

Urban
WATER
Management Plan

December 19, 2005



City of Lomita

2005

PSOMAS

URBAN WATER MANAGEMENT PLAN 2005



City of Lomita

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PSOMAS

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ACRONYMS and ABBREVIATIONS

AB	Assembly Bill
ACT	Urban Water Management Planning Act of 1983
AF	Acre Feet
AFY	Acre Feet per Year
BGS	Below Ground Surface
BMP	Best Management Practice
BOD	Biochemical Oxygen Demand
CALSIM	California Water Allocation and Reservoir Operations Model
CFS	Cubic Feet Per Second
CRA	Colorado River Aqueduct
CSUDH	California State University at Dominguez Hills
CUWCC	California Urban Water Conservation Council
CVP	Central Valley Project
DBP	Disinfection Byproducts
DHS	Department of Health Services
DMM	Demand Management Measure
DTSC	Department of Toxic Substance Control
DWCV	Desert Water Agency/Coachella Valley Water District
DWR	Department of Water Resources
EOC	Emergency Operations Center
EPA	Environmental Protection Agency
ETo	Evapotranspiration
GIS	Geographic Information System
GPCD	Gallons Per Capita Per Day
GPM	Gallon per Minutes
HAA	Haloacetic Acids
HCF	Hundred Cubic Feet
IAWP	Interim Agricultural Water Program
I/I	Inflow and Infiltration
IID	Imperial Irrigation District
IRP	Integrated Water Resources Plan
IRWMP	Integrated Regional water Management Plan
JWPCC	Joint Water Pollution Control Plan
LACSD	Sanitation Districts of Los Angeles
LADWP	Los Angeles Department of Water and Power
LARWQCB	Los Angeles Regional Water Quality Control Board
LRP	Local Resources Program
MAF	Million Acre Feet
MARS	Member Agency Response System
MCL	Maximum Contaminant Level
MDD	Maximum Daily Demand
MG	Million Gallons
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
NA	Not Available

NDMA	N-Nitrosodimethylamine
PCE	Tetrachloroethylene
pCi/L	Picocuries per liter
PRV	Pressure Reducing Valve
QSA	Quantification Settlement Agreement
RUWMP	Regional Urban Water Management Plan
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCAG	Southern California Association of Governments
SDP	Seawater Desalination Program
SEA	Significant Ecological Area
SWP	State Water Project
SWRCB	State Water Resources Control Board
TAF	Thousand Acre Feet
TCE	Trichloroethylene
TDS	Total Dissolved Solids
THM	Trihalomethane
Ug/L	Micrograms per Liter
ULFT	Ultra Low Flush Toilet
USBR	United States Bureau of Reclamation
USGS	United States Geological Survey
UWMP	Urban Water Management Plan
WARN	California Water Agencies Response Network
WBMWD	West Basin Municipal Water District
WBWRP	West Basin Water Recycling Plant
WOC	Water Operations Center
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 Lomita (City) 2005 UWMP has been prepared in compliance with the requirements of the Act, as amended to 2005¹ (Appendix A), and includes the following:

- Water Service Area
- Water Division and 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 SB 610 (2001), AB 901 (2001), SB 672 (2001), SB 1348 (2002), SB 1384 (2002), SB 1518 (2002), AB 105 (2004), and SB 318 (2004).

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

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

information, however, differs slightly in order to present information in a manner reflecting the unique characteristics of the PWC water utility. The California 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 Demand Management Measures (DMM) Completeness form has been completed, which identifies implementation of water conservation measures as discussed in Section 6, and is included in Appendix C.

Plan Adoption

The City's 2005 UWMP was adopted by Minute Order of the Lomita City Council on December 19, 2005, following a public hearing. Notices of the public hearing were posted in the following facilities throughout the City keeping with consistent City procedure for all public hearings: Lomita City Hall, 24300 Narbonne Avenue, Lomita, CA; Lomita Post Office, 25131 Narbonne Avenue, Lomita, CA; and Lomita Park, 24428 Eshelman Avenue, Lomita, CA.

The Plan was submitted to DWR within 30 days of Board approval. Copies of the notice of Notice of Public Hearing and the Minute Order for Plan Adoption are included in Appendix D. Copies of the Plan were made available to the public within 30 days after adoption.

Agency Coordination

The City Water Department Staff coordinated development of this plan with the City Administrator's Office, Public Works Department, Community Development Department, Economic Development Department, and City Clerk's Office. Development of the Plan was also coordinated with the West Basin Municipal Water District (WBMWD), which serves as the City's wholesaler of water received from the Metropolitan Water District of Southern California (Metropolitan), and the Water Replenishment District of Southern California (WRD), which manages the West Coast Groundwater Basin. Appendix E lists the numerous references used benefiting development of this plan.

Interagency activities included the exchange of data and incorporation of the agencies' comments to the City's Draft UWMP, as 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 WBMWD's Regional UWMP and Metropolitan's Regional UWMP.

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

Metropolitan: 2005 Regional UWMP Workshop at the WBMWD, June 28, 2005, as well as additional regional meetings with Metropolitan.

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

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

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

	Participated in Development of Plan	Contacted for Assistance	Commented on Draft	Notified of Public Hearing	Attended Public Hearing
City of Lomita Water Department	X	X	X	X	X
City of Lomita Public Works Department	X	X	X	X	X
City Administrator's Office				X	X
Community Development Department		X		X	X
Economic Development Department		X		X	X
Metropolitan		X			
WBMWD		X			
WRD		X			
LA County Waterworks		X			
LACSD		X			
Interested General Public				X	X

1.3 WATER SERVICE AREA

Location

The City was incorporated in 1964, and is located 26 miles south of downtown Los Angeles and is bounded by the City of Torrance to the north and west; the City of Los Angeles to the east; the City of Rolling Hills Estates on the southwest; and the City of Rancho Palos Verdes and unincorporated County area to the north. The City's total area is 1,261 acres or 1.97 square miles.

The water service area comprises about 95 percent of the population residing within the City limit, with a small area (211 homes) south of Via Madonna served by Golden State Water Company (previously known as Southern California Water Company – effective October 1, 2005). Figure 1.1 shows the City’s boundary and the water service area.

Climate Characteristics

The City of Lomita is located at the base of the Palos Verdes Peninsula. The climate is Mediterranean, characterized by warm, dry summers and wet, cool winters with average precipitation of approximately 13 inches per year. The average maximum temperature is 73 degrees Fahrenheit, while the average minimum temperature is 53 degrees Fahrenheit. Evapotranspiration (ETo)² in the region averages 49.7 inches annually. Table 1.3-1 lists the average ETo, temperatures and rainfall for the City.

**Table 1.3-1
City of Lomita
Average ETo, Temperatures, and Rainfall**

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total or Average	
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	66.7	67.6	67.6	70.3	71.8	74.7	78.8	79.9	79.2	76.6	71.2	66.7	72.7
	Min	45.1	46.4	47.5	50.0	53.8	57.2	60.4	61.9	60.4	56.3	50.2	45.5	52.9
Rainfall (inches)	2.7	2.8	2.1	0.9	0.1	0.1	0.0	0.0	0.3	0.3	1.3	2.0	12.7	

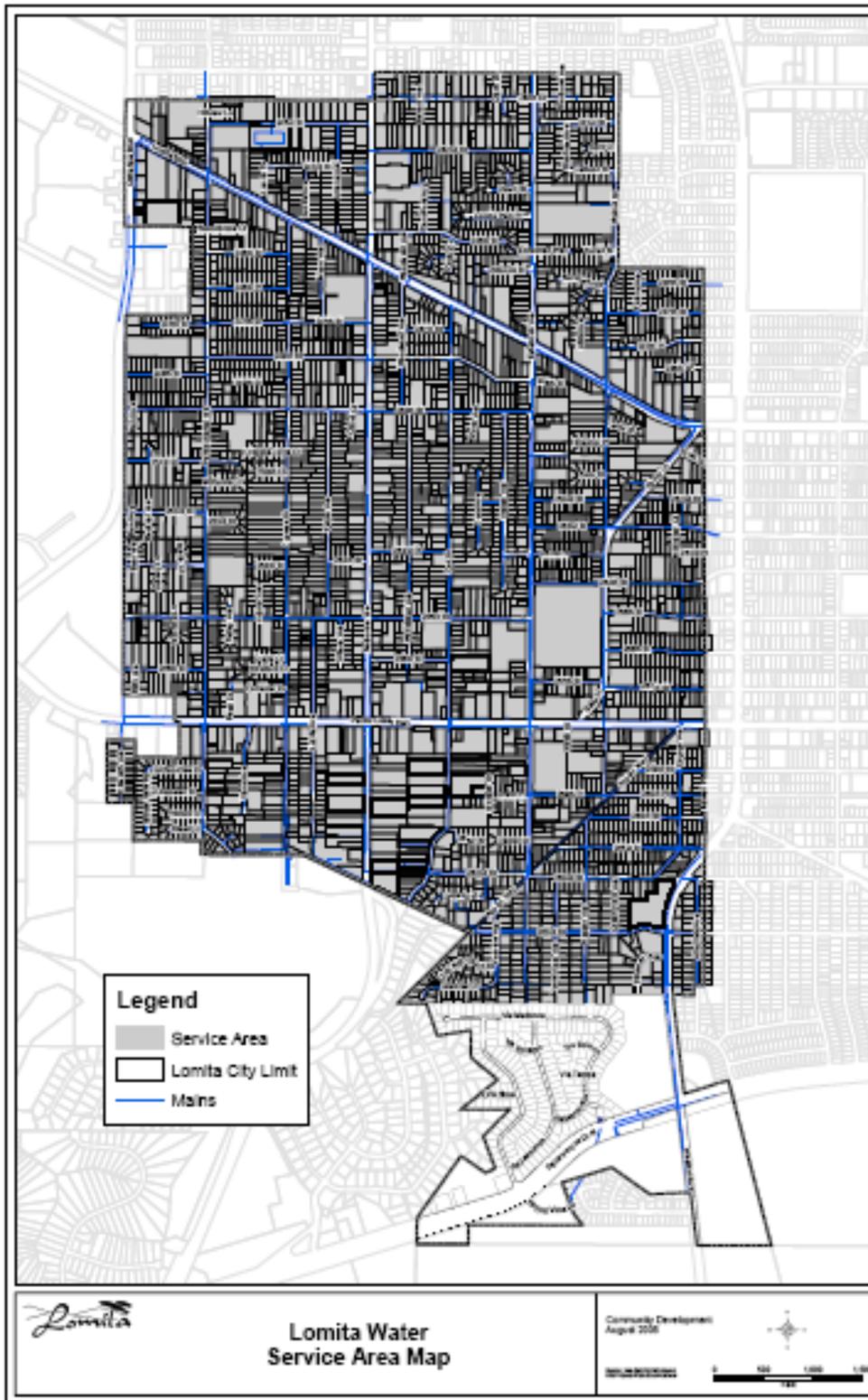
Source: [on-line] www.worldclimate.com. National Climate Data Center. Rainfall: Torrance Municipal Airport, Los Angeles County, between 1932 and 1995; Temperatures: Palos Verdes FC43D, Los Angeles County, between 1961 and 1990.

Demographics

According to the 2000 U.S. Census data, the City’s population was 20,046. The division of population is as follows: White – 38.4%; Hispanic – 26.9%; Black or African American – 4.2%; American Indian or Alaskan Native – 0.7%; Asian – 11.7%; and Native Hawaiian or other Pacific Islander – 1.0%; and two or more races or some other race – 17.1%.

² Evapotranspiration (ETo) 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 at ETo.

Figure 1.1
City of Lomita Boundary and Water Service Area



The 2000 U.S. Census data also indicates a total of 8,693 housing units, consisting primarily of single-family detached units. During the 1990's, the City experienced an average annual population growth of 0.3%. The California Department of Finance website estimates a 2005 population of 21,153 which represents a 5.5 percent growth rate since 2000 or approximately 1.1 percent per year. This rate of growth is also consistent with the annual growth rate projected by the Southern California Association of Governments (SCAG) through 2010. However, for years 2010 through 2030, WBMWD, based on Metropolitan's 2004 demographic data, is projecting a 0.5 percent annual growth rate for its service area population, which includes the City of Lomita. The projections for the City's water service area, which are presented in Table 1.3-2, are based on these data sets.

