWMP Act)

change

Implementation

(Section 10631 (f) & (h))

Describe demand management measure currently being implemented or scheduled for implementation (10631 (f) (1)(2)) Sec 6, p.6-12 Reference & Page Number

Year program started _____ or Year program scheduled to start _____

Describes steps necessary to implement measure _____ Reference & Page Number

| Actual | 2001 | 2002 | 2003 | 2004 | 2005 |
|---------------------------------|------|------|------|------|------|
| # of commercial replacements | | | | | |
| # of industrial replacements | | | | | |
| # of institutional replacements | | | | | |
| actual expenditures - \$ | | | | | |
| actual water savings - AFY | | | | | |

| Planned | 2006 | 2007 | 2008 | 2009 | 2010 |
|---------------------------------|------|------|------|------|------|
| # of commercial replacements | | | | | |
| # of industrial replacements | | | | | |
| # of institutional replacements | | | | | |
| projected expenditures - \$ | | | | | |
| projected water savings - AFY | | | | | |

Describe the methods, if any, used to evaluate the effectiveness of this demand management measure (10631 (f)(3)) Sec 6, p.6-13 Reference & Page Number

Provide estimates, if available, of existing conservation savings on water use and the effect of such savings on the supplier's ability to further reduce demand (10631(f)(4)) _____ Reference & Page Number

Provided an evaluation for this DMM if it is not implemented

(Section 10631 (g))

- Evaluate legal authority (10631 (g)(4))
- Evaluate economic and non-economic factors (10631 (g)(1))
- Evaluate environmental, social, health factors (10631 (g)(1))
- Evaluate customer impact & technological factors (10631 (g)(1))

- Describe efforts to work with other relevant agencies to ensure implementation of the measure and to share the cost of implementation (10631 (g)(4))
- Describe funding available to implement any planned water supply project that would provide water at a higher unit cost (10631 (g)(3) & (h))

| Table I6 - 10631 (g)(2) | |
|----------------------------|--|
| Cost Effectiveness Summary | |
| Total Costs | |
| Total Benefits | |
| Discount Rate | |
| Time Horizon | |
| Cost of Water | |
| Water Savings (AFY) | |

If Another Agency Implementing

- If another Agency is implementing (10631 (g)(4))

| Agency Name |
|--|
| Central Basin Municipal Water District in partnership with MWD |

Wholesale Agency Programs (10631 (f)(1)(j))

- Not a wholesale agency

Implementation

(Section 10631 (f) & (h))

- Describe demand management measure currently being implemented or scheduled for implementation (10631 (f) (1)(2))

| | | | | |
|--------------------------|-------|----|---------------------------------|-------|
| Year program started | _____ | or | Year program scheduled to start | _____ |
| # of suppliers you serve | _____ | | | |

Sec 6, p.6-14 Reference & Page Number

- Describes steps necessary to implement measure

| | |
|--|--|
| | <u>Sec 6, p.6-14</u> Reference & Page Number |
|--|--|

| Table J1 | Number of agencies assisted | | | | |
|--------------------------|-----------------------------|------|------|------|------|
| program activities | 2001 | 2002 | 2003 | 2004 | 2005 |
| Water Surveys | | | | | |
| Residential Retrofit | | | | | |
| System Audits | | | | | |
| Metering-Commodity Rates | | | | | |
| Landscape Programs | | | | | |
| Washing Machines | | | | | |
| Public Information | | | | | |
| School Education | | | | | |
| CII WC | | | | | |
| CII ULF | | | | | |
| Water Waste | | | | | |
| Pricing | | | | | |
| WC Coordinator | | | | | |
| Water Waste | | | | | |
| UFLT Replacement | | | | | |
| actual expenditures - \$ | | | | | |

| Table J2 | Number of agencies to be assisted | | | | |
|-----------------------------|-----------------------------------|------|------|------|------|
| program activities | 2006 | 2007 | 2008 | 2009 | 2010 |
| Water Surveys | | | | | |
| Residential Retrofit | | | | | |
| System Audits | | | | | |
| Metering-Commodity Rates | | | | | |
| Landscape Programs | | | | | |
| Washing Machines | | | | | |
| Public Information | | | | | |
| School Education | | | | | |
| CII WC | | | | | |
| CII ULF | | | | | |
| Water Waste | | | | | |
| Pricing | | | | | |
| WC Coordinator | | | | | |
| Water Waste | | | | | |
| UFLT Replacement | | | | | |
| projected expenditures - \$ | | | | | |

Describe the methods, if any, used to evaluate the effectiveness of this demand management measure (10631 (f)(3)) Sec 6, p.6-14 Reference & Page Number

Provide estimates, if available, of existing conservation savings on water use and the effect of such savings on the supplier's ability to further reduce demand (10631(f)(4)) Sec 6, p.6-14 Reference & Page Number

Provided an evaluation for this DMM if it is not implemented

(Section 10631 (g))

- Evaluate legal authority (10631 (g)(4))
- Evaluate economic and non-economic factors (10631 (g)(1))
- Evaluate environmental, social, health factors (10631 (g)(1))
- Evaluate customer impact & technological factors (10631 (g)(1))

| Table J3 - 10631 (g)(2) | |
|----------------------------|--|
| Cost Effectiveness Summary | |
| Total Costs | |
| Total Benefits | |
| Discount Rate | |
| Time Horizon | |
| Cost of Water | |
| Water Savings (AFY) | |

Describe efforts to work with other relevant agencies to ensure implementation of the measure and to share the cost of implementation (10631 (g)(4))

Describe funding available to implement any planned water supply project that would provide water at a higher unit cost (10631 (g)(3) & (h))

If Another Agency Implementing

If another Agency is implementing (10631 (g)(4))

| Agency Name |
|--|
| Central Basin Municipal Water District |

Conservation Pricing (10631 (f)(1)(k))

Implementation

(Section 10631 (f) & (h))

Describe demand management measure currently being implemented or scheduled for implementation (10631 (f) (1)(2)) Sec 6, p.6-14 Reference & Page Number

Year program started _____ or Year program scheduled to start _____

Agency provides sewer service

Describes steps necessary to implement measure Sec 6, p.6-14 Reference & Page Number

| Table K1 | | | |
|---------------------------------|-------------|----------------------|-------------|
| RETAILERS | | | |
| Residential | | | |
| Water Rate Structure | pop-up list | Sewer Rate Structure | pop-up list |
| Year rate effective | | Year rate effective | |
| Commercial | | | |
| Water Rate Structure | pop-up list | Sewer Rate Structure | pop-up list |
| Year rate effective | | Year rate effective | |
| Industrial | | | |
| Water Rate Structure | pop-up list | Sewer Rate Structure | pop-up list |
| Year rate effective | | Year rate effective | |
| Institutional/Government | | | |
| Water Rate Structure | pop-up list | Sewer Rate Structure | pop-up list |
| Year rate effective | | Year rate effective | |
| Irrigation | | | |
| Water Rate Structure | pop-up list | | |
| Year rate effective | | | |
| Other | | | |
| Water Rate Structure | pop-up list | Sewer Rate Structure | pop-up list |
| Year rate effective | | Year rate effective | |
| | | | |
| Table K2 | | | |
| WHOLESALEERS | | | |
| Water Rate Structure | pop-up list | | |
| Year rate effective | | | |

Provided an evaluation for this DMM if it is not implemented

- Evaluate legal authority (10631 (g)(4))
- Evaluate economic and non-economic factors (10631 (g)(1))
- Evaluate environmental, social, health factors (10631 (g)(1))
- Evaluate customer impact & technological factors (10631 (g)(1))

(Section 10631 (g))

| Table K3 - 10631 (g)(2) | |
|----------------------------|--|
| Cost Effectiveness Summary | |
| Total Costs | |
| Total Benefits | |
| Discount Rate | |
| Time Horizon | |
| Cost of Water | |
| Water Savings (AFY) | |

- Describe efforts to work with other relevant agencies to ensure implementation of the measure and to share the cost of implementation (10631 (g)(4))
- Describe funding available to implement any planned water supply project that would provide water at a higher unit cost (10631 (g)(3) & (h))

If Another Agency Implementing

If another Agency is implementing (10631 (g)(4))

| Agency Name |
|--|
| Central Basin Municipal Water District |

Water Conservation Coordinator (10631 (f)(1)(I))

Implementation

(Section 10631 (f) & (h))

Describe demand management measure currently being implemented or scheduled for implementation (10631 (f) (1)(2)) Sec 6, p.6-15 Reference & Page Number
 Year program started _____ or Year program scheduled to start _____

Describes steps necessary to implement measure Sec 6, p.6-15 Reference & Page Number

| Table L1 | | | | | |
|---------------------------|------|------|------|------|------|
| Actual | 2001 | 2002 | 2003 | 2004 | 2005 |
| # of full-time positions | 1 | 1 | 1 | 1 | 1 |
| # of full/part-time staff | | | | | |
| actual expenditures - \$ | | | | | |

| Table L2 | | | | | |
|-----------------------------|------|------|------|------|------|
| Planned | 2006 | 2007 | 2008 | 2009 | 2010 |
| # of full-time positions | 1 | 1 | 1 | 1 | 1 |
| # of full/part-time staff | | | | | |
| projected expenditures - \$ | | | | | |

Provided an evaluation for this DMM if it is not implemented

(Section 10631 (g))

- Evaluate legal authority (10631 (g)(4))
- Evaluate economic and non-economic factors (10631 (g)(1))
- Evaluate environmental, social, health factors (10631 (g)(1))
- Evaluate customer impact & technological factors (10631 (g)(1))

- Describe efforts to work with other relevant agencies to ensure implementation of the measure and to share the cost of implementation (10631 (g)(4))
- Describe funding available to implement any planned water supply project that would provide water at a higher unit cost (10631 (g)(3) & (h))

| Table L3 - 10631 (g)(2) | |
|----------------------------|--|
| Cost Effectiveness Summary | |
| Total Costs | |
| Total Benefits | |
| Discount Rate | |
| Time Horizon | |
| Cost of Water | |
| Water Savings (AFY) | |

If Another Agency Implementing

- If another Agency is implementing (10631 (g)(4))

| Agency Name |
|--|
| Central Basin Municipal Water District |

Waste Water Prohibition (10631 (f)(1)(m))

Implementation

(Section 10631 (f) & (h))

- Describe demand management measure currently being implemented or scheduled for implementation (10631 (f) (1)(2)) Sec 6, p.6-15 Reference & Page Number
 Year program started _____ or Year program scheduled to start _____
- Describes steps necessary to implement measure Sec 6, p.6-15 Reference & Page Number

| Table M1 | | | | | |
|---------------------------|------|------|------|------|------|
| Actual | 2001 | 2002 | 2003 | 2004 | 2005 |
| waste ordinance in effect | | | | | |
| # of on-site visits | | | | | |
| water softener ordinance | | | | | |
| actual expenditures - \$ | | | | | |

| Table M2 | | | | | |
|-----------------------------|------|------|------|------|------|
| Planned | 2006 | 2007 | 2008 | 2009 | 2010 |
| waste ordinance in effect | | | | | |
| # of on-site visits | | | | | |
| water softener ordinance | | | | | |
| projected expenditures - \$ | | | | | |

Describe the methods, if any, used to evaluate the effectiveness of this demand management measure
 (10631 (f) (3)) Sec 6, p.6-15 Reference & Page Number

Provided an evaluation for this DMM if it is not implemented

(Section 10631 (g))

- Evaluate legal authority
(10631 (g)(4))
- Evaluate economic and non-economic factors
(10631 (g)(1))
- Evaluate environmental, social, health factors
(10631 (g)(1))
- Evaluate customer impact & technological factors
(10631 (g)(1))

| Table M3 - 10631 (g)(2) | |
|----------------------------|--|
| Cost Effectiveness Summary | |
| Total Costs | |
| Total Benefits | |
| Discount Rate | |
| Time Horizon | |
| Cost of Water | |
| Water Savings (AFY) | |