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

Year	Estimated Population	Annual Growth
2000	20,046	0.3%
2005	21,153	1.1%
2010	21,700	0.5%
2015	22,250	0.5%
2020	22,800	0.5%
2025	23,400	0.5%
2030	24,000	0.5%

1.4 CITY OF LOMITA WATER DIVISION AND FACILITIES

Water Division

The City's Water System was owned and operated by the Los Angeles County Waterworks District No. 13 (District). The District was initially granted a water supply permit in August 1954. The District water was supplied by several wells, and a Metropolitan 12-inch connection for imported water. The District's facilities currently include a 1 million gallon (MG) concrete tank (with future plans to expand it to 5.3 MG); a 50,000-gallon elevated steel tank; and a distribution network. The service area of the system encompasses the entire City, totaling 4,161 service connections, with the exception of 211 homes on the southern portion of the City that are served by the California Water Service Company.

In 1990, ownership of the water system was transferred to the City. Since then, the City has handled the operations, maintenance and upgrading of the system. The District has been retained as a contractor to primarily work on the water quality monitoring, which includes collections, sampling, analyses, and production of the annual water quality report; the written correspondence between the system and the regulatory agencies; and

meter protection. The City's Water Department performs most maintenance activities such as new installations, Cla-val operation, and telemetry. The Lomita City Council governs the City's Water Department.

The City is a retail agency and within WBMWD's service area, which includes 17 cities. The City of Lomita along with the cities of Hermosa Beach, Manhattan Beach, Redondo Beach and a portion of Torrance constitute Division 3 of the WBMWD's five divisions. The residents of each division elect a representative that serves a four-year term on the five-member Board of Directors, which governs the District policies and activities. The City is continually coordinating with WBMWD on its programs.

Water System Facilities

The existing distribution system facilities include approximately 41 miles of pipeline ranging in size from 4-inch to 16-inch. Approximately 70 percent of the distribution system was constructed between the years of 1928 and 1970.

The City purchases all of its domestic water supply from Metropolitan through WBMWD. Metropolitan water supply is fed from the State Water Project (SWP) and the Colorado River and is fully treated at Metropolitan's Weymouth Treatment Plant. The City has one 12-inch and one 8-inch Metropolitan connections, West Basin 7 (WB-7) and West Basin 8 (WB-8), which are all metered using pressure reducing valves. The total capacity of these two connections is 5,161 gallons per minute (gpm). Metropolitan has no restrictions on the volume of water supply the City receives through the two connections.

There are two operating reservoirs in the City's system with a combined storage capacity of 1.05 MG. The City currently has one domestic water well located at the Cypress Reservoir site. This gravel packed well was drilled in 1971 and is capable of producing 1,000 gpm. However, due to the high levels of iron, manganese, and hydrogen sulfide odor, this well is currently inactive.

The City's water system has three emergency connections. One connection is with the City of Los Angeles and the other two connections are with the City of Torrance. These three connections allow water to flow to the City's water system during emergencies. Maintaining the system pressure beyond the connections is the City's responsibility.

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SECTION 2 WATER SOURCES AND SUPPLIES

WATER SOURCES

The City's source of water supply is imported water from Metropolitan through WBMWD. The imported water is transported through the expansive Colorado River Aqueduct (CRA) system and from Northern California. Although the City does have one groundwater well, it is only used for emergency supply and has not operated since 1990. The well was pumped in 2003 for water quality determination purposes only.

A small portion within the Southern area of the City (refer to Figure 1.1) is provided water service through the Golden State Water Company. The Golden State Water Company also receives its water from Metropolitan.

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.

Metropolitan acquires water from northern California via the SWP and from the Colorado River 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 WBMWD.

2.1.2 West Basin Municipal Water District (WBMWD)

In 1947, WBMWD was formed to help mitigate the over pumping of groundwater resources in southwest 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 1948, WBMWD became a member agency of Metropolitan. WBMWD service area includes 17 cities and several unincorporated portions of southwest Los Angeles County. WBMWD serves the cities of Carson, Palos Verdes Estates, Rancho Palos Verdes, Rolling Hills, Rolling Hills Estates, Inglewood, South Ladera Heights, a portion of Lennox, Lomita, Manhattan Beach, Redondo Beach, Culver City, El Segundo, Malibu, West Hollywood, Gardena, Hawthorne, and Lawndale. WBMWD also serves portions of unincorporated areas of Los Angeles County such as Athens, Howard, Ross-Sexton, Lennox, North Ladera Heights, Del Aire, Topanga, View Park, Windsor Hills, and portions of Lennox and El Camino Village.³

³ http://www.westbasin.org/service_area.php

2.1.3 Water Replenishment District of Southern California (WRD)

In 1959, the State Legislature enacted the Water Replenishment Act enabling the formation of the WRD by voter approval. The 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 nearly 43 cities of south Los Angeles County, a 420 square mile service area which uses about 250,000 acre-feet (AF) of groundwater per year.⁴ 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 adjudication was a result of a judgment from the Superior Court, County of Los Angeles. 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 include 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.⁵ The Sanitation Districts of LA construct, operate, and maintain facilities to collect, treat, recycle, and dispose of wastewater. The LACSD operate one wastewater treatment plant and nine reclamation plants to produce approximately 190 million gallons per day (MGD) of recycled water.⁶ WBMWD purchases secondary effluent from the Hyperion Wastewater Treatment Plant (Hyperion), treats it to meet applicable Title 22 standards, and distributes the recycled water within its service area.⁷ Additional information related to recycled water is discussed in Section 8.

2.2 WATER SUPPLY

The City's total water supply is imported water provided by Metropolitan through WBMWD.⁸ One groundwater well is connected to the City's water distribution system but is inoperative and only exists for fire protection during emergency situations. The well is not used for normal water consumption due to the groundwater having high levels of manganese, iron, and hydrogen sulfide odors.⁹

⁴ Water Replenishment District of Southern California website, <http://www.wrd.org/Purpose.htm>

⁵ Sanitation Districts of Los Angeles website, <http://www.lacsd.org>

⁶ Sanitation Districts of Los Angeles Fact Sheet, available online at http://www.lacsd.org/CSDFactSheet_Eng.pdf

⁷ West Basin Municipal Water District, 2005 UWMP, June 2005.

⁸ 2004 City of Lomita Water Master Plan

⁹ 2004 City of Lomita Water Master Plan

The unincorporated area within the city is supplied by Golden State Water Company and is separate and operated independently from the City’s water distribution system.¹⁰

Current and projected water supplies are shown in Table 2.2-1 and described in subsequent sections. Water reliability of these supplies is analyzed in Section 4.

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

Water Supply Sources	2004	2010	2015	2020	2025	2030
Imported Water	2,813	3,000	2,630	2,480	2,380	2,280
Groundwater	0	1,350	1,350	1,350	1,350	1,350
Total Water Supply	2,813	4,350	3,980	3,830	3,730	3,630

Note: AFY = acre-feet per year

2.2.1 Imported Water

In 2004, 100 percent of the City’s potable water supply came from imported water wholesaled by WBMWD through Metropolitan.¹¹ The City maintains two imported water connections to Metropolitan’s system. The characteristics of these connections are shown in Table 2.2.1-1.

**Table 2.2.1-1
The City of Lomita
Imported Water Connections**

Service Area	Connection Number	Capacity (cfs)	Capacity (gpm)
Pressure Zone 1	WB-7	4.01	1,800
Pressure Zones 1 - 3	WB-8	7.46	3,350
Total Capacity		11.5	5,150

Source: City of Lomita Water Master Plan, December 2004
cfs = cubic feet per second

¹⁰ Lomita Public Works, conversations with Jim Sheely, Field Office Manager

¹¹ City of Lomita 2004 Annual Water Quality Report

2.2.2 Groundwater

Extensive pumping from the West Coast groundwater basin (Basin) has led to critical overdraft and seawater intrusion. In 1961, the Los Angeles Superior Court adjudicated groundwater pumping rights. As a result, the City has water rights of 1,352 AFY from the Basin. Due to the poor water quality in its existing well, the City is not using groundwater for drinking water purposes. It is, however, planning to provide treatment to this well in order to use it for future drinking water.

WRD tracks the amount of groundwater production (pumping) that occurs every year 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.

West Coast Basin Aquifer

The Basin is approximately 160 square miles and occupies 37 percent of the southwestern part of the Coastal Plain of Los Angeles groundwater basin and has a total storage capacity of 6,500,000 AF (based on the Silverado Aquifer, the primary water producing aquifer). On the north, the Basin is bounded by the Ballona Escarpment, an abandoned erosional channel from the Los Angeles River. On the East, the Basin is bounded by the Newport-Inglewood fault zone, and on the south and west by the Pacific Ocean and consolidated rocks of the Palos Verdes Hills. The surface of the Basin is crossed in the south by the Los Angeles River through the Dominguez Gap, and the San Gabriel River through the Alamitos Gap, both then flowing into the San Pedro Bay.¹²

Water bearing formations include Holocene, Pleistocene, and Pliocene age sediments. The semiperched aquifer of the Holocene and Pleistocene age is unconfined. The groundwater in the underlying aquifers is confined throughout most of the Basin; and the Gage and Gardena aquifers are unconfined where water levels have dropped below the Bellflower aquiclude. These aquifers merge with adjacent aquifers, particularly near the Redondo Beach area. The Silverado aquifer, underlying most of the Basin, is the primary production aquifer and yields between 80 to 90 percent of the groundwater extracted from the Basin.

Adjudication

Groundwater in the Basin was adjudicated (Judgment) to protect the underground water supply within the Basin. Prior to adjudication, annual pumping rates reached levels as high as 94,000 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

¹² DWR, California's Groundwater Bulletin 118, 2004

rights were set at 64,468 AFY.¹³ 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 City's legal right to pump groundwater is included in Appendix F. The original adjudication was to Los Angeles County Water Works District No. 13.

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 2003/2004 were 1,352 afy, although only 0.13 AF (42,361 gallons) were pumped.¹⁴ 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.¹⁵

Groundwater Production and Overdraft

Groundwater supply meets approximately 20 percent of the water supply demand for agencies within the WBMWD.¹⁶ During the water year 2003/2004, total basin production for all agencies was approximately 47,967 AF. 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 Basin and estimates water levels to have risen approximately four feet from 2002/2003 and 2003/2004 water years. Although water levels rose in some area of the West Coast and Central groundwater basins, the overall result was a loss in groundwater storage. 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 Basin is 23,800 AF.¹⁷ 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 2003/2004.¹⁸

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 Sanitation Districts of Los Angeles on current and future replenishment supplies.

¹³ WRD of Southern California Engineering Survey Report, 2005

¹⁴ DWR Watermaster Service in the West Coast Basin, Los Angeles County, 2004

¹⁵ WRD of Southern California Engineering Survey Report, 2005

¹⁶ West Basin Municipal Water District, 2005 UWMP

¹⁷ WRD of Southern California, Technical Bulletin Volume 1, Fall 2004.

¹⁸ WRD of Southern California Engineering Survey Report, 2005

Recharge

Another method for controlling overdraft is through recharge management programs. Natural groundwater replenishment through percolation of precipitation and irrigation waters is insufficient to sustain the groundwater pumping that takes place in the Basin.¹⁹ 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 to both basins. The various methods of recharging the Basin using imported and recycled water are described below:

- Injection – WRD 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 West Coast Barrier Project (between Redondo Beach and El Segundo) and the Dominguez Gap Barrier Project (east of Palos Verdes Peninsula).
- 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.
- Transfer from Central groundwater basin – Although not well quantified, groundwater from the Central groundwater basin flows into the West Coast groundwater basin through the Newport Inglewood Uplift. This, along with natural percolation due to stormwater and irrigation, make up a small part of the overall recharge to the West Coast groundwater basin.

City of Lomita Groundwater Well

A groundwater well, Well No. 5, is currently in standby mode and is 660 feet deep, with a production capability of 1,000 gallons per minute (gpm). Due to high levels of iron, manganese, and hydrogen sulfide odors, the well is only used during fire flow demands and has not been operational since 1990. The well pumped approximately 42,361 gallons in 2003 for water quality testing purposes. It is connected directly to the City's distribution system and reservoir (Cypress Reservoir). Well No. 5 is planned for redevelopment (estimated for 2007) and a treatment plant will be constructed to address the water quality issues.²⁰ Table 2.2.2-1 shows the amount of water that is projected to be pumped from Well No. 5 in the future.

**Table 2.2.2-1
Amount of Groundwater Projected to be Pumped
(AFY)**

Well	2005	2010	2015	2020	2025	2030
5	0	500	750	1,000	1,000	1,000

Note: Although the City has 1,352 AFY in adjudicated groundwater rights, groundwater projections are shown as zero in the table due to water quality problems that have impacted the City's well since 1991.

¹⁹ WRD of Southern California, Regional Groundwater Monitoring Report Water Year 2003-2004, April 2005

²⁰ 2004 City of Lomita Water Master Plan

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 (CCR). This mandate is governed by the Environmental Protection Agency (EPA) and the California Department of Health Services (DHS) 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 customers meets the standards required by the state and federal regulatory agencies.²¹ As mentioned earlier, the City's sources of water currently include imported water supplies, groundwater, and recycled water.

3.1.1 Imported Water

The City receives imported water through WBMWD from Metropolitan, which receives raw water from Northern California through the SWP and from the CRA. Metropolitan water is treated at a total of five treatment plants. Three of these plants, the Jensen, Weymouth, and Diemer Filtration Plants, all provide varying portions of their treated water to an area referred to as the "Common Pool".²²

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) 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

²¹ 2004 Lomita Water Quality Report.

²² Southern California's Integrated Water Resources Plan, Vol 2, Metropolitan Water District, Rpt # 1107, 1996

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

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:

- 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 milligram 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. The 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. 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.

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

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

- 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 SWP 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 impurities 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 DBPs regulations. Metropolitan plans to install ozonation at the remaining three plants by 2009.

Methyl Tertiary Butyl Ether (MTBE) in local surface reservoirs

The DHS 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 pCi/L (picocuries per liter) whereas the California drinking water standard is 20 pCi/L.²⁵

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

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.

Hexavalent Chromium (Chromium VI)

Currently, the MCL for total chromium is 0.05 mg/L, which includes Chromium VI. California DHS 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 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.

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

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

- Source Water Protection – In 2001, Metropolitan completed a Watershed Sanitary Survey as required by DHS to examine possible sources of drinking water contamination and identify mitigation measures that can be taken to protect the water at the source. DHS 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 WBMWD and WRD actively monitor the Basin for water quality issues. WBMWD 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 10 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, the City, and the programs implemented to address those issues are summarized in the following sections.

Total Dissolved Solids (TDS)

One water quality concern is TDS. The Department of Health has established a recommended secondary standard of 500 mg/L with an upper limit of 1,000 mg/L. In the Basin, TDS was less than 750 mg/L in most production wells with a few wells near the Torrance/Hawthorne areas having concentrations greater than 750 mg/L.³⁰

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

²⁹ West Basin Municipal Water District, 2005 UWMP

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

One of the major challenges for WRD is the contamination of fresh groundwater by saltwater intrusion. Therefore, WRD has implemented the Dominguez Gap and West Coast Barrier Projects. WRD monitors the effectiveness of the barriers by collecting hydrogeologic and water quality data from monitoring wells near the barriers.

Iron and Manganese

Secondary standards of 0.3 mg/L for iron and 50 ug/L for manganese were established by DHS. In the Basin, iron has been detected in monitoring wells up to 1.1 mg/L although most groundwater zones within all 15 monitoring well locations had iron levels less than the MCL. Data from the DHS indicate that 1/3 of production wells in the Basin have iron concentrations exceeding the secondary MCL. Manganese concentrations typically exceed the MCL in many monitoring wells. Concentrations range from non-detect to 670 ug/L. The City's well is not operational because of high levels of iron and manganese.

Hardness

Hardness in the Basin ranged from 7.06 to 5,560 ug/L for both the monitoring and production wells. In general, the lower groundwater zones have low hardness. Production wells in the Basin show moderate levels of hardness.

Sulfate

Sulfate in the Basin ranged from non-detect to 710 mg/L for all wells. Sulfate concentrations in production wells in the Basin are generally low in the eastern and southern portion of the Basin and higher in the western portion of the Basin.

The City's one well (Well No. 5) has not been used partly due to the strong sulfur smell in the water.³¹

Chloride

Chloride was detected in the Basin wells at and between concentrations of 12 to 6,300 mg/L. Chloride concentrations exceeded the MCL in the Silverado aquifer zones in five of 15 Basin wells, primarily due to seawater intrusion.

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 (10 mg/L).

³¹ 2004 City of Lomita Water Master Plan

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 17 ug/L. To date, no production wells had detectable levels of TCE.

Tetrachloroethylene (PCE)

PCE's MCL is 5 ug/L and is a possible human carcinogen. PCE has been detected at one monitoring well location in the West Coast Basin. The concentrations in the one well were 1.5 ug/L. PCE has not been detected above the MCL in any of the production wells in the Basin.

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. Three monitoring wells had arsenic concentrations between 10 and 50 ug/L and one monitoring well had an arsenic concentration of 68 ug/L. Arsenic was not detected in any Basin production wells in the water years 2001 through 2004.

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 was not detected in any of the production wells in the Basin.

Methyl Tertiary-Butyl Ether (MTBE)

The health effects of MTBE are uncertain. The U.S. EPA currently classifies MTBE as a possible human carcinogen. The MCL for MTBE is 13 ug/L. The WRD monitoring wells have not shown detection of MTBE. MTBE has not been detected in any of the production wells in the Basin.

Total Organic Carbon (TOC)

TOC is the measure of the organics in water and provides an indication of the potential formation of disinfectant byproducts.³² There is no MCL for TOCs; however, seven of the 15 production wells tested greater than 5 mg/L for TOC.

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 for apparent color. Some water purveyors in these areas have treatment systems to remove the color from the groundwater.

Perchlorate

In March 2004, the Office of Environmental Health Hazard Assessment announced the publication of a public health goal for perchlorate at 6 ug/L. To date, however, DHS has not set a regulatory drinking water standard. Perchlorate has been detected in three monitoring wells in the Basin at levels below the Public Health Goal.

Water Quality Programs

WBMWD 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 VOCs and provides financial assistance for the design and installation of wellhead treatment systems.

WRD's Groundwater Quality Program – This program monitors and evaluates the impacts of pending drinking regulations on the 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, USEPA, Department of Toxic Substance Control (DTSC), Regional Water Quality Control Board (RWQCB), and the City of Santa 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.

³² WRD, Regional Groundwater Monitoring Report for Water Year 2003/2004, April 2005

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. Groundwater is not currently being pumped for the City, as its only groundwater well (Well No. 5) is inactive.

Well No. 5 was drilled and installed in 1971. Since 1990, it has been shut-down due to high iron, manganese, and hydrogen sulfide odors in the groundwater. Plans are to rehabilitate the well and add a treatment system to treat the groundwater to drinking water standards. This will enable the City to produce groundwater at approximately 500 AFY beginning in 2007, increasing to 750 AFY by 2015, and to 1,000 AFY by 2020.

Except for the water quality issues with Well No. 5, the City has not experienced any significant water quality problems in the past and does not anticipate any significant changes in the future. In the near future, EPA's Stage 2 regulation of the disinfection by-products 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 (imported water from Metropolitan) meet the requirements of Stage 1 and will be required to meet Stage 2 levels when they become finalized.

The City does not anticipate any negative changes in its available water supplies due to water quality issues in part because of the mitigation actions undertaken by Metropolitan, WBMWD, and WRD as described earlier.

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 wholly dependent on the reliability of imported water supplies; given the water quality problems associated with the City's groundwater supply. Imported supplies are managed and delivered by Metropolitan through WBMWD, while the groundwater supplies are managed by WRD. The following sections will discuss these agencies as well as the LACSD and 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 capacity 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)

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

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

Arizona and Nevada entitlement was available and California agricultural agencies use all of their contractual entitlement. Historically, Metropolitan has also possessed a priority for an additional 662,000 AFY depending upon availability of surplus water. In addition, Metropolitan maintains agreements for storage, exchanges and transfers within the service area of Imperial Irrigation District (IID) that provide water to Metropolitan.³⁴

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 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.

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.

The USBR implemented Interim Surplus Guidelines to assist California’s transition to the Plan. Seven priorities for use of the waters of the Colorado River within the State of California were established. Metropolitan would only be able to exercise its fourth priority right to 550,000 AF annually, instead of the maximum aqueduct capacity of 1.3 MAF. Priorities 1 through 3 cannot exceed 3.85 MAF annually. Together, Priorities 1 through 4 total California’s 4.4 MAF apportionment.

In October 2003, the Quantification Settlement Agreement (QSA), a critical component of the California’s Colorado River Water Use Plan and for purposes of Section 5(B) of the Interim Surplus Guidelines, was authorized defining Colorado River water deliveries, delivery of Priority 3(a) and 6(a) Colorado River water, and transfer and other water delivery commitments, thus facilitating the transfer of water from agricultural agencies to urban uses. The 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.

Metropolitan’s Integrated Water Resources Plan (IRP) 2003 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.

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*

³⁴ Metropolitan Water District of Southern California. Integrated Water Resources Plan. 2003 Update. May 2004.

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

Delivery Reliability Report, provides information on the reliability of the SWP to deliver water to its contractors assuming historical precipitation patterns. The following SWP reliability information is included in these reports.

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 Amount; currently at 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 complete by the end of 2005. 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. 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 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 Metropolitan's ability to meet the demands of its member agencies during single and multiple dry years. With this in mind, Metropolitan 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 a *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."³⁶ 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).

The Report also identifies the ways Metropolitan is managing changes in Southern California's water supplies, including reduced Colorado River deliveries and water quality constraints. In addition, opportunities for additional supplies are currently being implemented in the following ways:

- 1) Full Diamond Valley Lake: The Lake is now fully operational with an increased conveyance capacity for refill system storage.
- 2) Re-Operation of Storage and Transfer Programs: In 2003, Metropolitan developed additional storage and transfer capabilities and completed filling local resources to achieve full storage accounts in operational reservoirs and banking/transfer programs.
- 3) Enhanced Conservation Programs: A new campaign is designed to encourage more efficient outdoor water use and promote innovative conservation measures.
- 4) Development of Additional Local Resources: There are promising opportunities identified to develop seawater desalination and expand the Local Resources Program (LRP).

In addition to the *Report on Metropolitan's Water Supplies, A Blueprint for Water Reliability*, Metropolitan's September 2005 Draft Regional Urban Water Management Plan (RUWMP) demand and supply analysis also projects surpluses (of regional supplies compared with regional demands) ranging from 5 percent to 35 percent in all years and all drought scenarios through 2030.³⁷

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. 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 supports seawater desalination projects, increases commercial conservation efforts, improves water quality by decreasing salinity in supplies from the SWP and the Colorado

³⁶ Metropolitan Water District of Southern California. Report on Metropolitan Water Supplies, A Blueprint for Water Reliability, p. 9. March 25, 2003.

³⁷ Tables II-7, 8 and 9 of Metropolitan's Regional Urban Water Management Plan, Draft September 2005

River, increases underground storage and retrieval facilities, adopts principles for establishing cooperative programs, and endorses legislation that would further water reliability. Some of these projects are further described in Section 4.4.

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 was reviewed as part of Metropolitan's strategic plan and rate refinement to guide the development and implementation of revised Metropolitan water management programs through the year 2005.

The IRP 2003 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. The IRP did not project out to 2030.

While the IRP 2003 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 LRP and the Seawater Desalination Program as a means to increase reliability of local supplies. Metropolitan initiated the LRP to promote the development of water recycling projects that reduced demand for imported water and improved regional water supply reliability in 1982. In 1991, the Groundwater Recovery Program was implemented to similarly promote the recovery of local degraded groundwater supplies. In 1995, both programs were combined into the LRP. 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 2002.³⁸

The IRP 2003 Update states that Metropolitan's regional production target is 500,000 AF by 2020 for its LRP. Metropolitan's current projection of regional implementation of recycling, groundwater recovery, and seawater desalination resource targets exceeds the 1996 IRP goals. Although in FY 2002, recycling and groundwater recovery programs narrowly missed their target, the region is expected to meet its 2010 and 2020 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.

³⁸ Metropolitan Water District of Southern California. Integrated Water Resources Plan, 2003 Update. May 2004.

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.

In addition to the LRP, Metropolitan also provides financial and technical assistance for implementing water conservation Best Management Practices, as well as a significant investment in regional and local water conservation programs. Metropolitan was also responsible for distributing \$45 million in funds from Proposition 13 funding for development of conjunctive management programs in Southern California.

West Basin Municipal Water District (WBMWD)

Although the reliability of WBMWD's water supply relies heavily Metropolitan, WBMWD has invested in recycled water to help improve its reliability. Utilizing recycled water helps WBMWD reduce its vulnerability to extended drought or emergency shortage events. Although the City of Lomita does not directly use recycled water, it does benefit indirectly from the use of recycled water in other nearby locales as a result of that reduction in overall system vulnerability to droughts. WBMWD's recycled water program is discussed in Section 8.