- Describe efforts to work with other relevant agencies to ensure implementation of the measure and to share the cost of implementation (10631 (g)(4))
- Describe funding available to implement any planned water supply project that would provide water at a higher unit cost (10631 (g)(3) & (h))

If Another Agency Implementing

If another Agency is implementing (10631 (g)(4))

| |
|--------------------|
| Agency Name |
| |

Residential Ultra-Low-Flush Toilet Replacement Programs (10631 (f)(1)(n))

Implementation

(Section 10631 (f) & (h))

Describe demand management measure currently being implemented or scheduled for implementation (10631 (f) (1)(2)) Sec 6, p.6-15 Reference & Page Number

Year program started _____ or Year program scheduled to start _____
 # of SF pre-1992 accounts _____

Describes steps necessary to implement measure Sec 6, p.6-15 Reference & Page Number

| Table N1 | Single-Family | | | | | |
|----------------------------|---------------|------|------|------|------|------|
| Actual | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
| # of Single Family Rebates | 36 | 33 | 138 | 75 | 49 | 11 |
| # of Multi-Family Rebates | 7 | 2 | 0 | 0 | 1 | 0 |
| water savings (AFY) | 1 | 1 | 4 | 2 | 1.4 | 0.3 |

| Table N2 | Single-Family | | | | |
|----------------------------|---------------|------|------|------|------|
| Planned | 2006 | 2007 | 2008 | 2009 | 2010 |
| # of Single Family Rebates | 285 | 285 | 285 | 285 | 285 |
| # of Multi-Family Rebates | 8 | 8 | 8 | 8 | 8 |
| water savings (AFY) | 8 | 8 | 8 | 8 | 8 |

of MF pre-1992 units _____

| Table N3 | Multi-Family | | | | |
|----------------------------|--------------|------|------|------|------|
| Actual | 2001 | 2002 | 2003 | 2004 | 2005 |
| # of ULF rebates | | | | | |
| # of ULF direct installs | | | | | |
| # of ULF CBO installs | | | | | |
| actual expenditures - \$ | | | | | |
| actual water savings - AFY | | | | | |

| Table N4 | Multi-Family | | | | |
|-------------------------------|--------------|------|------|------|------|
| Planned | 2006 | 2007 | 2008 | 2009 | 2010 |
| # of ULF rebates | | | | | |
| # of ULF direct installs | | | | | |
| # of ULF CBO installs | | | | | |
| projected expenditures - \$ | | | | | |
| projected water savings - AFY | | | | | |

Is a toilet retrofit on resale ordinance in effect for your service area?

Provide estimates, if available, of existing conservation savings on water use and the effect of such savings on the supplier's ability to further reduce demand (10631 (f)(4))

Sec 6, p.6-15 Reference & Page Number

Provided an evaluation for this DMM if it is not implemented

(Section 10631 (g))

- Evaluate legal authority (10631 (g)(4))
- Evaluate economic and non-economic factors (10631 (g)(1))
- Evaluate environmental, social, health factors (10631 (g)(1))
- Evaluate customer impact & technological factors (10631 (g)(1))

- Describe efforts to work with other relevant agencies to ensure implementation of the measure and to share the cost of implementation (10631 (g)(4))
- Describe funding available to implement any planned water supply project that would provide water at a higher unit cost (10631 (g)(3) & (h))

| Table N5 - 10631 (g)(2) | |
|----------------------------|--|
| Cost Effectiveness Summary | |
| Total Costs | |
| Total Benefits | |
| Discount Rate | |
| Time Horizon | |
| Cost of Water | |
| Water Savings (AFY) | |

If Another Agency Implementing

- If another Agency is implementing (10631 (g)(4))

| Agency Name |
|--|
| Central Basin Municipal Water District and MWD |

2005 Urban Water Management Plan Review for Completeness Form

(Water Code §10620 (d)(1)(2) - 10645)

(Water Code §10620 (d)(1)(2) - 10645, the 2005 Urban Water Management Plan Review for Completeness Form is found on Sheet 1)

APPENDIX D

***NOTICE OF PUBLIC HEARING AND
RESOLUTION OF PLAN ADOPTION***

**LONG BEACH
PRESS-TELEGRAM**

604 Pine Avenue
Long Beach, CA 90844

**PROOF OF PUBLICATION
(2015.5 C.C.P.)**

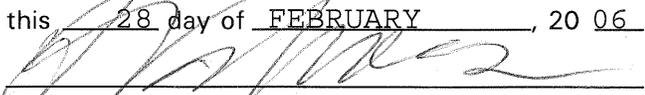
**STATE OF CALIFORNIA
County of Los Angeles**

I am a citizen of the United States, and a resident of the county aforesaid; I am over the age of eighteen years, and not a party to or interested in the above-entitled matter. I am the principal clerk of the printer of the Long Beach Press-Telegram, a newspaper of general circulation printed and published daily in the City of Long Beach, County of Los Angeles, and which newspaper has been adjudged a newspaper of general circulation by the Superior Court of the County of Los Angeles, State of California, on the date of March 21, 1934, Case Number 370512. The notice, of which the annexed is a true printed copy, has been published in each regular and entire issue of said newspaper and not in any supplement thereof on the following dates, to wit:

2/21, 28/06

I declare under penalty of perjury that the foregoing is true and correct.

Executed at Long Beach, LA Co. California
this 28 day of FEBRUARY, 20 06


signature

Proof of Publication of

**CITY OF CERRITOS
NOTICE OF PUBLIC HEARING**

NOTICE IS HEREBY GIVEN that the City Council of the City of Cerritos will hold a public hearing on **Thursday, March 9, 2006** at 7:00 p.m. on the following matter:

TO RECEIVE COMMENTS ON THE RESOLUTION OF THE CITY COUNCIL OF THE CITY OF CERRITOS ADOPTING THE 2005 URBAN WATER MANAGEMENT PLAN PURSUANT TO CALIFORNIA WATER CODE 10610 TO 10657.

This City Council hearing will be held in the Council Chambers of the Cerritos City Hall, 18125 Bloomfield Avenue, Bloomfield Avenue at 183rd Street, Cerritos, California. The Plan was prepared to provide information on the Central Basin Municipal Water Districts water supply, water use, existing and possible conservation measures and alternative water supply and management measures. The plan also includes specific conservation measures implemented by the City, as well as the City's reclaimed water program.

Written comments will be accepted through March 9, 2006 and should be sent to:

City of Cerritos
Department of Water and Power
18125 Bloomfield Avenue
Post Office Box 3130
Cerritos, CA 90703

THOSE DESIRING TO testify in favor or in opposition to the project will be given an opportunity to do so at the public hearing.

Should you have any questions, please call Joe Holdren, Water Superintendent, at (562) 916-1223. Copies of the report are available for inspection at the City Clerks Office, City of Cerritos, 18125 Bloomfield Avenue, Cerritos, CA 90703, 8:00 a.m. to 5:00 p.m.

Dated: February 21, 2006
Josephine Triggs, City Clerk
Pub. Feb. 21, 28 2006 (2t) PT (44331/623666)

CITY OF CERRITOS

RESOLUTION NO. 2006-6

**A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF CERRITOS
ADOPTING THE 2005 URBAN WATER MANAGEMENT PLAN PURSUANT
TO CALIFORNIA WATER CODE 10610 TO 10657.**

WHEREAS, Government Code Sections 10610 through 10657 requires the development of an Urban Water Management Plan for a water supplier serving 3,000 customers or more; and

WHEREAS, the City of Cerritos provides water service to over 15,000 customers; and

WHEREAS, the City of Cerritos has completed an update to its 2000 Urban Water Management Plan (2005 Plan) pursuant to the requirements of the Urban Water Management Planning Act of 1983; and

WHEREAS, the 2005 Plan is a general information document and compliments other regional water planning documents, including the Central Basin Municipal Water District and Metropolitan Water District of Southern California 2005 Regional Urban Water Management Plans; and

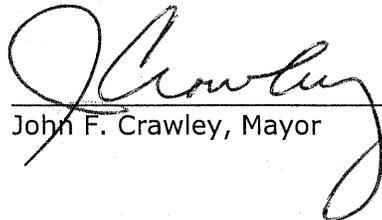
WHEREAS, the purpose of the 2005 Plan is to provide a local perspective and analysis of the current and alternative water demand, supplies and conservation activities of the City; and

WHEREAS, the 2005 Plan also addresses the effects and measures of coping with short-term and chronic water shortages within the City boundaries; and

WHEREAS, the 2005 Plan will be periodically updated, no less than every five years in the years ending in zero and five, to reflect changes in water supply trends and conservation policies within the boundaries of the City.

NOW, THEREFORE, BE IT HEREBY RESOLVED that the City Council of the City of Cerritos does hereby approve the 2005 Urban Water Management Plan.

PASSED, APPROVED and ADOPTED this 9th day of March, 2006.



John F. Crawley, Mayor

ATTEST:



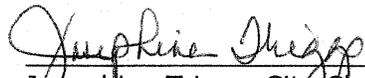
Josephine Triggs, City Clerk

STATE OF CALIFORNIA)
COUNTY OF LOS ANGELES) ss.
CITY OF CERRITOS)

I, Josephine Triggs, City Clerk of the City of Cerritos, California, DO HEREBY CERTIFY that the foregoing Resolution No. 2006-6 was duly adopted by the City Council of the City of Cerritos at a Regular Meeting held on the 9th day of March, 2006, and that it was so adopted as follows:

AYES: COUNCILMEMBERS - Edwards, Kappe, Lee, Bowlen, Crawley
NOES: COUNCILMEMBERS - None
ABSENT: COUNCILMEMBERS - None
ABSTAIN: COUNCILMEMBERS - None

DATED: March 10, 2006



Josephine Triggs, City Clerk

APPENDIX E

REFERENCES



City of Cerritos
2005 Urban Water Management Plan

REFERENCES

-
- Arizona Department of Health Services, *Topock Groundwater Study Evaluation of Chromium in Groundwater Wells*, September 7, 2005
- Assembly Bill 797, *California Water Code Division 6 Part 2.6 Urban Water Management Planning*, 1983, as amended to 2005
- Central Basin Municipal Water District, [On-line] http://www.centralbasin.org/about_dist.php
- Central Basin Municipal Water District, *Water Master Service in the Central Basin Los Angeles County*, 2004
- Central Basin Municipal Water District, *2005 Urban Water Management Plan*, June 2005
- Central Basin Municipal Water District, *2005 Urban Water Management Plan Update*, October 2005
- Central Basin Municipal Water District, *2002-2003 Annual Reports*, 2002-2003
- City of Cerritos, *2004 Water Quality Report*, 2004
- City of Cerritos, [On-line] <http://www.ci.cerritos.ca.us/>
- Country Studies, *City of Cerritos Weather*, [on-line] <http://countrystudies.us/united-states/weather/California>
- Department of Water Resources, *DWR's Bulletin 118-1 Basin Description for Coastal Plan of Orange County Groundwater Basin Number 8-1, Bulletin 104 Planned Utilization of the Groundwater Basins of the Coastal Plan of Los Angeles County* <http://www.water.ca.gov/> September 5, 2001
- Department of Water Resources, *State Water Project Delivery Reliability Report*, 2002
- Department of Water Resources, *California Water Plan Update 2005, Volume 2 – Resource Management Strategies*, 2005
- Department of Water Resources, *Summaries of Awarded Projects for Proposition 50, Chapter 6(a) Desalination grants – 2005 Funding Cycle*, 2005