Another means for increasing WBMWD 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.³⁹ 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.⁴⁰ 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 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.

³⁹ West Basin Municipal Water District, 2005 UWMP

⁴⁰ WRD Engineering Survey and Report, March 2005.

- 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.
- 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 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.⁴¹

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.

⁴¹ Los Angeles Regional Water Quality Control Board. Region 4 Water Quality Control Plan (Los Angeles Region). January 1995.

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 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. The urbanized, high density and highly utilized 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 Lomita is a member agency of WBMWD, which is a member agency of Metropolitan. In its September 2005 Draft Regional UWMP, Metropolitan chose the year 1977 as the single driest year since 1922 and the years 1990-1992 as the multiple driest 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.

Over the 20 year period beginning in 2010 and ending in 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 September 2005 final draft demand and supply projections, 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 and L in Table 4.2-1 are important and will be used later in this section for developing Lomita's 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 Years⁴²
(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 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
L	WBMWD Service Area Imported Water Demand During a Single Dry Year as a % of WBMWD Average Demand ^[2]	101.9	101.9	103.3	104.5	104.5

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

^[2] Data obtained from WBMWD June 2005 Draft UWMP; more specific demand data for Lomita will be developed later in this Section.

⁴² Metropolitan Water District of Southern California, Regional UWMP, September 2005 Draft

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 entries in Rows K and L in Table 4.2-2 are important and will be used later in this section for developing Lomita's projected multiple year demands over the next 25 years. It is also important to note that Row K indicates Metropolitan's projected supply (including surplus water) will exceed its projected multiple dry year demand during all years 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 (either within Metropolitan or WBMWD) 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 and assuming continuing conservation efforts) over its entire service area between 2005 and 2030 (4,115,700 AFY to 4,914,000 AFY)⁴³ compared with a 20.9 percent increase in population over the same period of (18,233,700 to 22,053,200)⁴⁴. This compares with an estimated 6.2 percent increase in demand in Lomita (approximately 0.25%/year or half the rate of the increase in population; this is consistent with average growth in water demand in most developed areas of southern California) along with a 12.5 percent increase in population for the City over this same period. In other words, Metropolitan's overall projected increase in demand is more than three times that which is expected to occur in Lomita. This finding suggests that any available Metropolitan surpluses will be diverted to those water purveyors experiencing higher rates of growth. With that in mind, it is reasonable to assume that the findings reflected in Table 4.2-2 are valid.

⁴³ Table A.1-5. Metropolitan Water District of Southern California, Draft Regional UWMP, September 2005.

⁴⁴ Table A.1-2. Metropolitan Water District of Southern California, Draft Regional UWMP, September 2005.

**Table 4.2-2
Metropolitan Regional Imported Water Supply Reliability Projections
for Average and Multiple Dry Years⁴⁵
(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
L	WBMWD Service Area Imported Water Demand During a Multiple Dry Year as a % of WBMWD Average Demand ^[3]	101.9	101.9	103.3	104.5	104.5

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

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

^[3] Data from WBMWD June 2005 Draft UWMP; demand data for Lomita is developed later in this Section.

⁴⁵ Based on Metropolitan Water District of Southern California, Regional UWMP, September 2005 Draft

To establish a reasonable foundation from which to project future City demands, recent Lomita production records were used to determine a basis for normal year usage. Table 4.2-3 summarizes production records for the 2000/01 through 2003/04 water years. The average imported water usage over that period was 2,758 AFY. Based on recorded rainfall, 2001 was the closest to a normal year (14.98 inches of rainfall in downtown Los Angeles compared with a long term historical average of 14.62 inches). The calendar year 2002 is representative of a single dry year based on the recorded calendar year rainfall of only 3.77 inches, which is one of the lowest recorded years on record for downtown Los Angeles.

In its June 2005 draft UWMP, WBMWD has projected a single dry year increase in demand for the year 2005 of 103.2 percent, which is slightly more than the actual 101.4 percent increase Lomita experienced in the very dry year of 2002. While WBMWD has not projected separate increases in multiple year demands for each of the three designated years (they assume only an average of 103.2 percent for each year beginning in 2005), Lomita's experience from the three dry years of 2002, 2003 and 2004 closely parallels WBMWD projection (101.0%, 100.3% and 103.2% of normal for years 1, 2 and 3, respectively, of a multiple year dry period) and is also representative of demand increases experienced in other southern California locales.⁴⁶ These factors can also be logically explained as follows: In year one, rainfall decreases and demands increase as customers use more water for irrigating lawns and other foliage; in year two, customers conserve more water as they begin to realize drought conditions are beginning to take hold; and in year three, demands begin increasing again as customers try to keep their lawns and foliage from dying.

Based on this information, the following factors will be used in developing Lomita's single and multiple year demands:

- Single Dry Year Factor 101.0 percent of normal
- Multiple Dry Year Factor for Year 1 101.0 percent of normal
- Multiple Dry Year Factor for Year 2 100.3 percent of normal
- Multiple Dry Year Factor for Year 3 103.2 percent of normal

It is important to note that the percentages reflected above for Multiple Dry Years 1, 2 and 3 are less than Metropolitan's projected available supplies during all multiple dry year periods through the year 2030 (refer to Row K of Table 4.2-2), which means that the City of Lomita should not encounter any problems in meeting its demands over the next 25 years.

⁴⁶ The Municipal Water District of Orange County (MWDOC) has conducted extensive analyses of water demand in Orange County based on hydrologic records for the period 1922-2004 and has concluded that during a multiple dry year period, demands in years 1, 2 and 3 are 106.7%, 103.7% and 105.5% of a normal year demand. MWDOC has also determined that single dry year demands in Orange County are 105.5% of normal year demands. Although the actual three dry year percentages differ from those experienced in Lomita, the trend is similar, i.e., first year is higher, followed by a lower second year and a higher third year.

Based on the data included in Table 4.2-3, total per capita demand in Lomita averages about 116 gallons per capita per day (gpcd) based on the 2,756 AFY average for the period 2000/01 through 2003/04 and an estimated 2005 service area population of 21,153.

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

	2001	2002	2003	2004	Average
Lomita Total Potable Demand⁴⁷	2,725	2,752	2,734	2,813	2,756
Calendar Year Rainfall ⁴⁸ in inches	19.06	NA	NA	NA	14.62 ⁴⁹
Water Year Rainfall ⁵⁰ in inches	14.98	3.77	8.61	9.25	---
Climatologic Classification	Average	Very Dry	Dry	Dry	---
Lomita Water Usage as a % of 2001 Assumed Average Year	100.0	101.0	100.3	103.2	---
WBMWD Single Dry Year Occurring in 2002 as a % of a Normal Year	---	103.2	---	---	---
WBMWD Multiple Dry Year Occurring in 2002-04 as a % of a Normal Year	---	103.2	103.2	103.2	---

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 a slight increase in demand based on the population projections referenced in Section 1.3 of this plan. In projecting these increased demands, it has been reasonably assumed that water usage will increase at about half the rate of population percentage increase, e.g., a 0.5 percent annual increase in population will result in a 0.25 percent annual increase in demand. This is a sensible approach in that there is little land left for development in Lomita, which means any increases in population will probably be reflected in higher densities per dwelling unit, with no concurrent increase in landscape irrigation or other non residential water usage.

⁴⁷ Potable Demand Data for all noted Fiscal Years was obtained from WBMWD Water Use Report for Fiscal Year 2003-2004, City of Lomita Total Water Use Table

⁴⁸ 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>

⁴⁹ Average rainfall recording in downtown Los Angeles over the period 1921-2001

⁵⁰ Data for years Water Years (October to September) 2000 – 2004 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>

Although Lomita does have adjudicated water rights, the City has not pumped any groundwater for regular domestic purposes in over 14 years due to water quality problems. However, the City is planning to construct appropriate treatment facilities at its Well No. 5 to allow future pumping of groundwater as indicated in Table 2.2.2-1. These facilities are anticipated to be in place by 2008.

The results displayed in Tables 4.2-4 through 4.2-10 indicate that the City can expect to meet all of its water demands over the next 25 years for all average, single and multiple dry years.

Table 4.2-4
City of Lomita Projected Water Supply and Demand
Normal Water Year
(AFY – all projections are rounded to the nearest 10 AFY)

Water Sources	2010	2015	2020	2025	2030
Supply					
Metropolitan 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]	3,000	2,630	2,480	2,380	2,280
Local (Groundwater) ^[3]	1,350	1,350	1,350	1,350	1,350
Total Supply	4,350	3,980	3,830	3,730	3,630
% of Normal Year	100	100	100	100	100
Demand					
Imported ^[2]	2,290	2,080	1,860	1,900	1,930
Local (Groundwater) ^[3]	500	750	1,000	1,000	1,000
Total Demand	2,790	2,830	2,860	2,900	2,930
% of Year 2004 Demand (2,813 AF) ^[4]	99.2	100.6	101.7	103.1	104.2
Supply/ Demand Difference	1,560	1,150	970	830	700
Difference as % of Supply	35.9	28.9	25.3	22.3	19.3
Difference as % of Demand	55.9	40.6	33.9	28.6	23.9

^[1] From Table 4.2-1, Row I

^[2] Imported water supply = (imported water demand) x (Metropolitan Projected Supply Available During an Average Year as a % of Demand During an Average Year (from Table 4.2-1, Row I)); Imported demand projections are estimated based on average 2001/2004 demand escalated at 0.25%/year projected increase in demand.

^[3] Groundwater supply in all future years represents City's adjudicated groundwater right of 1,352 AFY (rounded to nearest 10 AF).

^[4] 2005 Demand Data is not available so 2003/04 Actual Demand Data (2,813 AF) is used in this table as well as the single and multiple dry year tables.

Table 4.2-5
City of Lomita Projected Water Supply and Demand
Single Dry Water Year
(AFY – all projections are rounded to the nearest 10 AFY)

Water Sources	2010	2015	2020	2025	2030
Supply					
Projected Metropolitan Supply During an Average Year as a % of Demand During a Single Dry Year ^[1]	116.3	113.0	118.8	112.3	106.6
Projected Metropolitan Supply Available as a % of Single Dry Year Demand ^[2]	123.9	131.8	134.3	125.6	119.3
Projected WBMWD Single Dry Year Supply as a % of Average Year Supply ^[3]	103.2	101.9	101.9	103.3	104.5
Imported ^[4]	3,720	3,470	3,330	2,990	2,720
Local (Groundwater) ^[5]	1,350	1,350	1,350	1,350	1,350
Total Supply	5,070	4,820	4,680	4,340	4,070
Normal Year Supply ^[6]	4,350	3,980	3,830	3,730	3,630
% of Normal Year	116.6	121.1	122.2	116.4	112.1
Demand					
Imported ^[4]	2,320	2,110	1,890	1,930	1,960
Local (Groundwater) ^[5]	500	750	1,000	1,000	1,000
Total Demand	2,820	2,860	2,890	2,930	2,960
Normal Year Demand ^[6]	2,790	2,830	2,860	2,900	2,930
% of Normal Year	101.1	101.1	101.0	101.0	101.0
% of Year 2004 Demand (2,813 AF)	100.2	101.7	102.7	104.2	105.2
Supply/ Demand Difference	2,250	1,960	1,790	1,410	1,110
Difference as % of Supply	44.4	40.7	38.2	32.5	27.3
Difference as % of Demand	79.8	68.5	61.9	48.1	37.5

^[1] From Table 4.2-1, Row J

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

^[3] From June 2005 Draft WBMWD UWMP, Table 4-1

^[4] Available Imported supply is estimated to equal Metropolitan's September 2005 Final Draft RUWMP projected available supplies including surplus supplies = (normal year import) x (Metropolitan projected supply as a % of the single dry year demand); Imported demand = (normal year demand) x (101.0% Single Dry Year Factor for the City of Lomita based on 2002 Demand).

^[5] Groundwater supply in all future years represents City's adjudicated groundwater right of 1,352 AFY (rounded to nearest 10 AFY); Groundwater demand estimated provided by City based on anticipated construction of treatment facility at Well No. 5.

^[6] From Table 4.2-4

Table 4.2-6
City of Lomita Projected Water Supply and Demand
Multiple Dry Water Years 2006-2010
(AFY – all projections are rounded to the nearest 10 AFY)

Water Sources	2006	2007	2008	2009	2010
Supply	Normal Years		Multiple Dry Years		
Metropolitan Projected Supply During a Multiple Dry Year as a % of Average Supply ^[1]			98.2	98.2	98.2
Projected WBMWD Multiple Dry Year Supply as a % of Average Year Supply ^[2]			103.2	99.6	103.9
Imported ^[3]	3,300	3,220	3,090	3,010	2,950
Local (Groundwater) ^[4]	0	0	1,350	1,350	1,350
Total Supply	3,300	3,220	4,440	4,360	4,300
Normal Year Supply	3,300	3,220	4,500	4,420	4,350
% of Normal Year	100.0	100.0	98.7	98.6	98.9
Demand					
Metropolitan Projected Multiple Dry Year Demand as % of Normal Year ^[5]			116.5	116.5	116.5
Imported ^[3]	2,760	2,770	2,810	2,790	2,380
Local (Groundwater) ^[4]	0	0	0	0	500
Total Demand	2,760	2,770	2,810	2,790	2,880
Normal Year Demand ^[6]	2,760	2,770	2,780	2,780	2,790
% of Normal Year	100.0	100.0	101.0	100.3	103.2
% of Year 2004 Demand (2,813 AF)	98.1	98.5	99.9	99.2	102.4
Supply/ Demand Difference	540	450	1,630	1,570	1,420
Difference as % of Supply	16.4	14.0	36.7	36.0	33.0
Difference as % of Demand	19.6	16.2	58.0	56.3	49.3

^[1] From Table 4.2-2, Row C

^[2] From WBMWD June 2005 Draft UWMP; the more conservative Metropolitan projections are used in the analysis.

^[3] Imported supply = (imported supply interpolated from Table 4.2-4) x (escalation factor from Table 4.2-2, Row C); Imported demand = (normal year demand) x (101.0%, 100.3% or 103.2% Year 1, 2 and 3; multiple dry year demand factors are based on actual usage during the dry years 2002, 2003 and 2004 as compared to the average year 2001). Imported demand for normal years is 100% interpolated from Table 4.2-4.

^[4] Groundwater supply in all future years represents City's adjudicated groundwater right of 1,352 AFY (rounded to nearest 10 AFY); Groundwater demand estimated provided by City based on anticipated construction of treatment facility at Well No. 5.

^[5] From Table 4.2-2, Row F; In its September 2005 Draft UWMP Multiple Dry Year Projections, Metropolitan only projected demands for Year 3, therefore Years 1 and 2 are assumed to equal Year 3 demand; these percentages are presented only to reflect the fact that the City's demand is well below the factor presented in the table, e.g., 2010 multiple dry year demand is 103.2% as opposed to 116.5%.

^[6] Interpolated from Table 4.2-4

Table 4.2-7
City of Lomita Projected Water Supply and Demand
Multiple Dry Water Years 2011-2015
(AFY – all projections are rounded to the nearest 10 AFY)

Water Sources	2011	2012	2013	2014	2015
Supply	Normal Years		Multiple Dry Years		
Metropolitan Projected Supply During a Multiple Dry Year as a % of Average Supply ^[1]			106.8	106.8	106.8
Projected WBMWD Multiple Dry Year Supply as a % of Average Year Supply ^[2]			103.2	99.6	103.9
Imported ^[3]	2,930	2,850	2,970	2,880	2,810
Local (Groundwater) ^[4]	1,350	1,350	1,350	1,350	1,350
Total Supply	4,280	4,200	4,320	4,230	4,160
Normal Year Supply	4,280	4,200	4,130	4,050	3,980
% of Normal Year	100.0	100.0	104.6	104.4	104.5
Demand					
Metropolitan Projected Multiple Dry Year Demand as % of Normal Year ^[5]			116.4	116.4	116.4
Imported ^[3]	2,300	2,310	2,340	2,330	2,170
Local (Groundwater) ^[4]	500	500	500	500	750
Total Demand	2,800	2,810	2,840	2,830	2,920
Normal Year Demand ^[6]	2,800	2,810	2,810	2,820	2,830
% of Normal Year	100.0	100.0	101.0	100.3	103.2
% of Year 2004 Demand (2,813 AF)	99.5	99.9	101.0	100.6	103.8
Supply/ Demand Difference	1,480	1,390	1,480	1,400	1,240
Difference as % of Supply	34.6	33.1	34.3	33.1	29.8
Difference as % of Demand	52.9	49.5	52.1	49.5	42.5

^[1] From Table 4.2-2, Row C

^[2] From WBMWD June 2005 Draft Urban Water Management Plan; note that the more conservative Metropolitan projections are used in the analysis.

^[3] Imported supply = (imported supply interpolated from Table 4.2-4) x (escalation factor from Table 4.2-2, Row C); Imported demand = (normal year demand) x (101.0%, 100.3% or 103.2% Year 1, 2 and 3; multiple dry year demand factors are based on actual usage during the dry years 2002, 2003 and 2004 as compared to the average year 2001). Imported demand for normal years is 100% interpolated from Table 4.2-4.

^[4] Groundwater supply in all future years represents City's adjudicated groundwater right of 1,352 AFY (rounded to nearest 10 AFY); Groundwater demand estimated provided by City based on anticipated construction of treatment facility at Well No. 5 by 2008.

^[5] From Table 4.2-2, Row F; In its September 2005 Draft UWMP Multiple Dry Year Projections, Metropolitan only projected demands for Year 3, therefore Years 1 and 2 are assumed to equal Year 3 demand; these percentages are presented only to reflect the fact that the City's demand is well below the factor presented in the table, e.g., 2015 multiple dry year demand is 103.2% as opposed to 116.4%.

^[6] Interpolated from Table 4.2-4

Table 4.2-8
City of Lomita Projected Water Supply and Demand
Multiple Dry Water Years 2016-2020
(AFY – all projections are rounded to the nearest 10 AFY)

Water Sources	2016	2017	2018	2019	2020
Supply	Normal Years		Multiple Dry Years		
Metropolitan Projected Supply During a Multiple Dry Year as a % of Average Supply ^[1]			103.3	103.3	103.3
Projected WBMWD Multiple Dry Year Supply as a % of Average Year Supply ^[2]			103.2	99.6	103.9
Imported ^[3]	2,600	2,570	2,620	2,590	2,560
Local (Groundwater) ^[4]	1,350	1,350	1,350	1,350	1,350
Total Supply	3,950	3,920	3,970	3,940	3,910
Normal Year Supply	3,950	3,920	3,890	3,860	3,830
% of Normal Year	100.0	100.0	102.1	102.1	102.1
Demand					
Metropolitan Projected Multiple Dry Year Demand as % of Normal Year ^[5]			116.5	116.5	116.5
Imported ^[3]	2,080	2,090	2,130	2,110	1,950
Local (Groundwater) ^[4]	750	750	750	750	1,000
Total Demand	2,830	2,840	2,880	2,860	2,950
Normal Year Demand ^[6]	2,830	2,840	2,850	2,860	2,860
% of Normal Year	100.0	100.0	101.0	100.3	103.2
% of Year 2004 Demand (2,813 AF)	100.6	101.0	102.4	101.7	104.9
Supply/ Demand Difference	1,120	1,080	1,090	1,080	960
Difference as % of Supply	28.4	27.6	27.5	27.4	24.6
Difference as % of Demand	39.6	38.0	37.8	37.8	32.5

^[1] From Table 4.2-2, Row C

^[2] From WBMWD June 2005 Draft Urban Water Management Plan; note that the more conservative Metropolitan projections are used in the analysis.

^[3] Imported supply = (imported supply interpolated from Table 4.2-4) x (escalation factor from Table 4.2-2, Row C); Imported demand = (normal year demand) x (101.0%, 100.3% or 103.2% Year 1, 2 and 3; multiple dry year demand factors are based on actual usage during the dry years 2002, 2003 and 2004 as compared to the average year 2001). Imported demand for normal years is 100% interpolated from Table 4.2-4.

^[4] Groundwater supply in all future years represents City's adjudicated groundwater right of 1,352 AFY (rounded to nearest 10 AFY); Groundwater demand estimated provided by City based on anticipated construction of treatment facility at Well No. 5.

^[5] From Table 4.2-2, Row F; In its September 2005 Draft UWMP Multiple Dry Year Projections, Metropolitan only projected demands for Year 3, therefore Years 1 and 2 are assumed to equal Year 3 demand; these percentages are presented only to reflect the fact that the City's demand is well below the factor presented in the table, e.g., 2020 multiple dry year demand is 103.2% as opposed to 116.5%.

^[6] Interpolated from Table 4.2-4

Table 4.2-9
City of Lomita Projected Water Supply and Demand
Multiple Dry Water Years 2021-2025
(AFY – all projections are rounded to the nearest 10 AFY)

Water Sources	2021	2022	2023	2024	2025
Supply	Normal Years		Multiple Dry Years		
Metropolitan Projected Supply During a Multiple Dry Year as a % of Average Supply ^[1]			102.4	102.4	102.4
Projected WBMWD Multiple Dry Year Supply as a % of Average Year Supply ^[2]			103.2	99.6	103.9
Imported ^[3]	2,460	2,440	2,480	2,460	2,440
Local (Groundwater) ^[4]	1,350	1,350	1,350	1,350	1,350
Total Supply	3,810	3,790	3,830	3,810	3,790
Normal Year Supply	3,810	3,790	3,770	3,750	3,730
% of Normal Year	100.0	100.0	101.6	101.6	101.6
Demand					
Metropolitan Projected Multiple Dry Year Demand as % of Normal Year ^[5]			116.0	116.0	116.0
Imported ^[3]	1,870	1,880	1,910	1,900	1,990
Local (Groundwater) ^[4]	1,000	1,000	1,000	1,000	1,000
Total Demand	2,870	2,880	2,910	2,900	2,990
Normal Year Demand ^[6]	2,870	2,880	2,880	2,890	2,900
% of Normal Year	100.0	100.0	101.0	100.3	103.2
% of Year 2004 Demand (2,813 AF)	102.0	102.4	103.4	103.1	106.3
Supply/ Demand Difference	940	910	920	910	800
Difference as % of Supply	24.7	24.0	24.0	23.9	21.1
Difference as % of Demand	32.8	31.6	31.6	31.4	26.8

^[1] From Table 4.2-2, Row C

^[2] From WBMWD June 2005 Draft Urban Water Management Plan; note that the more conservative Metropolitan projections are used in the analysis.

^[3] Imported supply = (imported supply interpolated from Table 4.2-4) x (escalation factor from Table 4.2-2, Row C); Imported demand = (normal year demand) x (101.0%, 100.3% or 103.2% Year 1, 2 and 3; multiple dry year demand factors are based on actual usage during the dry years 2002, 2003 and 2004 as compared to the average year 2001). Imported demand for normal years is 100% interpolated from Table 4.2-4.

^[4] Groundwater supply in all future years represents City's adjudicated groundwater right of 1,352 AFY (rounded to nearest 10 AFY); Groundwater demand estimated provided by City based on anticipated construction of treatment facility at Well No. 5.

^[5] From Table 4.2-2, Row F; In its September 2005 Draft UWMP Multiple Dry Year Projections, Metropolitan only projected demands for Year 3, therefore Years 1 and 2 are assumed to equal Year 3 demand; these percentages are presented only to reflect the fact that the City's demand is well below the factor presented in the table, e.g., 2025 multiple dry year demand is 103.2% as opposed to 116.0%.

^[6] Interpolated from Table 4.2-4

Table 4.2-10
City of Lomita Projected Water Supply and Demand
Multiple Dry Water Years 2026-2030
(AFY – all projections are rounded to the nearest 10 AFY)

Water Sources	2026	2027	2028	2029	2030
Supply	Normal Years		Multiple Dry Years		
Metropolitan Projected Supply During a Multiple Dry Year as a % of Average Supply ^[1]			102.4	102.4	102.4
Projected WBMWD Multiple Dry Year Supply as a % of Average Year Supply ^[2]			103.2	99.6	103.9
Imported ^[3]	2,360	2,340	2,380	2,360	2,330
Local (Groundwater) ^[4]	1,350	1,350	1,350	1,350	1,350
Total Supply	3,710	3,690	3,730	3,710	3,680
Normal Year Supply	3,710	3,690	3,670	3,650	3,630
% of Normal Year	100.0	100.0	101.6	101.6	101.4
Demand					
Metropolitan Projected Multiple Dry Year Demand as % of Normal Year ^[5]			115.0	115.0	115.0
Imported ^[3]	1,910	1,910	1,950	1,940	2,030
Local (Groundwater) ^[4]	1,000	1,000	1,000	1,000	1,000
Total Demand	2,910	2,910	2,950	2,940	3,030
Normal Year Demand ^[6]	2,910	2,910	2,920	2,930	2,930
% of Normal Year	100.0	100.0	101.0	100.3	103.2
% of Year 2004 Demand (2,813 AF)	103.4	103.4	104.9	104.5	107.7
Supply/ Demand Difference	800	780	780	770	650
Difference as % of Supply	21.6	21.1	20.9	20.8	17.7
Difference as % of Demand	27.5	26.8	26.4	26.2	21.5

^[1] From Table 4.2-2, Row C

^[2] From WBMWD June 2005 Draft Urban Water Management Plan; note that the more conservative Metropolitan projections are used in the analysis.