- Department of Water Resources, *Water Master Service in the Central Basin Los Angeles County*, 2004
- Los Angeles Regional Water Quality Control Board, *Region 4 Water Quality Control Plan (Los Angeles Region)*, January 1995
- Metropolitan Water District of Southern California, *Metropolitan Water District of Southern California Final Draft Demand and Supply Projections*, August 2005
- Metropolitan Water District of Southern California, *Annual Water Quality Report for 2005*,
www.mwdh2o.com/mwdh2o/pages/yourwater/2005_reepor/protect_02.html, 2005
- Metropolitan Water District of Southern California, *2005 Regional Urban Water Management Plan*, 2005
- Metropolitan Water District of Southern California, *Integrated Water Resources Plan 2003 Update*, May 2004
- Metropolitan Water District of Southern California, *Report on Metropolitan Water Supplies, A Blueprint for Water Reliability*, p.9, 24-35, March 25, 2003
- Sanitation District of Los Angeles, [On-line] <http://www.lacsd.org>
- Sanitation District of Los Angeles, *Sanitation Districts of Los Angeles Fact Sheet*, http://www.lacsd.org/CSDFactSheet_Eng.pdf
- Water Replenishment District of Southern California, *Water Replenishment of Southern California Engineering Survey Report*, March 2005
- Water Replenishment District of Southern California, [On-line] <http://www.wrd.org/Purpose.htm>
- Water Replenishment District of Southern California, *Regional Groundwater Monitoring Report for Water Year 2003/2004*, April 2005
- Water Replenishment District of Southern California, *Technical Bulletin Volume 1*, Fall 2004

APPENDIX F

CENTRAL GROUNDWATER BASIN JUDGMENT



Central Basin Judgment

*Central and West Basin Water Replenishment District, etc., vs. Charles E. Adams, et al.
case no. 786,656 Second Amended Judgment, May 6, 1991*

The above-titled matter duly and regularly came on for trial in Department 73 of the above-entitled Court (having been transferred thereto from Department 75 by order of the presiding Judge), before the Honorable Edmund M. Moor, specially assigned Judge, on May 17, 1965, at 10:00 a.m. Plaintiff was represented by its attorneys BEWLEY, KNOOP, LASSLEBEN & WHELAN, MARTIN E. WHELAN, JR., and EDWIN H. VAIL, JR., and cross-complainant was represented by its attorney JOHN S. TODD. Various defendants and cross-defendants were also represented at the trial. Evidence both oral and documentary was introduced. The trial continued from day to day on May 17, 18, 19, 20, 21 and 24, 1965, at which time it was continued by order of Court for further trial on August 25, 1965, at 10:00 a.m. in Department 73 of the above-entitled Court; whereupon, having then been transferred to Department 74, trial was resumed in Department 74 on August 25, 1965, and then continued to August 27, 1965 at 10:00 a.m. in the same Department. On the latter date, trial was concluded and the matter submitted. Findings of fact and conclusions of law have heretofore been signed and filed. Pursuant to the reserved and continuing jurisdiction of the court under the judgment herein, certain amendments to said judgment and temporary orders have heretofore been made and entered. Continuing jurisdiction of the court for this action is currently assigned to HON. FLORENCE T. PICKARD. Motion of Plaintiff herein for further amendments to the judgment, notice thereof and of the hearing thereon having been duly and regularly given to all parties, came on for hearing in Department 38 of the above-entitled court on May 6, 1991 at 8:45 a.m. before said HONORABLE PICKARD. Plaintiff was represented by its attorneys LAGERLOF, SENEAL, DRESCHER & SWIFT, by William F. Kruse. Various defendants were represented by counsel of record appearing on the Clerk's records. Hearing thereon was concluded on that date. The within "Second Amended Judgment" incorporates amendments and orders heretofore made to the extent presently operable and amendments pursuant to said last mentioned motion. To the extent this Amended Judgment is a restatement of the judgment as heretofore amended, it is for convenience in incorporating all matters in one document, is not a readjudication of such matters, and is not intended to reopen any such matters. As used hereinafter the word "judgment" shall include the original judgment as amended to date. In connection with the following judgment, the following terms, words, phrases and clauses are used by the Court with the following meanings:

"*Administrative Year*" means the water year until operation under the judgment is converted to a fiscal year pursuant to Paragraph 4, Part I, p. 53 hereof, whereupon it shall mean a fiscal year, including the initial 'short fiscal year' therein provided.

"*Allowed Pumping Allocation*" is that quantity in acre feet which the Court adjudges to be the maximum quantity which a party should be allowed to extract annually from Central Basin as set forth in Part I hereof, which constitutes 80% of such party's Total Water Right.

"*Allowed Pumping Allocation for a particular Administrative year*" and "*Allowed Pumping Allocation in the following Administrative year*" and similar clauses, mean the Allowed Pumping Allocation as increased in a particular Administrative year by any authorized carryovers pursuant to Part III, Subpart A of this judgment and as reduced by reason of any over-extractions in a previous Administrative year.

"*Artificial Replenishment*" is the replenishment of Central Basin achieved through the spreading of imported or reclaimed water for percolation thereof into Central Basin by a governmental agency.

"*Base Water Right*" is the highest continuous extractions of water by a party from Central Basin for a beneficial use in any period of five consecutive years after the commencement of overdraft in Central Basin and prior to the commencement of this action, as to which there has been no cessation of use by that party during any subsequent period of five consecutive years. As employed in the above definition, the words "extractions of water by a party" and "cessation of use by that party" include such extractions and cessations by any predecessor or predecessors in interest.

"*Calendar Year*" is the twelve month period commencing January 1 of each year and ending December 31 of each year.

"*Central Basin*" is the underground water basin or reservoir underlying Central Basin Area, the exterior boundaries of which Central Basin are the same as the exterior boundaries of Central Basin Area.

"*Central Basin Area*" is the territory described in Appendix "1" to this judgment, and is a segment of the territory comprising Plaintiff District.

"*Declared water emergency*" shall mean a period commencing with the adoption of a resolution of the Board of Directors of the Central and West Basin Water Replenishment District declaring that conditions within the Central Basin relating to natural and imported supplies of water are such that, without implementation of the water emergency provisions of this Judgment, the water resources of the Central Basin risk degradation. In making such declaration, the Board of Directors shall consider any information and requests provided by water producers, purveyors, and other affected entities and may, for that purpose, hold a public hearing in advance of such declaration. A Declared Water Emergency shall extend for one (1) year following such resolution, unless sooner ended by similar resolution.

"*Extraction*", "*extractions*", "*extracting*", "*extracted*", and other variations of the same noun and verb, mean pumping, taking, diverting or withdrawing ground water by any manner or means whatsoever from Central Basin.

"*Fiscal Year*" is the twelve (12) month period July 1 through June 30 following.

"*Imported Water*" means water brought into Central Basin Area from a non-tributary source by a party and any predecessors in interest, either through purchase directly from The Metropolitan Water District of Southern California or by direct purchase from a member agency thereof, and additionally as to the Department of Water and Power of the City of Los Angeles, water brought into Central Basin Area by that party by means of the Owens River Aqueduct.

"*Imported Water Use Credit*" is the annual amount, computed on a calendar year basis, of imported water which any party and any predecessors in interest, who have timely made the required filings under Water Code Section 1005.1, have imported into Central Basin Area in any calendar year and subsequent to July 9, 1951, for beneficial use therein, but not exceeding the amount by which that party and any predecessors in interest reduces his or their extractions of ground water from Central Basin in that calendar year from the level of his or their extractions in the preceding calendar year, or in any prior calendar year not earlier than the calendar year 1950, whichever is the greater.

"*Natural Replenishment*" means and includes all processes other than "Artificial Replenishment" by which water may become a part of the ground water supply of Central Basin.

"*Natural Safe Yield*" is the maximum quantity of ground water, not in excess of the long term average annual quantity of Natural Replenishment, which may be extracted annually from Central Basin without eventual depletion thereof or without otherwise causing eventual permanent damage to Central Basin as a source of ground water for beneficial use, said maximum quantity being determined without reference to Artificial Replenishment.

"*Overdraft*", is that condition of a ground water basin resulting from extractions in any given annual period or periods in excess of the long-term average annual quantity of Natural Replenishment, or in excess of that quantity which may be extracted annually without otherwise causing eventual permanent damage to the basin.

"*Party*" means a party to this action. Whenever the term "party" is used in connection with a quantitative

water right, or any quantitative right, privilege or obligation, or in connection with the assessment for the budget of the Watermaster, it shall be deemed to refer collectively to those parties to whom are attributed a Total Water Right in Part I of this judgment.

"*Person*" or "*persons*" include individuals, partnerships, associations, governmental agencies and corporations, and any and all types of entities.

"*Total Water Right*" is the quantity arrived at in the same manner as in the computation of "Base Water Right", but including as if extracted in any particular year the Imported Water Use Credit, if any, to which a particular party may be entitled.

"*Water*" includes only non-saline water, which is that having less than 1,000 parts of chlorides to 1,000,000 parts of water.

"*Water Year*" is the 12-month period commencing October 1 of each year and ending September 30th of the following year.

In those instances where any of the above-defined words, terms, phrases or clauses are utilized in the definition of any of the other above-defined words, terms, phrases and clauses, such use is with the same meaning as is above set forth.

NOW THEREFORE, IT IS ORDERED, DECLARED, ADJUDGED AND DECREED WITH RESPECT TO THE ACTION AND CROSS-ACTION AS FOLLOWS:

I. Declaration and Determination of Water Rights of Parties; Restrictions on the Exercise Thereof.

1. Determination of Rights of Parties.

(a) Each party, except defendants, The City of Los Angeles and Department of Water and Power of the City of Los Angeles, whose name is hereinafter set forth in the tabulation at the conclusion of (Subpart 3 of Part 1), and after whose name there appears under the column "Total Water Right" a figure other than "0", was the owner of and had the right to extract annually groundwater from Central Basin for beneficial use in the quantity set forth after that party's name under said column "Total Water Right" pursuant to the Judgment as originally entered herein. Attached hereto as Appendix "2" and by this reference made a part hereof as though fully set forth are the water rights of parties and successors in interest as they existed as of the close of the water year ending September 30, 1978, in accordance with the Watermaster Reports on file with this Court and the records of the Plaintiff. This tabulation does not take into account additions or subtractions from any Allowed Pumping Allocation of a producer for the 1978-79 water year, nor other adjustments not representing change in fee title to water rights, such as leases of water rights, nor does it include the names of lessees of landowners where the lessees are exercising the water rights. The exercise of all water rights is subject, however, to the provisions of this Judgment as hereinafter contained. All of said rights are of the same legal force and effect and are without priority with reference to each other. Each party whose name is hereinafter set forth in the tabulation set forth in Appendix "2" of this judgment, and after whose name there appears under the column "Total Water Right" and figure "0" owns no rights to extract any ground water from Central Basin, and has no right to extract any ground water from Central Basin.

(b) Defendant The City of Los Angeles is the owner of the right to extract fifteen thousand (15,000) acre-feet per annum of ground water from Central Basin. Defendant Department of Water and Power of the City of Los Angeles has no right to extract ground water from Central Basin except insofar as it has the right, power, duty or obligation on behalf of defendant The City of Los Angeles to exercise the water rights in Central Basin of defendant The City of Los Angeles. The exercise of said rights are subject, however, to the provisions of this judgment hereafter

contained, including but not limited to, sharing with other parties in any subsequent decreases or increases in the quantity of extractions permitted from Central Basin, pursuant to continuing jurisdiction of the Court, on the basis that fifteen thousand (15,000) acre-feet bears to the Allowed Pumping Allocations of other parties.

(c) No party to this action is the owner of or has any right to extract ground water from Central Basin except as herein affirmatively determined.

2. *Parties Enjoined as Regards Quantities of Extractions.*

(a) Each party, other than The State of California and The City of Los Angeles and Department of Water and Power of The City of Los Angeles, is enjoined and restrained in any Administrative year commencing after the date this judgment becomes final from extracting from Central Basin any quantity of Water greater than the party's Allowed Pumping Allocation as hereinafter set forth next to the name of the party in the tabulation appearing in Appendix 2 at the end of this Judgment, subject to further provisions of this Judgment. Subject to such further provisions, the officials, agents and employees of The State of California are enjoined and restrained in any such Administrative year from extracting from Central Basin collectively any quantity of water greater than the Allowed Pumping Allocation of The State of California as hereinafter set forth next to the name of that party in the same tabulation. Each party adjudged and declared above are not to be the owner of and not to have the right to extract ground water from Central Basin is enjoined and restrained in any Administrative year commencing after the date this judgment becomes final from extracting any ground water from Central Basin, except as may be hereinafter permitted to any such party under the Exchange Pool provisions of this judgment.

(b) Defendant The City of Los Angeles is enjoined and restrained in any Administrative year commencing after the date this judgment becomes final from extracting from Central Basin any quantity or water greater than fifteen thousand (15,000) acre feet, subject to further provisions of this judgment, including but not limited to, sharing with other parties in any subsequent decreases or increases in the quantity of extractions permitted from Central Basin by parties, pursuant to continuing jurisdiction of the Court, on the basis that fifteen thousand (15,000) acre-feet bears to the Allowed Pumping Allocations of the other parties. Defendant Department of Water and Power of The City of Los Angeles is enjoined and restrained in any Administrative year commencing after the date this judgment becomes final from extracting from Central Basin any quantity of water other than such as it may extract on behalf of defendant The City of Los Angeles, and which extractions, along with any extractions by said City, shall not exceed that quantity permitted by this judgment to that City in any Administrative year. Whenever in this judgment the term "Allowed Pumping Allocation" appears, it shall be deemed to mean as to defendant The City of Los Angeles the quantity of fifteen thousand (15,000) acre-feet.

[See Appendix B of the latest [Annual Report](#) for the most recent list and succession of water right holders in the Central Basin.]

3. [There is no paragraph 3 found in the judgment.]

4. *Transition in Administrative Year – Application.* "Year" and "Administrative Year" as used throughout this judgment shall mean the water year; provided that with the first fiscal year (July 1 – June 30) commencing at least four months after the "Amended Judgment" became final, and thereafter, said words shall mean the fiscal year. Since this will provide a transitional Administrative year of nine months, October 1 – June 30, ("short year" hereafter), notwithstanding the finding and determinations in the annual Watermaster report for the then last preceding water year, the Allowed Pumping Allocations of the parties and the quantity which Defendant City of Los Angeles is annually permitted to extract from Central Basin for said short year shall be based on three-quarters of the otherwise allowable quantity. During said short year, because of hardships that might otherwise result, any overextractions by a party shall be deemed pursuant to paragraph

2, Subpart B of Part III of this judgment, and it shall be deemed that the Watermaster has made the determination of unreasonable hardship to which reference is therein made.

II. Appointment of Watermaster; Watermaster Administrative Provisions.

Department of Water Resources of the State of California is hereby appointed Watermaster, for an indefinite term, but subject to removal by the Court, to administer this judgment and shall have the following powers, duties and responsibilities.

1. *Duties, Powers and Responsibilities of Watermaster.* In order to assist the Court in the administration and enforcement of the provisions of this judgment and to keep the Court fully advised in the premises, the Watermaster shall have the following duties, powers and responsibilities in addition to those before or hereafter provided in this judgment:
 - a. *Watermaster May Require Reports, Information, and Records.* To require of parties the furnishing of such reports, information and records as may be reasonably necessary to determine compliance or lack of compliance by any party with the provisions of this judgment.
 - b. *Requirement of Measuring Devices.* To require all parties or any reasonable classification of parties owning or operating any facilities for the extraction of ground water from Central Basin to install and maintain at all times in good working order at such party's own expense, appropriate measuring devices at such times and as often as may be reasonable under the circumstances and to calibrate or test such devices.
 - c. *Inspections by Watermaster.* To make inspections of ground water production facilities and measuring devices at such times and as often as may be reasonable under the circumstances and to calibrate or test such devices.
 - d. *Annual Report.* The Watermaster shall prepare, file with the Court and mail to each of the parties on or before the 15th day of the fourth month following the end of the preceding Administrative year, an annual report for such year, the scope of which shall include but not be limited to the following:
 1. Ground Water Extractions
 2. Exchange Pool Operation
 3. Use of Imported Water Resources
 4. Violations of Judgment and Corrective Action Taken
 5. Change of Ownership of Total Water Rights
 6. Watermaster Administration Costs
 7. Recommendations, if any.
 - e. *Annual Budget and Appeal Procedure in Relation Thereto.* The Watermaster shall annually prepare a tentative budget for each Administrative year stating the anticipated expense for administering the provisions of this judgment. The Watermaster shall mail a copy of said tentative budget to each of the parties hereto at least 60 days before the beginning of each Administrative year. For the first Administrative year of operation under this judgment, if the Watermaster is unable to meet the above time requirement, the Watermaster shall mail said copies as soon as possible. If any party hereto has any objection to said tentative budget, it shall present the same in writing to the Watermaster within 15 days after the date of mailing of said tentative budget by the Watermaster. If no objections are received within said period, the tentative budget shall become the final budget. If objections are received, the Watermaster shall, within 10 days thereafter, consider such objections, prepare a final budget and mail a copy thereof to each party hereto, together with a statement of the amount assessed to each party. Any party may

apply to the Court within 15 days after the mailing of such final budget for a revision thereof based on specific objections thereto. The parties hereto shall make the payments otherwise required of them to the Watermaster even though such a request for revision has been filed with the Court. Upon any revision by the Court the Watermaster shall either remit to the parties their pro rata portions of any reduction in the budget, or credit their accounts with respect to their budget assessments for the next ensuing Administrative year, as the Court shall direct.

The amount to be assessed to each party shall be determined as follows: If that portion of the final budget to be assessed to the parties is equal to or less than \$20.00 per party then the cost shall be equally apportioned among the parties. If that portion of the final budget to be assessed to parties is greater than \$20.00 per party then each party shall be assessed a minimum of \$20.00. The amount of revenue expected to be received through the foregoing minimum assessments shall be deducted from that portion of the final budget to be assessed to the parties and the balance shall be assessed to the parties having Allowed Pumping Allocations, such balance being divided among them proportionately in accordance with their respective Allowed Pumping Allocations.

Payment of the assessment provided for herein, subject to adjustment by the Court as provided, shall be made by each such party prior to beginning of the Administrative year to which the assessment relates, or within 40 days after the mailing of the tentative budget, whichever is later. If such payment by any party is not made on or before said date, the Watermaster shall add a penalty of 5% thereof to such party's statement. Payment required of any party hereunder may be enforced by execution issued out of the Court, or as may be provided by order hereinafter made by the Court, or by other proceedings by the Watermaster or by any party hereto on the Watermaster's behalf.

Any money unexpended at the end of any Administrative year shall be applied to the budget of the next succeeding Administrative year.

Notwithstanding the above, no part of the budget of the Watermaster shall be assessed to the Plaintiff District or to any party who has not extracted water from Central Basin for a period of two successive Administrative years prior to the Administrative year in which the tentative budget should be mailed by the Watermaster under the provisions of this subparagraph (e).

- f. *Rules.* The Watermaster may adopt and amend from time to time such rules as may be reasonably necessary to carry out its duties, powers and responsibilities under the provisions of this judgment. The rules shall be effective on such date after the mailing thereof to the parties as is specified by the Watermaster, but not sooner than 30 days after such mailing.
2. *Use of Facilities and Data Collected by Other Governmental Agencies.* The Watermaster is directed not to duplicate the collection of data relative to conditions of the Central Basin which is then being collected by one or more governmental agencies, but where necessary the Watermaster may collect supplemental data. Where it appears more economical to do so, the Watermaster is directed to use such facilities of other governmental agencies as are available to it under either no cost or cost agreements with respect to the receipt of reports, billings to parties, mailings to parties, and similar matters.
3. *Appeal from Watermaster Decisions Other Than With Respect to Budget.* Any party interested therein who has objection to any rule, determination, order or finding made by the Watermaster, may make objection thereto in writing delivered to the Watermaster within 30 days after the date the Watermaster mails written notice of the making of such rule, determination, order or finding, and within 30 days after such delivery the Watermaster shall consider said objection and shall

amend or affirm his rule, determination, order or finding and shall give notice thereof to all parties. Any such party may file with the Court within 30 days from the date of said notice any objection to such rule, determination, order or finding of the Watermaster and bring the same on for hearing before the Court at such time as the Court may direct, after first having served said objection upon all other parties. The Court may affirm, modify, amend or overrule any such rule, determination, order or finding of the Watermaster. The provisions of this paragraph shall not apply to budgetary matters, as to which the appellate procedure has heretofore been set forth. Any objection under this paragraph shall not stay the rule, determination, order or finding of the Watermaster. However, the Court, by ex parte order, may provide for a stay thereof on application of any interested party on or after the date that any such party delivers to the Watermaster any written objection.

4. *Effect of Non-Compliance by Watermaster With Time Provisions.* Failure of the Watermaster to perform any duty, power or responsibility set forth in this judgment within the time limitation herein set forth shall not deprive the Watermaster of authority to subsequently discharge such duty, power or responsibility, except to the extent that any such failure by the Watermaster may have rendered some otherwise required act by a party impossible.

III. Provisions for Physical Solution to Meet the Water Requirements in Central Basin.

A. Carryover of Portion of Allowed Pumping Allocation.

(1) Each party adjudged to have a Total Water Right or water rights and who, during a particular Administrative year, does not extract from Central Basin a total quantity equal to such party's Allowed Pumping Allocation for the particular Administrative year, less any allocated subscriptions by such party to the Exchange Pool, or plus any allocated requests by such party for purchase of Exchange Pool water, is permitted to carry over (the "One Year Carryover") from such Administrative year the right to extract from Central Basin in the next succeeding Administrative year so much of said total quantity as it did not extract in the particular Administrative year, not to exceed 20% of such party's Allowed Pumping Allocation, or 20 acre feet, whichever of said 20% or 20 acre feet is the larger.

(2) Following the declaration of a Declared Water Emergency and until the Declared Water Emergency ends either by expiration or by resolution of the Board of Directors of the Central and West Basin Water Replenishment District, each party adjudged to have a Total Water Right or water rights and who, during a particular Administrative year, does not extract from Central Basin a total quantity equal to such party's Allowed Pumping Allocation for the particular Administrative year, less any allocated subscriptions by such party to the Exchange Pool, or plus any allocated requests by such party for purchase of Exchange Pool water, is permitted to carry over (the "Drought Carryover") from such Administrative year the right to extract from Central Basin so much of said total quantity as it did not extract during the period of the Declared Water Emergency, to the extent such quantity exceeds the One Year Carryover, not to exceed an additional 35% of such party's Allowed Pumping Allocation, or additional 35 acre-feet, whichever of said 35% or 35 acre-feet is the larger. Carryover amounts shall first be allocated to the One Year Carryover and any remaining carryover amount for that year shall be allocated to the Drought Carryover.

(3) No further amounts shall be added to the Drought Carryover following the end of the Declared Water Emergency, provided however that in the event another Declared Water Emergency is declared, additional Drought Carryover may be added, to the extent such additional Drought Carryover would not cause the total Drought Carryover to exceed the limits set forth above.

(4) The Drought Carryover shall be supplemental to and shall not affect any previous drought carryover acquired by a party pursuant to previous order of the court.