^[3] Imported supply = (imported supply interpolated from Table 4.2-4) x (escalation factor from Table 4.2-2, Row C); Imported demand = (normal year demand) x (101.0%, 100.3% or 103.2% Year 1, 2 and 3; multiple dry year demand factors are based on actual usage during the dry years 2002, 2003 and 2004 as compared to the average year 2001). Imported demand for normal years is 100% interpolated from Table 4.2-4.

^[4] Groundwater supply in all future years represents City's adjudicated groundwater right of 1,352 AFY (rounded to nearest 10 AFY); Groundwater demand estimated provided by City based on anticipated construction of treatment facility at Well No. 5.

^[5] From Table 4.2-2, Row F; In its September 2005 Draft UWMP Multiple Dry Year Projections, Metropolitan only projected demands for Year 3, therefore Years 1 and 2 are assumed to equal Year 3 demand; these percentages are presented only to reflect the fact that the City's demand is well below the factor presented in the table, e.g., 2030 multiple dry year demand is 103.2% as opposed to 115.0%.

^[6] Interpolated from Table 4.2-4

4.3 VULNERABILITY OF SUPPLY FOR SEASONAL OR CLIMATIC SHORTAGE

As mentioned in Section 1, the City of Lomita is in a semi-arid environment. The area must depend on imported water supplies since natural precipitation is limited and groundwater is not considered a viable source of supply. Climatological data in California has been recorded since the year 1858. During the 20th 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 and, in particular, Los Angeles County sustained few adverse impacts from the 1976-77 drought, but the 1987-91 drought created considerably more concern for Southern California and Los Angeles County.

As a result, the City is vulnerable to water shortages due to its climatic environment and seasonally hot summer months. While the data shown in Tables 4.2-4 through 4.2-10 identify water availability during single and multiple dry year scenarios, response to a future drought would follow the water use efficiency mandates of the Metropolitan Water Surplus and Drought Management (WSDM) Plan, along with implementation of the appropriate stage of Lomita's Phased 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 Lomita Projects

The City continually reviews practices that will provide its customers with adequate and reliable supplies. Trained staff continues to ensure the water quality is safe and the water supply will meet present and future needs in an environmentally and economically responsible manner. The City consistently coordinates its long-term water shortage planning with WBMWD and WRD.

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 potential use of recycled water. Any new well supply sources will be to replace or upgrade inefficient wells, rather than to support population growth and new development. For example, a new water supply source will be included as part of the upgrade of Well No. 5. The projects that have been identified to improve the City's water supply reliability and enhance the operations of the City's facilities include replacement of water meters, fire hydrants, valves, and pipelines. The improvement projects identified for production purposes include:

- Well 5 Rehabilitation: Clean and disinfect the well (through chlorination, well development or similar), and replace well pump with a 1,000 gpm vertical turbine pump.

- Well 5 Groundwater Treatment: Construct a wellhead treatment plant to reduce existing levels of iron, manganese, and other constituents to below MCLs. Maximize local groundwater supply by pumping Well 5 at the allotted amount adjudicated (1,352 AFY), and reduce imported water demand.
- System Storage: Replace existing 1.0 MG Cypress Reservoir with new 5.3 MG tank. The project will produce storage capacity for approximately 2½ days of the City’s average day demand. The project will be completed in 2007.
- Pump Station: Install new pump station concurrently with new reservoir as an alternative water supply in case Metropolitan’s water connection WB-8 is interrupted.
- Pressure Reducing Valve (PRV) Rehabilitation: Replace aging PRVs and piping at Metropolitan’s turnouts WB-7 and WB-8.
- Pipeline Replacement: Replace aging pipelines in the City’s distribution system in order to maintain adequate flows and service.
- Installation of Standby Emergency Power: Installation of a standby emergency generator at the reservoir site to ensure adequate power during emergencies.
- Telemetry System Upgrades: Upgrade the City’s existing telemetry system in order to ensure efficient operation of its water distribution system.
- New booster pumps to provide adequate pressure for improved water system distribution and circulation.

**Table 4.4-1
Future Water Supply Projects
(AF)**

Project Name	Multiple-Dry				
	2010	2015	2020	2025	2030
Well No. 5	500	750	1,000	1,000	1,000
At Capacity	Normal-year	Single-year	Year 1	Year 2	Year 3
Well No.5	1,000	1,000	1,000	1,000	1,000

Note: Well No. 5 will add capacity to the City; however, the City is limited to its adjudicated water rights and therefore the well is not considered new water.

4.4.2 Regional Agency Projects

Since the City purchases imported water from the SWP and the Colorado River from Metropolitan, the projects implemented by Metropolitan to secure their water supplies have a direct effect on the City. In addition, WRD’s and WBMWD’s planned projects and programs for groundwater and recycled water will also impact the City.

Metropolitan Water District of Southern California (Metropolitan)

Metropolitan is implementing water supply alternative 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 was 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 also included following 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 • Groundwater 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

Target	Programs and Status
<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"> SWP 	<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)
<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 Recovery, 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 thousand acre-feet (TAF) of recycled water is permitted for use within Metropolitan service area. Metropolitan estimates that an additional 480 TAF per year of new recycled water could be developed and used by 2025 with an additional 130 TAF 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. One of the projects is within the WBMWD's service area and none are associated with the City.
- **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 TAF per year of desalinated seawater: San Diego County Water Authority, Long Beach Water Department, Los Angeles Department of Water and Power, 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. The program coordinates eight conjunctive use projects with a total storage capacity of 195 TAF and a dry-year yield of 65 TAF per year.
- 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 TAF per year by 2010.
- Other Programs – Metropolitan intends to expand the conjunctive use programs to add another 80 TAF 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 TAF 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 TAF per year in the Sacramento Valley of which approximately 55 TAF 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 to 285 TAF 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 to 219 TAF of carryover water.
- Desert Water Agency/Coachella Valley Water District (DWCV) SWP Table A Transfer – This transfer to DWCV includes 100 TAF 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 and 26 TAF 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 to 18 TAF depending on the water year.

Colorado River Aqueduct (CRA) Target

Metropolitan also receives imported water from the CRA. Metropolitan, Imperial IID and Coachella Valley Water District (CVWD) 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 TAF and will increase yearly until 2023 where the transfer will be 200 TAF 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 TAF 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 TAF 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 TAF of water in storage. Metropolitan expects the program to eventually develop a storage capacity of approximately 500 TAF.
- 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 TAF 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.

CVP/SWP 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 TAF.

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:

- Robert W. Goldworthy Desalter Project – WRD operates a desalination plant (Desalter Project) that is located in the Basin and within the City of Torrance. The plant was constructed in order to treat a saline plume located in the Basin that was trapped as a result of barrier operations designed for seawater intrusion. The plant began operating in 2001 and currently treats approximately 2.75 MGD. 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 drinking for the City of Torrance. The residual by-product of the desalination process is routed to the sewer system.
- 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, Central Basin Municipal Water District, 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.⁵¹ The group continues to meet and it is anticipated resolution on some of the major issues will occur in the near future.
- Nitrogen Gas Pilot Study – WRD, City of Los Angeles Department of Water and Power (LADWP), and the USBR are conducting a pilot study to test whether injection of nitrogen gas can replace water injection for barrier protection against seawater intrusion. This test involves the injection of the nitrogen gas in an existing barrier well for several days and checking water levels in nearby wells to assess effectiveness.
- Dominguez Gap Barrier Recycled Water Injection Project – The project delivers water from the LADWP's Terminal Island Treatment Plant to the Dominguez Barrier. The water at the treatment plant is processed using microfiltration, reverse osmosis, and chlorination before being injected in the barrier. The project

⁵¹ WRD, Engineering Survey and Report, March 2005

maintains a 50/50 ratio of recycled water and potable water to satisfy regulatory requirements. LADWP is responsible for the project water delivery, and WRD is responsible for the groundwater monitoring compliance.

West Basin Municipal Water District (WBMWD)

The projects identified in WBMWD's fiscal year budget for 2005/2006 include the following:

- Completion of the recycled water system (pipeline extensions) through the City of Torrance toward the Palos Verdes Peninsula.
- Construction of the Phase IV Water Recycling Plant Expansion Design-Build Project. The Phase IV expansion project is expected to increase the amount of recycled water by 5 MGD (5,600 AFY) and will be online in 2009.
- Design and begin construction of the Hyperion Secondary Effluent Pump Station No. 2 (will serve the additional recycled water produced by the Phase IV Plant expansion); include construction of a second source (backup) of electrical power.
- Upgrade the Seawater Desalination Project from 40 to 80 gpm and evaluate alternative membrane pretreatment technologies.
- Continue discussions with property owners on the coast to procure site for future seawater desalination demonstration plant.
- Design/Construct miscellaneous recycled water laterals and retrofits as customers are identified.

In 2005, WBMWD also applied for funding through the Proposition 50 Water Recycling Construction Grant for the Madronas/Palos Verdes Lateral project. WBMWD also requested the State Water Resources Control Board to fund 25 percent of the \$27.5 million cost of the pipeline.

The Los Angeles County South Bay Integrated Regional Water Management Group, operating under the lead agency authority of WBMWD, is developing a formal Integrated Regional Water Management Plan (IRWMP) for a region including Ballona Creek, Dominguez, and South Santa Monica Bay Watersheds. The agencies and stakeholders in the Region are preparing an IRWMP with the understanding that through regional integration, more cost effective and border-reaching water management solutions can be developed and implemented.⁵²

4.5 EXCHANGE OR TRANSFER OPPORTUNITIES

⁵² Proposition 50, Chapter 8 Integrated Regional Water Management Planning Grant, Los Angeles County South Bay Integrated Regional Water Management Plan.

The City has not entered into any agreements for the transfer or exchange of water other than through WBMWD. However, Metropolitan and WRD are exploring options that would benefit the region. These exchanges were discussed earlier under proposed projects for the region.

Further, since the City only has 1,352 AF of groundwater rights, and is currently not pumping, it obtains its water solely from Metropolitan imported water through WBMWD. The City has not entered into any lease agreements with other pumpers for additional groundwater supplies.

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 or impaired groundwater. 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 comprised of 27 organizations and in October 2003 provided a list of recommendations related to the following key issues: general, energy, environment, planning, and permitting.

Metropolitan's Seawater Desalination Program

In August 2001, Metropolitan launched its Seawater Desalination Program (SDP). 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. In 2004, Metropolitan adopted its IRP Update that 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 as noted earlier, including the LADWP, Long Beach Water Department, Municipal Water District of Orange County, 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

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

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.

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.

West Basin Municipal Water District (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. Future plans are to increase the production of the project to 80 gallons per day and to evaluate alternative pretreatment membrane technologies.

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 expand 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 whole scale desalination facility.⁵⁵

United States Desalination Coalition

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

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

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

Water Replenishment District of Southern California

As discussed, WRD owns and operates the Desalter Project that is located within the City of Torrance. The plant was constructed in order to treat a saline plume located in the Basin and began operations 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. The residual by-product of the desalination process is routed to the sewer system.

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

SECTION 5 WATER USE PROVISIONS

5.1 PAST, CURRENT AND PROJECTED WATER USE AMONG SECTORS

Table 5.1-1 shows the water use per classification for the City. The projected water use by sector reflects the water demand projections shown in Table 4.2-4 in Section 4.2.

Table 5.1-1
Past, Current and Projected Water Use by Sector
(Rounded to the Nearest 10 Acre-Feet)

	2000	2004	2010	2015	2020	2025	2030
Single Family Residential	1,848	1,873	1,860	1,890	1,910	1,930	1,950
Multi Family Residential	616	610	600	610	620	630	640
Commercial/Institutional	280	280	280	280	280	290	290
Landscape Irrigation	42	40	40	40	40	40	40
Other	14	10	10	10	10	10	10
Subtotal	2,800	2,813	2,790	2,830	2,860	2,900	2,930
Unaccounted for System Losses ^[1]	200	200	200	200	200	200	210
Total Water Use	3,010	3,013	2,990	3,030	3,060	3,100	3,140

Source: Data for 2000 and 2004 extracted from City Annual Public Water System Report to DWR; Future City of Lomita projections are estimated based on actual percentage breakdown from 2004 water year data (i.e., 66.6% is single family residential; 21.7% is multi-family residential; and 10.0% is commercial/institutional); landscape and other are anticipated to remain constant in future years.) All figures have been adjusted to avoid round-off errors.

^[1] Estimated at approximately 7.0%; all future entries rounded to nearest 10 AF

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

- Water lost from system leaking, i.e. from pipes, valves, pumps, and other water system appurtenances.
- Water used by the Fire Department to fight fires. This water is also not metered.
- Customer meter inaccuracies. Meters have an inherent accuracy for a specified flow range. However, flow above or below this range is usually registered at a lower rate. Meters become less accurate with time due to wear.

Table 5.1-2 shows the number of water service customers by sector between 2000 and 2005, and projections of customers through 2030. The number of service connections is anticipated to grow through 2030, with a projected 0.5 percent annual increase in population.

**Table 5.1-2
Number of Water Service Connections by Sector**

	2002*	2004	2010	2015	2020	2025	2030
Single Family Residential	2,765	2,781	2,810	2,840	2,870	2,910	2,940
Multi Family Residential	925	927	940	950	960	970	980
Commercial/Institutional	393	393	400	400	410	410	420
Landscape Irrigation	59	51	50	50	50	50	50
Other	0	9	10	10	10	10	10
Total Connections	4,142	4,161	4,210	4,250	4,300	4,350	4,400

Source: Data for 2002 and 2004 extracted from City Annual Public Water System Report to DWR; Future City of Lomita projections are estimated based on actual percentage breakdown from 2004 water year data (i.e., 66.8% is single family residential; 22.3% is multi-family residential; and 9.4% is commercial/institutional); landscape and other are estimated based on actual 2004 data and are anticipated to remain constant in future years.) All figures have been adjusted to avoid round-off errors.

* City did not tabulate meter connection data prior to 2002.

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. Through the California Urban Water Conservation Council's (CUWCC) Memorandum of Understanding Regarding Urban Water Conservation in California (MOU), 14 BMP's have been established. These BMPs are equivalent to demand management measures (DMM) and refer to policies, programs, rules, regulation and ordinances, and the use of devices, equipment and facilities that, over the long term; have been generally justified and accepted by the industry as providing a "reliable" reduction in water demand. The BMPs are technically and economically reasonable and not environmentally or socially unacceptable, and are not otherwise unreasonable for most water suppliers to carry out.

Although the City is not a signatory to the MOU, WBMWD is and implements many of the BMPs on behalf of its member agencies, including the City. WBMWD has made state-mandated BMPs the cornerstone of its conservation programs and a key element in the overall regional water resource management strategy for the region.

6.2 DETERMINATION OF DMM IMPLEMENTATION

The City has continued to work with WBMWD towards implementing the 14 BMPs, which are incorporated in regional water agencies rate surcharges. These 14 BMPs 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 address planned implementation of BMPs, but focused on the existing actions contributing to the implementation of BMPs and water conservation efforts as a whole. Therefore, the following provides an thorough summary of the City's most recent BMP implementation efforts and reflects the current plans for future implementation.

6.3 DEMAND MANAGEMENT MEASURES (DMMs)

As a member of WBMWD, the City of Lomita benefits from regional DMM programs performed by WBMWD on behalf of its member agencies.

Current WBMWD conservation programs are saving over 4.5 billion gallons of imported water every year, since the 1990's.⁵⁷ These savings relate directly to additional available water for beneficial use within the WBMWD service area, including the City.

The following presents the DMM activities implemented, both regional and local programs, which benefit the City:

- BMP 1 – Water Survey Programs for Single-Family Residential and Multi-Family Residential Customers.** On behalf of its member agencies, WBMWD acts as the liaison to Metropolitan to offer funding for residential survey devices. As a member agency of WBMWD, the City may receive funding through Metropolitan. The City also responds to customer inquiries to high water bills that prompt informal water surveys to be completed by trained City water staff. A high water bill triggers the City to inspect the accuracy of the water meter, conduct a flow test, and then suggest possible sources of water leaks or excessive water use. The City initiated water surveys in 1992, following the City's acquisition of the water system from Los Angeles County.

Based on the CUWCC's savings rates, set forth in the BMP Costs & Savings Study (December 2003), savings from untargeted intensive home surveys results in an average of 21 gallons per day (gpd) per household (both single family and multi-family) total savings for future projections. This rate allows the calculation of estimated total water savings that results from completion of residential water surveys. Table 6.3-1 below shows the City's residential survey activity historically and projected to 2010.

**Table 6.3-1
BMP 1 – Water Survey Programs for Residential Customers**

City of Lomita	Historical (2001- 2004)	Current and Projected (2005-2010)
# of Surveys	24	24
Expenditures (\$)	4,900	4,900
Water Savings (AFY)	.6	.6

The City will measure the effectiveness of water survey programs through analyzing the number of surveys distributed and the difference in water consumption for the families after the surveys are conducted.

- BMP 2 – Residential Plumbing Retrofits.**

On behalf of the City, WBMWD actively distributes faucet aerators and low-flow showerheads within its service area. Since 1990, WBMWD has installed numerous faucet aerators and low-flow showerheads, as shown in Table 6.3-2.

⁵⁷ Central Basin Municipal Water District, Draft Urban Water Management Plan Update, June 2005 Draft

**Table 6.3-2
BMP 2 – WBMWD Historical Residential Plumbing Retrofit Devices**

Devices	1990-2000		2000-2005	
	# units	AF	# units	AF
Faucet Aerators	954	3	0	0
Low-flow Showerheads	215,563	1,014	7,500	35

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

WBMWD 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. WBMWD will continue to partner with cities and water purveyors in order to implement these programs. In addition, WBMWD will continue to offer a \$50 rebate for the purchase and installation of ULFTs.

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

BMP 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. Field employees are trained in detection of leaks and signs of unauthorized uses of water. In addition, the customer billing system flags high or unusual water bills, which are then investigated for possible leaks in customer piping. When a leak is first noticed, the pipeline is inspected and promptly repaired. Leak detection and repair activities were first initiated in 1992 when the City acquired the water system from Los Angeles County. The City’s system inspection and field reviews are triggered when pressure losses are experienced within the same locations of the distribution line.

In 1996, WBMWD and its sister agency, Central Basin Municipal Water District (CBMWD), partnered with the United States Bureau of Reclamation (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 purveyors, 10 participated in the audit, and of the 10, three agencies found their unaccounted-for water to be above 10%. As part of its Conservation Master Plan, WBMWD will seek input from its water retailers regarding support for this program.

Table 6.3-3 provides the City's current and projected water audit, leak detection and repair levels through 2010.

Table 6.3-3
BMP 3 – System Water Audits, Leak Detection, and Repair

City of Lomita	Historical (2001- 2004)	Current and Projected (2005-2010)
Unaccounted Water	7%	7%
Miles of Distribution Lines Surveyed	41	7
Miles of Distribution Lines Repaired	.25	2
Expenditures (\$)	565,000	2.7 million

To evaluate the effectiveness of these conservation measures, staff will review the data records to confirm that the unaccounted-for water losses remain low and consistent. Because of the City's proactive measures, the unaccounted-for water losses are 7%. 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 gpm. Cost and savings depend on the age of infrastructure for the water system.

- BMP 4 – Metering with Commodity Rates for All New Connections and Retrofit of Existing Connections.** The City bills its customers according to meter consumption. In addition, the City encourages the installation of dedicated landscape meters, which allows the City to recommend the appropriate irrigation schedules through future landscape programs. 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.
- BMP 5 – Large Landscape Conservation Programs and Incentives.** In Southern California, over 50% of water is used for outdoor landscape irrigation. Therefore, in order to conserve water consumption throughout its service area, including within the City, WBMWD is actively developing conservation programs targeting outdoor irrigation. Over the next few years, WBMWD will seek partnerships and resources in order to offer new programs targeted at large landscape customers. The following described the variety programs WBMWD is implementing on behalf of its member agencies.

Irrigation Controller Program

In 2004, Metropolitan was awarded a Proposition 13 grant for a new Weather-Based Irrigation Controller Program. WBMWD has been working with the Project Advisory Committee (PAC) to develop the program. WBMWD recognizes the water savings potential and is beginning to test weather-based irrigation controllers in sites that use potable imported water. The plan is to use the new controllers in areas where recycled water is unavailable. The funding incentives provided vary based 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

WBMWD 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 weather-based irrigation controllers to conserve water and reduce runoff.

Since 50% of the potable water in southern California is used for maintaining landscaping, offering these classes is an ideal way to reduce outdoor water use and waste. By educating the public on properly maintaining the irrigation system, trouble-shooting problems, such as over-watering, that are simple yet difficult to address, can be solved without spending additional funding.

Ocean Friendly Gardens

Also in 2005, WBMWD formed a partnership with the Surfrider Foundation to develop “Ocean Friendly Garden” workshops and demonstration gardens. WBMWD took the lead in applying for a State grant to help finance the classes. The classes focus on planting “ocean friendly plants” and installing weather-based irrigation controllers as a way to reduce urban runoff that finds its way to the local waterways and the ocean. The installation of water efficient plants and efficient sprinkler controllers can conserve between 20%-50% water and reduce runoff by up to 70%.

These programs are offered to customers throughout the City’s service area, since it is included within WBMWD’s service area. 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.

- **BMP 6 – High-Efficiency Washing Machine (HEWM) Rebate Programs.** The City promotes HEWMs through consumer education and incentives. In 2003, the City, through the WBMWD HEWM Rebate Program, distributed a total of 15 washer rebates. In 2004, participation in the program significantly increased, with 44 washer rebates provided throughout its service area. As of mid-May 2005, a

total of seven rebates were provided and it is anticipated this number will increase based on significant past participation in the program. The program is significant for the City's service area and will be continued through 2006.

WBMWD provides an incentive of \$110 per washer with a 6.0 Water Factor or less until December 2005 to residents in its service area, including within the City. Table 6.3-4 shows the number of rebates WBMWD has allocated, by total service area and within the City, over the past two years.

Table 6.3-4
WBWD Service Area and City of Lomita HEWM Rebates

	2003	2004	Total
\$ per Rebate	\$110	\$110	\$110
Total # of Rebates in WBMWD Service Area	104	602	706
Total Water Savings (AF)	1.6	9.4	11
# of Rebates in City's Service Area	15	44	59
Water Savings in City's Service Area (AF)	0.2	0.7	0.9

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

Table 6.3-5 reflects the City's projected program participation from present through 2010.

Table 6.3-5
Projected City of Lomita HEWM Rebates

	2005-2010
\$ per Rebate	\$100
# of Rebates in City's Service Area per Year	25
Water Savings in City's Service Area (AFY)	.11

The method to measure effectiveness of this BMP will include quantifying the number of HECW'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.

- **BMP 7 – Public Information Programs.** The City regularly holds public meetings that provide its customers with an opportunity to ask questions about the water source, supply, rates, and other water system related concerns. In addition, two types of informational brochures are distributed to its customers: 1) basic source, supply and meter information, and 2) water treatment and conservation measures. The informal public information meetings began in October 2005 as water rates workshops hosted by the City for residents throughout its service area.

WBMWD, along with the City and other local agencies, implement the following programs and activities to promote water conservation:

- Public Information Committee (PIC): Consists of Public Information and Public Affairs Officers from member agencies. The PIC provides useful information to customers on important water issues.
- Inspection Tours: WBMWD, in coordination with Metropolitan, provides inspection tours of the CRA and the SWP to legislators, local elected officials, retail agency staff, and the general public. The purpose of the tours is to enhance the understanding of water supply.
- Speaker's Bureau: WBMWD provides speakers to local community groups, service clubs, and schools upon request.
- "Water Harvest Festival:" WBMWD invites parents and children to participate in a variety of water education games and to obtain information on water recycling and conservation.
- California Water Awareness Campaign: An association formed to coordinate efforts throughout the state during Water Awareness Month, as well as the rest of the year.

The method to measure effectiveness of implementing this BMP 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.