B. *When Over-extractions May be Permitted.*

1. *Underestimation of Requirements for Water.* Any party hereto having an Allowed Pumping Allocation and not in violation of any provision of this judgment may extract in an Administrative year an additional quantity of water not to exceed: (a) 20% of such party's Allowed Pumping Allocation or 20 acre feet, whichever is greater, and (b) any amount in addition thereto which may be approved in advance by the Watermaster.
2. *Reductions in Allowed Pumping Allocations in Succeeding Years to Compensate for Permissible Overextractions.* Any such party's Allowed Pumping Allocation for the following Administrative year shall be reduced by the amount over-extracted pursuant to paragraph 1 above, provided that if the Watermaster determines that such reduction in the party's Allowed Pumping Allocation in one Administrative year will impose upon such a party an unreasonable hardship, the said reduction in said party's Allowed Pumping Allocation shall be prorated over a period of five (5) Administrative years succeeding that in which the excessive extractions by the party occurred. Application for such relief to the Watermaster must be made not later than the 40th day after the end of the Administrative year in which such excessive pumping occurred. Watermaster shall grant such relief if such over-extraction, or any portion thereof, occurred during a period of Declared Water Emergency.
3. *Reductions in Allowed Pumping Allocations for the Next Succeeding Administrative Year to Compensate for Overpumping.* Whenever a party over-extracts in excess of 20% of such party's Allowed Pumping Allocation, or 20 acre feet, whichever is greater and such excess has not been approved in advance by the Watermaster, then such party's Allowed Pumping Allocation for the following Administrative year shall be reduced by an amount equivalent to its total over-extractions in the particular Administrative year in which it occurred.
4. *Reports of Certain Over-extractions to the Court.* Whenever a party over-extracts in excess of 20% of such party's Allowed Pumping Allocation, or 20 acre feet, whichever is greater, without having obtained prior approval of the Watermaster, such shall constitute a violation of the judgment and the Watermaster shall make a written report to the Court for such action as the Court may deem necessary. Such party shall be subject to such injunctive and other processes and action as the Court might otherwise take with regard to any other violation of such judgment.
5. *Effect of Over-extractions on Rights.* Any party who over-extracts from Central Basin in any Administrative year shall not acquire any additional rights by reason of such over-extractions; nor, shall any required reductions in extractions during any subsequent years reduce the Total Water Right or water rights of any party to the extent said over-extractions are in compliance with paragraph 1 above.
6. *Pumping Under Agreement With Plaintiff During Periods of Emergency.* Plaintiff overlies Central Basin and engages in activities of replenishing the ground waters thereof. Plaintiff by resolution has appropriated for use during emergencies the quantity of 17,000 acre feet of imported and reclaimed water replenished by it into Central Basin, and pursuant to such resolution Plaintiff reserves the right to use or cause the use of such quantity during such emergency periods.

(a) Notwithstanding any other provision of this judgment, parties who are water purveyors (including successors in interest) are authorized to enter into agreements with Plaintiff under which such water purveyors may exceed their respective Allowed Pumping Allocations for the particular administrative year when the following conditions are met:

(1) Plaintiff is in receipt of a resolution of the Board of Directors of the Metropolitan Water District of Southern California ("MWD") that there is an actual or immediately threatened temporary shortage of MWD's imported water supply compared to MWD's needs, or a temporary inability to deliver MWD's imported water supply throughout its area, which will be alleviated by overpumping from Central Basin.

(2) The Board of Directors of both Plaintiff and Central Basin Municipal Water District by resolutions concur in the resolution of MWD's Board of Directors, and the Board of Directors of Plaintiff finds in its resolution that the average minimum elevation of water surface among those wells in the Montebello Forebay of the Central Basin designated as Los Angeles County Flood Control District Wells Nos. 1601T, 1564P, 1615P, and 1626L, is at least 43.7 feet above sea level. This computation shall be based upon the most recent "static readings" taken, which shall have been taken not more than four weeks prior. Should any of the wells designated above become destroyed or otherwise be in a condition so that readings cannot be made, or the owner prevent their use for such readings the Board of Directors of the Plaintiff may, upon appropriate engineering recommendation substitute such other well or wells as it may deem appropriate.

(3) In said resolution, Plaintiff's Board of Directors sets a public hearing, and notice of the time, place and date thereof (which may be continued from time to time without further notice) is given by First Class Mail to the current designees of the parties, filed and served in accordance with Part V, paragraph 3 of this Judgment. Said notice shall be mailed at least five (5) days before the scheduled hearing date.

(4) At said public hearing, parties (including successors in interest) are given full opportunity to be heard, and at the conclusion thereof the Board of Directors of Plaintiff by resolution decides to proceed with agreements under this Part III-B.

(5) For purposes of this Part III-B, "water purveyors" mean those parties (and successors in interest) which sell water to the public whether regulated public utilities, mutual water companies or public entities, which have a connection or connections for the taking of imported water of MWD, or access to imported water of MWD through a connection, and which normally supply part of their customer's needs with such imported water.

(b) All such agreements shall be subject to the following requirements, and such others as Plaintiff's Board of Directors shall require:

(1) They shall be of uniform content except as to quantity involved, and any special provisions considered necessary or desirable with respect to local hydrological conditions or good hydrologic practice.

(2) They shall be offered to all water purveyors, excepting those which Plaintiff's Board of Directors determine should not over pump because such over pumping would occur in undesirable proximity to a sea water barrier project designed to forestall sea water intrusion, or within or in undesirable proximity to an area within Central Basin wherein groundwater levels are at an elevation where over pumping is under all the circumstances then undesirable.

(3) The maximum terms for the agreements shall be four months, which agreements shall commence on the same date and end on the same date (and which may be executed at any time within the four month period), unless an extension thereof is authorized by the Court, under Part IV of this judgment.

(4) They shall contain provisions that the water purveyor executing the agreement pay to the Plaintiff a price in addition to the applicable replenishment assessment determined on

the following formula. The normal price per acre-foot of Central Basin Municipal Water District's (CBMWD) treated domestic and municipal water, as "normal" price of such category of water is defined in Part C, paragraph 10 (price to be paid for Exchange Pool Water) as of the beginning of the contract term less the deductions set forth in said paragraph 10 for the administrative year in which the contract term commences. The agreement shall provide for adjustments in the first of said components for any proportional period of the contract term during which the CBMWD said normal price is changed, and if the agreement straddles two administrative years, the said deductions shall be adjusted for any proportionate period of the contract term in which the amount thereof or of either subcomponent changes for purposes of said paragraph 10. Any price for a partial acre-foot shall be computed prorata. Payments shall be due and payable on the principle that over extractions under the agreement are of the last water pumped in the fiscal year, and shall be payable as the agreement shall provide.

(5) They shall contain provisions that:

(a) All of such agreements (but not less than all) shall be subject to termination by Plaintiff if, in the Judgment of Plaintiff's Board of Directors, the conditions or threatened conditions upon which they were based have abated to the extent over extractions are no longer considered necessary; and (b) that any individual agreement or agreements may be terminated if the Plaintiff's Board of Directors finds that adverse hydrologic circumstances have developed as a result of over extractions by any water purveyor or purveyors which have executed said agreements, or if any other reason that Plaintiff's Board of Directors finds good and sufficient.

(c) Other matters applicable to such agreements and over pumping thereunder are as follows, without need for express provisions in the agreements;

(1) The quantity of over pumping permitted shall be additional to that which the water purveyor could otherwise over pump under this Judgment.

(2) The total quantity of permitted over pumping under all said agreements during said four months shall not exceed Seventeen thousand (17,000) acre feet, but the individual water purveyor shall not be responsible or affected by any violation of this requirement. That total is additional to over extractions otherwise permitted under this Judgment.

(3) Only one four month period may be utilized by Plaintiff in entering into such agreements, as to any one emergency or contamination thereof declared by MWD's Board of Directors under paragraph 6 (a).

(4) Plaintiff may utilize the ex parte provisions of Part IV of this Judgment in lieu of the authority contained herein (which ex parte provisions are not limited as to time, nature of relief, or terms of any agreements), but neither Plaintiff nor any other party shall utilize both as to any one such emergency or continuation thereof.

(5) If any party claims it is being damaged or threatened with damage by the over extractions by any party to such an agreement, the first party or the Watermaster may seek appropriate action of the Court for termination of any such agreement upon notice of hearing to the party complaining, to the party to said agreement, to the plaintiff, and to any parties who have filed a request for special notice. Any termination shall not affect the obligation of the party to make payments under the agreement for over extractions which did occur thereunder.

(6) Plaintiff shall maintain separate accounting of the proceeds from payments made pursuant to agreements entered into under this part. Said fund shall be utilized solely for

purposes of replenishment in replacement of waters in Central Basin and West Basin. Plaintiff shall as soon as practicable cause replenishment in Central Basin by the amounts to be overproduced pursuant to this Paragraph 6 commencing at Page 63, whether through spreading, injection, or in lieu agreements.

(7) Over extractions pursuant to the agreements shall not be subject to the "make up" provisions of the Judgment as amended, provided that if any party fails to make payments as required by the agreement, Plaintiff may require such "make up" under Paragraph 3, Subpart B, Part III of the Judgment.

(8) Water Purveyors under any such agreement may, and is encouraged to enter into appropriate arrangements with customers who have water rights in Central Basin under or pursuant to this Judgment whereby the Water Purveyor will be assisted in meeting the objectives of the agreement.

(9) Nothing in this Paragraph 6 limits the exercise of the reserved jurisdiction of the court except as provided in subparagraph (c) (4) above.

7. *Exemption for Extractors of Contaminated Groundwater.* Any party herein may petition the Replenishment District for a Non-consumptive Water Use Permit as part of a project to remedy or ameliorate groundwater contamination. If the petition is granted as set forth in this part, the petitioner may extract the groundwater as permitted hereinafter, without the production counting against the petitioner's production rights.

(a) If the Board of the Replenishment District determines by Resolution that there is a problem of groundwater contamination that a proposed program will remedy or ameliorate, an operator may make extractions of groundwater to remedy or ameliorate that problem without the production counting against the petitioner's production rights if the water is not applied to beneficial surface use, its extractions are made in compliance with all the terms and conditions of the Board Resolution, and the Board has determined in the Resolution either of the following:

(1) The groundwater to be extracted is unusable and cannot be economically treated or blended for use with other water.

(2) The proposed program involves extraction of usable water in the same quantity as will be returned to the underground without degradation of quality.

(b) The Resolution may provide those terms and conditions the Board deems appropriate, including, but not limited to, restrictions on the quantity of the extractions to be so exempted, limitations on time, periodic reviews, requirement of submission of test results from a Board-approved laboratory, and any other relevant terms or conditions.

(c) Upon written notice to the operator involved, the Board may rescind or modify its Resolution. The rescission or modification of the Resolution shall apply to groundwater extractions occurring more than ten days after the rescission or modification. Notice of rescission or modification shall be either mailed first class mail, postage prepaid, at least two weeks prior to the meeting of the Board at which the rescission or modification will be made to the address of record of the operator or personally delivered two weeks prior to the meeting.

(d) The Board's decision to grant, deny, modify or revoke a permit or to interrupt or stop a permitted project may be appealed to this court within thirty days of the notice thereof to the applicant and upon thirty days notice to the designees of all parties herein.

(e) The Replenishment District shall monitor and periodically inspect the project for compliance with the terms and conditions for any permit issued pursuant to these provisions.

(f) No party shall recover costs from any other party herein in connection with determinators made with respect to this part.

C. *Exchange Pool Provisions.*

1. *Definitions.*

For purposes of these Exchange Pool provisions, the following words and terms have the following meanings:

(a) "Exchange Pool" is the arrangement hereinafter set forth whereby certain of the parties, ("Exchangers") may, notwithstanding the other provisions of the judgment, extract additional water from Central Basin to meet their needs, and certain other of the parties ("Exchangors"), reduce their extractions below their Allowed Pumping Allocations in order to permit such additional extractions by others.

(b) "Exchangor" is one who offers, voluntarily or otherwise, pursuant to subsequent provisions, to reduce its extractions below its Allowed Pumping Allocation in order to permit such additional extractions by others.

(c) "Exchangee" is one who requests permission to extract additional water from, Central Basin.

(d) "Undue hardship" means unusual and severe economic or operational hardship, other than that arising (i) by reason of any differential in quality that might exist between water extracted from Central Basin and water available for importation or (ii) by reason of any difference in cost to a party in subscribing to the Exchange Pool and reducing its extractions of water from Central Basin in an equivalent amount as opposed to extracting any such quantity itself.

2. *Parties Who May Purchase Water Through the Exchange Pool.* Any party not having existing facilities for the taking of imported water as of the beginning of any Administrative year, and any party having such facilities as of the beginning of any Administrative year who is unable, without undue hardship, to obtain, take, and put to beneficial use, through its distribution system or systems existing as of the beginning of the particular Administrative year, imported water in a quantity which, when added to its Allowed Pumping Allocation for that particular Administrative year, will meet its estimated needs for that particular Administrative year, may purchase water from the Exchange Pool, subject to the limitations contained in this Subpart C of this Part III (Subpart "C" hereinafter).

3. *Procedure for Purchasing Exchange Pool Water.* Not later than the 40th day following the commencement of each Administrative year, each such party desiring to purchase water from the Exchange Pool shall file with the Watermaster a request to so purchase, setting forth the amount of water in acre feet that such party estimates that it will require during the then current Administrative year in excess of the total of:

(a) Its allowed Pumping Allocation for that particular Administrative year; and

(b) The imported water, if any, which it estimates it will be able, without undue hardship, to obtain, take and put to beneficial use, through its distribution system or systems existing as of the beginning of that particular Administrative year.

Any party who as of the beginning of any Administrative year has existing facilities for the taking of imported water and who makes a request to purchase from the Exchange Pool must provide with such request substantiating data and other proof which, together with any further data and other proof requested by the Watermaster, establishes that such party is unable without undue hardship, to obtain, take and put to beneficial use through its said distribution system or systems a sufficient quantity of imported water which, when added to its said Allowed Pumping Allocation for the particular Administrative year, will meet its estimated needs. As to any such party, the Watermaster shall make a determination whether the party has so established such inability, which determination shall be subject to review by the court under the procedure set forth in Part II of this judgment. Any party making a request to purchase from the Exchange Pool shall either furnish such substantiating data and other proof, or a statement that such party had no existing facilities for the taking of imported water as of the beginning of that Administrative year, and in either event a statement of the basis for the quantity requested to be purchased.

4. *Subscriptions to Exchange Pool.*

a. *Required Subscription.* Each party having existing facilities for the taking of imported water as of the beginning of any Administrative year hereby subscribed to the Exchange Pool for purposes of meeting Category (a) requests thereon, as more particularly defined in paragraph 5 of this Subpart C, twenty percent (20%) of its Allowed Pumping Allocation, or the quantity of imported water which it is able, without undue hardship, to obtain, take and put to beneficial use through its distribution system or systems existing as of the beginning of the particular Administrative year in addition to such party's own estimated needs for imported water during that water year, whichever is the lesser. A party's subscription under this subparagraph (a) and subparagraph (b) of this paragraph 4 is sometimes hereinafter referred to as a 'required subscription'.

b. *Report to Watermaster by Parties With Connections and Unable to Subscribe 20%.* Any party having existing facilities for the taking of imported water and estimating that it will be unable, without undue hardship, in that Administrative year to obtain, take and put to beneficial use through its distribution system or systems existing as of the beginning of that Administrative year, sufficient imported water to further reduce its extractions from the Central Basin by twenty percent (20%) of its Allowed Pumping Allocation for purposes of providing water to the Exchange Pool must furnish not later than the 40th day following the commencement of such Administrative year substantiating data and other proof which, together with any further data and other proof requested by the Watermaster, establishes said inability or such party shall be deemed to have subscribed twenty percent (20%) of its Allowed Pumping Allocation for the purpose of providing water to the Exchange Pool. As to any such party so contending such inability, the Watermaster shall make a determination whether the party has so established such inability, which determination shall be subject to review by the Court under the procedure set forth in Part II of this judgment.

c. *Voluntary Subscriptions.* Any party, whether or not having facilities for the taking of imported water, who desires to subscribe to the Exchange Pool a quantity or further quantity of its Allowed Pumping Allocation, may so notify the Watermaster in writing of the quantity of such offer on or prior to the 40th day following the commencement of the particular Administrative year. Such

subscriptions are referred to hereinafter as "voluntary subscriptions." Any Exchangor who desires that any part of its otherwise required subscription not needed to fill Category (a) requests shall be available for Category (b) requests may so notify the Watermaster in writing on or prior to say 40th day. If all of that Exchangor's otherwise required subscription is not needed in order to fill Category (a) requests, the remainder of such required subscription not so used, or such part thereof as such Exchangor may designate, shall be deemed to be a voluntary subscription.

5. *Limitations on Purchases of Exchange Pool Water and Allocation of Requests to Purchase Exchange Pool Water Among Exchangors.*
 - a. *Categories of Requests.* Two categories of Exchange Pool requests are established as follows:
 1. *Category (a) requests.* The quantity requested by each Exchangee, whether or not that Exchangee has an Allowed Pumping Allocation, which quantity is not in excess of 150% of its Allowed Pumping Allocation, if any, or 100 acre-feet, whichever is greater. Requests or portions thereof within the above criteria are sometimes hereinafter referred to as "Category (a) requests."
 2. *Category (b) requests.* The quantity requested by each Exchangee having an Allowed Pumping Allocation to the extent the request is in excess of 150% of that Allowed Pumping Allocation or 100 acre-feet, whichever is greater, and the quantity requested by each Exchangee having no Allowed Pumping Allocation to the extent the request is in excess of 100 acre-feet. Portions of requests within the above criteria are sometimes hereinafter referred to as "Category (b) requests."
 - b. *Filling of Category (a) Requests.* All Exchange Pool subscriptions, required and voluntary, shall be available to fill category (a) requests. Category (a) requests shall be filled first from voluntary subscriptions, and if voluntary subscriptions should be insufficient to fill all Category (a) requests required subscriptions shall be then utilized to fill Category (a) requests. All Category (a) requests shall be first filled before any Category (b) requests are filled.
 - c. *Filling of Category (b) Requests.* To the extent that voluntary subscriptions have not been utilized in filling Category (a) requests, Category (b) requests shall be filled only out of any remaining voluntary subscriptions. Required subscriptions will then be utilized for the filling of any remaining Category (b) requests.
 - d. *Allocation of Requests to Subscriptions When Available Subscriptions Exceed Requests.* In the event the quantity of subscriptions available for any category of requests exceeds those requests in that category, or exceeds the remainder of those requests in that category, such requests shall be filled out of such subscriptions proportionately in relation to the quantity of each subscription.
 - e. *Allocation of Subscriptions to Category (b) Requests in the Event of Shortage of Subscriptions.* In the event available subscriptions are insufficient to meet Category (b) requests, available subscriptions shall be allocated to each request

in the proportion that the particular request bears to the total requests of the particular category.

6. *Additional Voluntary Subscriptions.* If subscriptions available to meet the requests of Exchangees are insufficient to meet all requests, additional voluntary subscriptions may be solicited and received from parties by the Watermaster. Such Additional subscriptions shall be allocated first to Category (a) requests to the extent unfilled, and next to Category (b) requests to the extent unfilled. All allocations are to be otherwise in the same manner as earlier provided in paragraph 5 (a) through 5 (e) inclusive.
7. *Effect if Category (a) Requests Exceed Available Subscriptions, Both Required and Voluntary.* In the event that the quantity of subscriptions available to fill Category (a) requests is less than the total quantity of such requests, the Exchangees may, nonetheless, extract the full amount of their Category (a) requests otherwise approved by the Watermaster as if sufficient subscriptions were available. The amounts received by the Watermaster on account of that portion of the approved requests in excess of the total quantities available from Exchangors shall either be paid by the Watermaster to Central & West Basin Water Replenishment District in trust for the purpose of purchasing imported water and spreading the same in Central Basin for replenishment thereof, or credited to an account of said Plaintiff District on the books of the Watermaster, at the option of said Plaintiff District. Thereafter said Plaintiff District may, at any time, withdraw said funds or any part thereof so credited in trust for the aforesaid purpose, or may by the 40th day of any Administrative year notify the Watermaster that it desires all or any portion of said funds to be expended by the Watermaster for the purchase of water available from subscriptions by Exchangors in the event the total quantity of such subscriptions exceeds the total quantity of approved requests by parties to purchase Exchange Pool water. To the extent that there is such an excess of available subscriptions over requests and to the extent that the existing credit in favor of Plaintiff District is sufficient to purchase such excess quantity at the price established for Exchange Pool purchases during that Administrative year, the account of the Plaintiff District shall be debited and the money shall be paid to the Exchangors in the same manner as if another party had made such purchase as an Exchangee. The Plaintiff District shall not extract any such Exchange Pool water so purchased.
8. *Additional Pumping by Exchangees Pursuant to Exchange Pool Provisions.* An Exchangee may extract from Central Basin in addition to its Allowed Pumping Allocation for a particular Administrative year that quantity of water which it has requested to purchase from the Exchange Pool during that Administrative year and which has been allocated to it pursuant to the provisions of paragraph 5, 6 and 7. The first pumping by an Exchangee in any Administrative year shall be deemed to be pumping of the party's allocation of Exchange Pool water.
9. *Reduction in Pumping by Exchangors.* Each Exchangor shall in each Administrative year reduce its extractions of water from Central Basin below its Allowed Pumping Allocation for the particular year in a quantity equal to the quantity of Exchange Pool requests allocated to it pursuant to the provisions of paragraphs 4, 5, 6 and 7 of this Subpart C.
10. *Price to be Paid for Exchange Pool Water.* The price to be paid by Exchangees and to be paid to Exchangors per acre foot for required and voluntary subscriptions of Exchangors utilized to fill requests on the Exchange Pool by Exchangees shall be the dollar amount computed as follows by the Watermaster for each Administrative year. The "normal" price as of the beginning of the Administrative year charged by Central Basin Municipal Water District (CBMWD) for treated MWD (metropolitan Water District of Southern California) water used for domestic and municipal purposes shall be determined, and if

on that date there are any changes scheduled during that Administrative year in CBMWD's "normal" price for such category of water, the weighted daily "normal" CBMWD price shall be determined and used in lieu of the beginning such price; and there shall be deducted from such beginning or weighted price, as the case may be, the "incremental cost of pumping water in Central Basin" at the beginning of the Administrative year and any then current rate or rates, of assessments levied on the pumping of ground water in Central Basin by Plaintiff District and any other governmental agency. The "normal" price charged by CBMWD shall be the highest price of CBMWD for normal service excluding any surcharge or higher rate for emergency deliveries or otherwise failing to comply with CBMWD rates and regulations relating to earlier deliveries. The "incremental cost of pumping water in Central Basin" as of the beginning of the Administrative year shall be deemed to be the Southern California Edison Company Schedule No. PA-1 rate per kilowatt-hour, including all adjustments and all uniform authorized additions to the basic rate, multiplied by 560 kilowatt-hours per acre-foot, rounded to the nearest dollar (which number of kilowatt-hours has been determined to represent the average energy consumption to pump an acre-foot of water in Central Basin). In applying said PA-1 rate the charge per kilowatt-hour under the schedule shall be employed and if there are any rate blocks then the last rate block shall be employed. Should a change occur in Edison schedule designations, the Watermaster shall employ that applicable to motors used for pumping water by municipal utilities.

11. *Carry-over of Exchange Pool Purchases by Exchangers.* An Exchanger who does not extract from Central Basin in a particular Administrative year a quantity of water equal to the total of (a) its Allowed Pumping Allocation for that particular Administrative year, reduced by any authorized amount of carry-over into the next succeeding Administrative year pursuant to the provisions of Subpart A of Part III of this judgment, and (b) the quantity that it purchased from the Exchange Pool for that particular Administrative year, may carry over into the next succeeding Administrative year the right to extract from Central Basin a quantity equal to the difference between said total and the quantity actually extracted in that Administrative year, but not exceeding the quantity purchased from the Exchange Pool for that Administrative year. Any such carry-over shall be in addition to that provided in said Subpart A of Part III.

If the 'Basinwide Average Exchange Pool Price' in the next succeeding Administrative year exceeds the 'Exchange Pool Price' in the previous Administrative year, any such Exchanger exercising such carry-over rights hereinabove provided shall pay to the Watermaster, forthwith upon the determination of the 'Exchange Pool Price' in said succeeding Administrative year and as a condition to such carry-over rights, an additional amount determined by multiplying the number of acre-feet of carry-over by the difference in 'Exchange Pool Price' as between the two Administrative years. Such additional payment shall be miscellaneous income to the Watermaster which shall be applied by him against that share of the Watermaster's budget to be paid by the parties to this Agreement for the second Administrative year succeeding that in which the Exchange Pool water was so purchased.

12. *Notification by Watermaster to Exchangers and Exchanges of Exchange Pool Requests and Allocations Thereof and Price of Exchange Pool Water.* Not later than the 65th day after the commencement of each Administrative year, the Watermaster shall determine and notify all Exchangers and Exchanges of the total of the allocated requests for Exchange Pool water and shall provide a schedule divided into categories of requests showing the quantity allocated to each Exchanger and a schedule of the allocation of the total Exchange Pool requirements among the Exchangers. Such notification shall also advise Exchangers and Exchanges of the prices to be paid to Exchangers for subscriptions utilized and the Exchange Pool Price for that Administrative year as determined by the Watermaster. The determinations of the Watermaster in this regard shall be subject to review by the Court in accordance with the procedure set forth in Part II of this judgment.

13. *Payment by Exchanges.* Each Exchangee shall, on or prior to last day of the third month of each Administrative year, pay to the Watermaster one-quarter of said price per acre-foot multiplied by the number of acre feet of such party's approved request and shall, on or before the last day of each of the next succeeding three months, pay a like sum to the Watermaster. Such amounts must be paid by each Exchangee regardless of whether or not it in fact extracts or uses any of the water it has requested to purchase from the Exchange Pool.
14. *Payments to Exchangors.* As soon as possible after receipt of moneys from Exchangees, the Watermaster shall remit to the Exchangors their prorate portions of the amount so received in accordance with the provisions of paragraph 10 above.
15. *Delinquent Payments.* Any amounts not paid on or prior to any due date above shall carry interest at the rate of 1% per month or any part of a month. Any amounts required to be so paid may be enforced by the equitable powers of the Court, including, but not limited to, the injunctive process of the Court. In addition thereto, the Watermaster, as Trustee for the Exchangors, may enforce such payment by any appropriate legal action, and shall be entitled to recover as additional damages reasonable attorneys' fees incurred in connection therewith. If any Exchangee shall fail to make any payments required of it on or before 30 days after the last payment is due, including any accrued interest, said party shall thenceforward not be entitled to purchase water from the Exchange Pool in any succeeding Administrative year except upon order of the Court, upon such conditions as the Court may impose.

IV. Continuing Jurisdiction of the Court.

(a) Its determination of the permissible level of extractions from Central Basin in relation to achieving balanced basin and an economic utilization of Central Basin for ground water storage, taking into account any then anticipated artificial replenishment of Central Basin by governmental agencies for the purpose of alleviating what would otherwise be annual overdrafts upon Central Basin and all other relevant factors.

(b) Whether in accordance with applicable law any party has lost all or any portion of his rights to extract ground water from Central Basin and, if so, to ratably adjust the Allowed Pumping Allocations of other parties and ratably thereto any remaining Allowed Pumping Allocation of such party.

(c) To remove any Watermaster appointed from time to time and appoint a new Watermaster; and to review and revise the duties, powers and responsibilities of the Watermaster and to make such other and further provisions and orders of the Court that may be necessary or desirable for the adequate administration and enforcement of the judgment.

(d) To revise the price to be paid by Exchangees and to Exchangors for Exchange Pool purchases and subscriptions.

(e) In case of emergency or necessity, to permit extractions from Central Basin for such periods as the Court may determine: (i) ratably in excess of the Allowed Pumping Allocations of the parties; or (ii) on a non-ratable basis by certain parties if either compensation or other equitable adjustment for the benefit of the other parties is provided. Such overextractions may be permitted not only for emergency and necessity

arising within Central Basin area, but to assist the remainder of the areas within The Metropolitan Water District of Southern California in the event of temporary shortage or threatened temporary shortage of its imported water supply, or temporary inability to deliver the same throughout its area, but only if the court is reasonably satisfied that no party will be irreparably damaged thereby. Increased energy cost for pumping shall not be deemed irreparable damage. Provided, however, that the provisions of this subparagraph will apply only if the temporary shortage, threatened temporary shortage, or temporary inability to deliver was either not reasonably avoidable by the Metropolitan Water District, or if reasonably avoidable, good reason existed for not taking the steps necessary to avoid it.

(f) To review actions of the Watermaster.

(g) To assist the remainder of the areas within The Metropolitan Water District of Southern California within the parameter set forth in subparagraph (e) above.

(h) To provide for such other matters as are not contemplated by the judgment and which might occur in the future, and which if not provided for would defeat any or all of the purposes of this judgment to assure a balanced Central Basin subject to the requirements of Central Basin Area for water required for its needs, growth and development.

The exercise of such continuing jurisdiction shall be after 30 days notice to the parties, with the exception of the exercise of such continuing jurisdiction in relation to subparagraphs (e) and (g) above, which may be ex parte, in which event the matter shall be forthwith reviewed either upon the Court's own motion or the motion of any party upon which 30 days notice shall be so given. Within ten (10) days of obtaining any ex parte order, the party so obtaining the same shall mail notice thereof to the other parties. If any other party desires Court review thereof, the party obtaining the ex parte order shall bear the reasonable expenses of mailing notice of the proceedings, or may in lieu thereof undertake the mailing. Any contrary or modified decision upon such review shall not prejudice any party who relied on said ex parte order.

V. General Provisions.

1. *Judgment Constitutes Inter Se Adjudication.* This judgment constitutes an inter se adjudication of the respective rights of all parties, except as may be otherwise specifically indicated in the listing of the rights of the parties at page 12 through 52 of this judgment, or in Appendix "2" thereof.
2. *Assignment, Transfer, Etc., of Rights.* Subject to the other provision of this judgment, and any rules and regulations of the Watermaster requiring reports relative thereto, nothing herein contained shall be deemed to prevent any party hereto from assigning, transferring, licensing, or leasing all or any portion of such water rights as it may have with the same force and effect as would otherwise be permissible under applicable rules of law as exist from time to time.
3. *Service Upon and Delivery to Parties of Various Papers.* Service of the judgment on those parties who have executed that certain Stipulation and Agreement for Judgment or who have filed a notice of election to be bound by the Exchange Pool provisions shall be made by first class mail, postage prepaid, addressed to the designee and at the address designated for that purpose in the executed and filed Counterpart of the Stipulation of Agreement for Judgment or in the executed and filed "Notice of Election to be Bound by Exchange Pool Provisions", as the case may be, or in

any substitute designation filed with the Court. Each party who has not heretofore made such a designation shall, within 30 days after the judgment shall have been served upon that party, file with the Court, with proof of service of a copy upon the Watermaster, a written designation of the person to whom and the address at which all future notices, determinations, requests, demands, objections, reports and other papers and processes to be served upon that party or delivered to that party are to be so served or delivered.

A later substitute designation filed and served in the same manner by any party shall be effective from the date of filing as to the then future notices, determinations, requests, demands, objections, reports and other papers and processes to be served upon or delivered to that party.

Delivery to or service upon any party by the Watermaster, by any other party, or by the Court, or any item required to be served upon or delivered to a party under or pursuant to the judgment may be by deposit in the mail, first class, postage prepaid, addressed to the designee and at the address in the latest designation filed by that party.

4. *Judgment Does Not Affect Rights, Powers, Etc., of Plaintiff District.* Nothing herein constitutes a determination or adjudication which shall foreclose Plaintiff District from exercising such rights, powers, privileges and prerogatives as it may now have or may hereafter have by reason of provisions of law.
5. *Continuation of Order Under Interim Agreement.* The order of Court made pursuant to the "Stipulation and Interim Agreement and Petition for Order" shall remain in effect through the water year in which this judgment shall become final (subject to the reserved jurisdiction of the Court).
6. *Effect of: Extractions by Exchangees; Reductions in Extractions.* With regard to Exchange Pool purchases, the first extractions by each Exchangee shall be deemed the extractions of the quantities of water which that party is entitled to extract pursuant to his allocation from the Exchange Pool for that Administrative year. Each Exchangee shall be deemed to have pumped his Exchange Pool request so allocated for and on behalf of each Exchangor in proportion to each Exchangor's subscription to the Exchange Pool which is utilized to meet Exchange Pool requests. No Exchangor shall ever be deemed to have relinquished or lost any of its rights determined in this judgment by reason of allocated subscriptions to the Exchange Pool. Each Exchangee shall be responsible as between Exchangors and that Exchangee, for any tax or assessment upon the production of ground water levied for replenishment purposes by the Central and West Basin Water Replenishment District or by any other governmental agency with respect to water extracted by such Exchangee by reason of Exchange Pool allocations and purchases. No Exchangor or Exchangee shall acquire any additional rights, with respect to any party to this action, to extract waters from Central Basin pursuant to Water Code Section 1005.1 by reason of the obligations pursuant to and the operation of the Exchange Pool.
7. *Judgment Binding on Successors, Etc.* This judgment and all provisions thereof are applicable to and binding upon not only the parties to this action, but as well to their respective heirs, executors, administrators, successors, assigns, lessees, licensees and to the agents, employees and attorneys in fact of any such persons.
8. *Costs.* No party shall recover its costs herein as against any other party.
9. *Intervention of Successors in Interest and New Parties.* Any person who is not a party (including but not limited to successors or parties who are bound by this judgment) and who proposes to produce water from the basin or exercise water rights of a predecessor may seek to become a party to this Judgment through a Stipulation in Intervention entered into with the Plaintiff. Plaintiff may execute said Stipulation on behalf of the other parties herein, but such Stipulation shall not preclude a party from opposing such intervention at the time of the court hearing thereon. Said Stipulation for Intervention must thereupon be filed with the Court, which will consider an order

confirming said intervention following thirty (30) days notice to the parties. Thereafter, if approved by the Court, such intervenor shall be a party bound by this Judgment and entitled to the rights and privileges accorded under the physical solution herein.

10. *Effect of this Amended Judgment on Orders Filed Herein.* This Second Amended Judgment shall not abrogate such rights of additional carry-over of unused water rights as may otherwise exist pursuant to orders herein filed June 2, 1977 and September 29, 1977.

APPENDIX G

***EMERGENCY WATER CONSERVATION
PLAN RESOLUTION NO. 91-6***



CITY OF CERRITOS

RESOLUTION NO. 91-6

A RESOLUTION OF THE CITY COUNCIL OF THE
CITY OF CERRITOS IMPLEMENTING PHASE I AND
II OF THE EMERGENCY WATER CONSERVATION PLAN

WHEREAS, on May 2, 1990, the City Council of the City of Cerritos adopted Resolution No. 90-14 entitled "A Resolution of the City Council of the City of Cerritos Adopting a Program of Voluntary Water Conservation to Reduce Water Consumption by Ten (10) Percent"; and,

WHEREAS, the City Council of the City of Cerritos has established an Emergency Water Conservation Plan in light of the current drought conditions in Southern California, particularly in Cerritos, and desires to rescind Resolution No. 90-14.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF CERRITOS DOES RESOLVE AS FOLLOWS:

SECTION 1. Scope. Phase I and II of City of Cerritos Emergency Water Conservation Plan are hereby implemented, effective February 21, 1991.

SECTION 2. Purpose. The City Council hereby declares that a water shortage emergency exists, and this Emergency Water Conservation Plan shall be implemented to provide a vehicle to protect public peace, health and safety by significantly and equitably reducing the consumption of potable water over an extended period. The Conservation Plan shall remain in effect until the Council declares that the water shortage emergency has ended.

SECTION 3. Application. The provisions of this Conservation Plan shall apply to all customers and property receiving potable water from the City wherever situated, and shall also apply to all property and facilities owned, maintained, operated or under the jurisdiction of the various officials, bureaus or agencies of the City of Cerritos. The provisions of this Conservation Plan shall not apply to the use of reclaimed water.

SECTION 4. Authorization. The various officials, bureaus, and agencies of the City are hereby authorized and directed to implement immediately the applicable provisions of this Conservation Plan upon the effective date of the implementation of any Phase.

SECTION 5. Water Conservation Phases. No customer of the City shall make, cause, use, or permit the use of water from the City for residential, commercial, industrial, agricultural, governmental, or any other purpose in a manner contrary to any provision of, or in an amount in excess of that use permitted by the Phase then in effect pursuant to action taken by the City Council. The City Council shall determine by resolution which Phase is necessary to accomplish water conservation, based on the severity of the water shortage emergency.

SECTION 6. Phase I. The following occurrences shall be deemed improper water use:

- (a) Washing of walkways, driveways, or parking areas with a hose;
- (b) Using water to clean, fill, or maintain levels in decorative fountains unless a recycling system is used;
- (c) Serving drinking water to any customer in a restaurant or other public place where food is served, sold, or offered for sale unless expressly requested by the customer;
- (d) Failing to repair all water leaks as soon as possible;
- (e) Watering or irrigating lawns, turf, or landscape areas between the hours of 10:00 A.M. and 4:00 P.M.;
- (f) Watering or irrigating lawns, turf, or landscape areas beyond saturation causing runoff;
- (g) Allowing a hose to run continuously while washing vehicles;
- (h) Allowing sprinklers to direct water to areas other than landscape causing runoff.

SECTION 7. Notice of Improper Water Use. For each occurrence of improper water use, the City shall send to the customer where the improper use occurred a notice of Improper Water use specifying the subsection or subsections of Section 6 that apply. Where possible, a copy of said Notice shall be given to the individual who has improperly used water in addition to being given as required in Section 11.

(A) Failure to Comply

- (1) **First Violation:** The City shall issue a written notice of the improper water use to the customer.

- (2) Second Violation: For a second violation during any one water shortage emergency, the City shall impose a \$25.00 penalty, payable with the next subsequent water bill.
- (3) Third and Subsequent Violations. For a third and each subsequent violation during any one water shortage emergency, the City shall install a flow restricting device of one (1) gallon per minute capacity for services up to one and one-half (1-1/2) inch size, and comparatively sized for larger services, on the service of the customer at the premises at which the violation occurred for a period of not less than forty-eight (48) hours. The City shall charge the customer the reasonable costs incurred for installing and for restoration of normal service. The charge shall be paid before normal service can be restored.
- (4) Failure to pay penalties described in subsection (2) and (3) will result in discontinuation of water service until all previous penalties are paid in full. In addition, a reactivation fee will be imposed.

SECTION 8. Phase II

(A) Section 6 and 7 of the Conservation Plan shall apply in Phase II.

(B) Bimonthly, each 5/8" x 3/4" or 1" water meter shall be billed at a base consumption of 30 units, under the current water rate structure. All billing units of water used over the aforementioned base consumption will be billed at one and one half times the quantity rate in existence in the current rate structure.

(C) Bimonthly, each 1-1/2" water meter shall be billed at a base consumption of 119 units under the current water rate structure.

Bimonthly, each 2" water meter shall be billed at a base consumption of 277 units under the current water rate structure.

Bimonthly, each 3" water meter shall be billed at a base consumption of 511 units under the current water rate structure.

Bimonthly, each 4" water meter shall be billed at a base consumption of 1080 units under the current water rate structure.

Under each condition in Section C, if the bimonthly usage exceeds the aforementioned base consumption, a comparison to the previous years water consumption, during a similar bimonthly period will be made. The customer will be allowed ninety percent (90%) of the previous years use. Any water used in excess of the greater of the following, will be billed at one and one half times the quantity rate in existence under the current rate structure:

(a) the base consumption for a 1-1/2", 2", 3" or 4" meter as applicable, or

(b) ninety percent (90%) of the previous years use comparison.

SECTION 9. Exceptions. The improper use of water specified in Section 6 of this Conservation Plan are not applicable to that use of water necessary for public health and safety or for essential governmental services such as police, fire, and other similar emergency services.

SECTION 10. Failure to Comply. A flow restricting device may be installed for a period of three (3) months in the water service of any customer whose bill shows an excess rate, as established in Section 8 above, for three (3) consecutive months. The charge for installation and removal of the flow restricting device shall be as established in Section 7.

SECTION 11. Notice. Except as otherwise provided in this Conservation Plan, all notices required or desired to be given under the Conservation Plan shall be in writing and personally served or deposited in the U.S. Postal Service, first class, postage prepaid, addressed to the billing address of the customer and to the City of Cerritos, P. O. Box 3130, Cerritos, CA 90703, Attn: Water Superintendent. Notice shall be effective on the date personal service is obtained or the date on which the notice is deposited in the mail. If the customer is absent from this residence or place of business so that personal service cannot be obtained, notice may be given by leaving a copy thereof with some responsible person at either place and then sending a copy by regular mail addressed to the customer at his billing address, or if the residence or place of business cannot be ascertained or a responsible

person cannot be found there, then notice may be given by affixing a copy thereof in a conspicuous place on the property where the improper water use occurred and delivering a copy thereof to a person residing there if such person can be found and sending a copy thereof by regular mail addressed to the customer at his or her billing address.

SECTION 12. Relief from Compliance.

(A) Administrative Hearing. A customer shall have the right to a hearing to obtain relief from compliance with the Conservation Plan by filing a written request for hearing within fifteen (15) days after receipt of a Notice of Improper Water Use or receipt of a bill whichever is later. To the extent possible, the hearing shall be held by the Water Superintendent or designee within fifteen (15) days after receipt of the request therefor. In determining whether or not relief shall be granted, the Water Superintendent shall consider all relevant factors including but not limited to:

- (1) The fact that reduction in water consumption will result in unemployment;
- (2) Increased number of employees in commercial or industrial business, and governmental offices;
- (3) The existence of emergency health or safety hazards;
- (4) The existence of family health problems;
- (5) The fact that the current customer was not a customer at the water service address during the base period and the nature of the current customer's water use is substantially different from the use during the base period;
- (6) Special needs of medical care facilities or schools.

The Water Superintendent or designee shall give the customer notice of his decision, including notice of the customer's right to appeal the decision to the City Council. No customer shall appeal to the City Council prior to receipt of a decision from the Water Superintendent or designee.

(B) Appeal to Council. A customer shall have the right to appeal the decision of the Water Superintendent or designee to the City Council by filing a written request for appeal within fifteen (15) days after receipt of said decision. To the extent possible, the City Council shall hear the appeal at its first regular meeting occurring after the expiration of fifteen (15) days of receipt of the request for appeal. The decision of the City Council shall be final.

SECTION 13. General Provisions.

(A) Reduction in Water Supplied. If any customer fails to comply with any provision of this Conservation Plan, the City may reduce the amount of water provided to that customer to the level which that customer would be using if he were complying with the provisions of this Conservation Plan. The provisions of this subsection shall be applied in lieu of, or in addition to, any of the other provisions of this Conservation Plan, in the discretion of the City and shall be applied without regard to the status or nature of the customer.

(B) Public Health and Safety Not to be Affected. Nothing contained in this Conservation Plan shall be construed to require the City to curtail the supply of water to any customer when, in the discretion of the Council, such water is required by that customer to maintain an adequate level of public health and safety.

(C) Base Period. The base period shall be the historic period designated by the Council and is hereby established as the period June 1989 through May 1990.

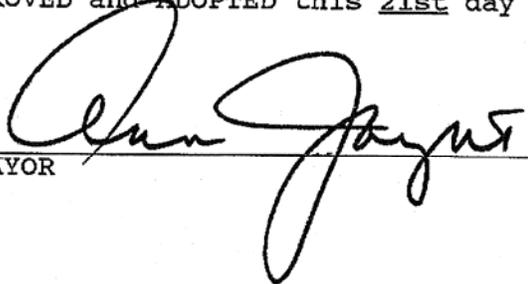
SECTION 14. Severability. If any section, subsection, sentence, clause and phrase in this Conservation Plan or the application thereof to any person or circumstances is for any reason held invalid, the validity of the remainder of the Conservation Plan or the application of such provisions to other persons or circumstances shall not be affected thereby. The City Council declares that it would have passed this Conservation Plan and each section, subsection, sentence, clause, and phrase thereof irrespective of the fact that one or more sections, subsections, sentences, clauses, or phrases or the application thereof to any person or circumstances be held invalid.

SECTION 15. Resolution No. 90-14 is hereby rescinded.

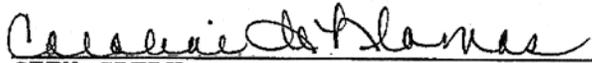
SECTION 16. The City Clerk of the City of Cerritos shall certify to the approval of this Resolution cause the same to be published one time only in a newspaper of general

circulation in Cerritos, which publication shall be made on or after the effective date of the Resolution of the City Council approving this Resolution.

PASSED, APPROVED and ADOPTED this 21st day of February, 1991.


MAYOR

ATTEST:


CITY CLERK

***DRAFT WATER SHORTAGE
STAGE RESOLUTION***



--DRAFT--

CITY OF CERRITOS

RESOLUTION NO. _____

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF
CERRITOS ADOPTING WATER SHORTAGE STAGE ____
OF THE EMERGENCY WATER CONSERVATION PLAN

WHEREAS, the Department of Water Resources has indicated that water supplies from the State Water Project (SWP) will be drastically reduced; and

WHEREAS, the Metropolitan Water District of Southern California, who is the main supplier of water to the City of Cerritos, receives a major portion of its water supplies from the SWP; and

WHEREAS, Metropolitan Water District has adopted regulations that impose severe surcharges for water use in excess of __ percent of that used during a specified base period; and

WHEREAS, in order to stretch available supplies to meet critical customer needs and to protect the public welfare and safety, it will be necessary to significantly reduce water usage in the city; and

WHEREAS, in accordance with Resolution No. 91-6 that establishes the Emergency Water Conservation Plan, the City Council may implement the applicable provisions of the Phased Water Conservation Plan of the City of Cerritos in order to protect the public welfare and safety.

NOW, THEREFORE, BE IT RESOLVED that the City Council of the City of Cerritos, does hereby declare that there currently exists a water supply shortage in all areas and; therefore, under the provisions of the Emergency Water Conservation Plan under Resolution No. 91-6 of the City of Cerritos, a Phase ____ Shortage is declared. Under the Phase __ Shortage, the following conditions shall apply:

1. For each occurrence of improper water use, the City shall send to the customer where the improper use occurred a notice of Improper Water use specifying the subsection or subsections of the following that apply:
 - a. First Violation: The City shall issue a written notice of the improper water use to the customer.
 - b. Second violation: The City shall impose a \$25.00 penalty payable with the next subsequent water bill.
 - c. Third and Subsequent Violations: For a third and each subsequent violation during any one water shortage emergency, the City shall

install a flow restricting device of one (1) gallon per minute capacity for service up to one and one-half (1-1/2) inch size, and comparatively sized for larger services, on the service of the customer at the premises at which the violation occurred for a period of not less than forty-eight (48) hours. The City shall charge the customer the reasonable costs incurred for installing and for restoration of normal service. The charge shall be paid before normal service can be restored.

- d. Failure to pay penalties will result in discontinuation of water service until all previous penalties are paid in full. In addition, a reactivation fee will be imposed.

Now, THEREFORE, BE IT RESOLVED, that the City Council authorizes the implementation of stage __ of the Emergency Water Conservation Plan.

PASSED, APPROVED, AND ADOPTED THIS __ day of _____, 20__

MAYOR

ATTEST:

CITY CLERK