- **BMP 8 – School Education Programs.** In 2003, the City provided school education programs to grades 6 through 8 on water awareness and conservation. The City will continue to promote and coordinate water education school programs with the schools.

In addition, WBMWD promotes educational programs about water conservation to elementary through high school students. The City participates in the Planet Protector Water Explorations program, with a total of 2 tours taking place in 2003, reaching grades 6-8. The *Planet Protector Water Explorations* is a collaborative water education field trip program between WBMWD and the Roundhouse Marine Research Station and Aquarium in Manhattan Beach. The Roundhouse is operated by Oceanographic Teaching Stations, a non-profit organization, and is affiliated with the Los Angeles County Office of Education.

As stated in WBMWD's June 2005 Draft 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. Beginning in fiscal year 2004-05, additional programs have become available to students, increasing the number of students that are educated through the various programs.

In addition, WBMWD has implemented the following new programs for the benefit of its member agencies, including the City:

- **Think Earth It's Magic:** Through West Basin's membership as part of the Think Earth Environmental Education Foundation, *Think Earth It's Magic* is a collaborative program between West Basin, Los Angeles County Sanitation Districts, 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 West Basin'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: WBMWD’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 West Basin and Metropolitan each May. In addition, all teachers at each of West 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 Metropolitan’s “Water Is Life” annual calendar. Over the past ten years, more than 25,000 students within West Basin’s service area have participated in this program. Table 6.3-6 shows the number of students that have participated in the program.

**Table 6.3-6
WBMWD 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
K-3rd	240	250	480	690	1,014 ^[2]	2,674
4th-6th	350	575	450	690	1,632	3,697
7th-8th	70	36	150	120	876	1,252
High School	0	70	30	30	174	304
Total	660	931	1,110	1,530	3,696	7,927

[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.

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

Table 6.3-7
BMP 8 – Lomita School Education Program

City of Lomita	Historical (FY 2001- 2005)	Projected (FY 2005-2010)
Grades 4-6 th	25 students	25 students
Grades 7 th -8 th	25 students	25 students

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

- **Water Wanderings: A Journey Through Water:** *Water Wanderings* is a collaborative classroom visitation program between West Basin and the S.E.A. Lab in Redondo Beach. This collaborative hands-on classroom program will take fourth graders on a 2 ½-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. It is WBMWD’s staff’s intention to have the program developed by the end of Summer 2005, and then begin marketing efforts to schedule program dates from September 2005 through June 2006.
- **Sewer Science:** WBMWD staff is currently exploring the possibility of partnering with the Los Angeles County Sanitation Districts 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. It is WBMWD’s staff’s intention to have the program developed by the end of Summer 2005, and then begin marketing efforts to schedule program dates from September 2005 through June 2006.
- **BMP 9 – Conservation Programs for Commercial, Industrial and Institutional (CII) Accounts.** WBMWD, in partnership with Metropolitan, participates in Metropolitan’s region-wide CII rebate program. WBMWD offers the rebates to its member agencies, including the City. 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 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. West Basin supported CUWCC's efforts in marketing the program. The nozzles and installations were provided free of charge to the food services sector.

In 2005, WBMWD 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, WBMWD offers its 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.

As a result of these efforts, the City provides the opportunity for rebates to its customers in the commercial, industrial and institutional sectors. In 2002, nine rebates were provided for high efficiency clothes washers. In 2003, seven rebates were provided, with two for water brooms and five for high efficiency clothes washers. Most recently, in 2004, the City distributed 26 rebates for 10 high efficiency clothes washers, 10 ULFTs, and six water saving urinals. The implementation of these conservation programs provides a cumulative savings of 3.7 AFY. The predominance of customers utilizing the rebate programs includes schools and apartment buildings.

In 2005, the City initiated its Rinse and Save Program for CII customers. Through this program, the City provides pre-rinse spray valves to customers to install. As of May 2005, 14 pre-rinse spray valves were installed to CII customers throughout the City's service area.

The CII Rebate Program provides a total of 17.8-20.3 percent median and 17.9-29.2 percent mean in savings on an annual basis. To measure the effectiveness of this BMP, 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 BMP.

Table 6.3-8 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 2010.

**Table 6.3-8
BMP 9 – CII Rebate Program**

CII Rebates	Historic 2000-2004	Current and Projected 2005-2010
# of HECW	24	25
# of Water Brooms	2	3
# of ULFTs	10	10
Water Saving Urinals	6	4
Water Savings (AFY)	3.7	3

- BMP 10 – Wholesale Agency Assistance Program.** The City takes advantage of WBMWD’s conservation-related technical support and information it offers to its member agencies. Programs include ULFT replacement, system audits, HEWM rebates, public information, school education, wholesaler incentives, residential retrofits, CII rebates and surveys, residential and large turf irrigation, and assistance with conservation-related rates and pricing. Overall, WBMWD offers programs under BMP’s 3, 5, 6, 7, 8, 9, 10, 12, and 14 on behalf of its member agencies, including the City.
- BMP 11- Conservation Pricing.** In 2003, WBMWD 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, WBMWD helps prevent member agencies, including the City, from exceeding their Tier 1 allocation limits by conservation, education, and the development of recycled water use.

In response to this two-tiered structure, the City anticipates implementing a new rate structure in 2006 as part of the Water Rate Analysis report completed in 2004. The City’s customer growth projection of approximately 1 percent new water connections over 5 years (2010) require that the proposed water rates are organized utilizing an increasing block method. With this approach, the unit price of water increase with each successive block, resulting in an increase in the incremental and the average cost of water with increased water use. The new rate structure will encourage water conservation.

The measure of effectiveness of the uniform rate structure in terms of acting as a catalyst for water conservation will be assessed based on decreases in the total amount of consumption since the charges are based on total consumption rates.

- BMP 12 – Conservation Coordinator.** The City’s Field Operations Manager serves as the City’s Conservation Coordinator for the water service area. The role of the Field Operations Manager entails consistent water, street, and tree code

enforcement and as a result, regular communication with customers is provided. Since 1992, the responsibilities of the Field Operations Manager have included the conservation coordinator duties. The costs associated with this position are approximately \$2,700 per month.

Additionally, WBMWD has an assigned a Conservation Coordinator to work with its member agencies, including the City, to enhance their conservation efforts. WBMWD's Conservation Coordinator also investigates Federal, State, and local funding to develop new programs throughout its service area.

- **BMP 13 – Water Waste Prohibition.** Under City Ordinance No. 481 (Section 1, 6-17-91), “no customer of the City water department shall make, cause, use or permit the use of water from the city water department in a manner contrary to any provision of Municipal Code Section 12-4-01 through 12-4.18.” Additionally, WBMWD supports member agencies and local cities to adopt ordinances that will reduce wasting water.
- **BMP 14 – Residential ULFT Replacement Program.** In partnership with WBMWD, the City has aggressively promoted the replacement of high water using toilets, which has resulted in the distribution of 706 ULFTs since 2001 in its service area. From 2000, a total of nine ULFTs rebates were provided to single family homes, and a total of seven rebates were distributed to multi-family homes. Table 6.3-9 reflects the water savings from the implementation of the ULFTs and rebates. The City continues to be dedicated to ULFT replacements as an aggressive conservation measure.

**Table 6.3-9
BMP 14 – Residential ULFT Replacement Program
Lomita Historical and Projected Residential ULFTs**

Devices	2001-2004	2005-2010
	# units	# units
ULFTs	706	700
Single Family Rebates	9	15
Multi-Family Rebates	7	14
Water Savings (AFY)	22	20

In 1991, WBMWD introduced its ULFT program, which includes direct installation and rebates based on available funding. In 2004, WBMWD partnered with Metropolitan on a joint-project to identify areas within its service area where the devices could be implemented. Tables 6.3-10 and 6.3-11 illustrate the ULFT Rebate Program and the ULFT Replacement Program for the last five years.

**Table 6.3-10
WBMWD ULFT Rebate Program**

	2000	2001	2002	2003	2004	Total
\$ per Rebate	\$50	\$50	\$50	\$50	\$50	\$50
# of Rebates	564	564	377	736	581	2,822
Water Savings (AF)	16	16	10	21	16	82

**Table 6.3-11
WBMWD ULFT Replacement Program
(Free ULFT Distributions to the Public)**

	2000	2001	2002	2003	2004	Total
# of Devices	4,234	2,946	2,214	2,234	1,544	13,172
Water Savings (AF)	123	85	64	65	44	381

Due to the large areas of high density and numerous multi-family facilities, WBMWD will continue to partner with cities and member agencies to offer a \$50 rebate for the purchase and installation of ULFTs. WBMWD also provides a \$70 rebate for the purchase and installation of dual-flush toilets, which have the ability to flush at 0.8 of a gallon for liquids and 1.6 gallons for solids. WBMWD will continue to offer the program to the City's service area through 2010.

Additional Water Conservation Projects

WBMWD has developed new conservation programs in partnership with Metropolitan in order to conserve additional water throughout its service area. These programs include the Synthetic Turf Program, California Heritage Program, and the Community Partnering Program.

WBMWD has also proposed the Restroom Retrofit Project, which will offer 91 AFY in water savings. The Project is proposed for funding under the DWR Water Use Efficiency Grant Program. The Project will furnish restroom maintenance for up to 383 restrooms in one year.

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 WEST BASIN MUNICIPAL WATER DISTRICT WATER USE EFFICIENCY PROGRAMS

The City works closely with WBMWD to understand the economics of water conservation programs through the adoption and application of the Metropolitan-Main Model. The Model 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 BMPs. The conservation potential by retail water agency is used to develop BMP implementation plans using a “least cost approach” to develop a “most cost effective” package of BMP programs customized for each retail agency. A Conservation Savings Model estimates the potential water conservation from implementation of the BMPs. Once the potential water savings are quantified, programs can be developed to target potential savings. From this model, implementation plans will be developed for the City, in coordination with the City, by WBMWD, detailing the most cost-effective BMPs.

Quantifiable BMP programs include ULF toilet 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 WBMWD’s significant contributions to the development and coordination of water use efficiency activities for its member agencies.

Many of the BMPs have been implemented on a regional basis based upon the WBMWD’s MOU schedule, others are being implemented, and all BMPs will continue on an ongoing basis. The City will continue to work cooperatively with WBMWD to implement cost-effective BMPs.

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SECTION 7 WATER SHORTAGE CONTINGENCY PLAN

7.1 INTRODUCTION

One dry year does not constitute a drought in California, but does serve as a reminder of the need to plan for droughts. 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.

During water shortage emergencies, the City will implement a "Phased Water Conservation Plan", which was adopted as Section 12-4 in the City's Municipal Code. The purpose of the plan is to reduce the effect of shortage water supplies on the City's customers during water shortage emergencies. In compliance with the Water Code requirements, this plan imposes a 50 percent reduction in the total water supply. The City will also work in congruence with WBMWD to implement water shortage plans on a regional level.

7.2 STAGES OF ACTION

City of Lomita Water Shortage Response

The City has implemented a water conservation program to reduce water demands since the drought period of the early 1990s. The "Phased Water Conservation Plan" was adopted as Section 12-4 of the City's Municipal Code to implement a 9-stage phased approach to reduce water usage 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 Phased Water Conservation Plan. This plan imposes phases of mandatory water reduction of water use up to 50 percent and consists of nine phases that help reduce water use within the City's system in order to meet a conservative target. The City of Lomita's City Council will implement the provisions of the Phased Water Conservation Plan, following a public hearing, upon determination that the projected water shortage and the appropriate measures should be implemented. Any provision requiring curtailment in the

use of water shall become effective no sooner than the first billing period commencing on or after the date of publication of the measures adopted. Table 7.2-1 indicates the measures for water conservation phases to reduce the City's water usage, as included in Section 12-4 of the City's Municipal Code, which is also included in Appendix G.

**Table 7.2-1
City of Lomita Phased Water Conservation Plan
Measures for Water Conservation Phases**

Phase	Target %	Landscape Watering Restrictions	Construction Meter Restrictions	Other Restrictions
I	10%	None	None	None
II	15%	None	None	None
III	20%	Every other Day	No New Meters	No New Permanent Meters Issued to Newly Created Lots
IV	25%	Every Other Day	No New Meters	No New Permanent Meters Issued to Newly Created Lots
V	30%	Every Other Day	No New Meters	No New Permanent Meters Issued to Newly Created Lots
VI	35%	Every Third Day	No New Meters	No New Permanent Meters Issued to Newly Created Lots
VII	40%	Trees and Shrubs only by Bucket	Remove Meters	No New Permanent Meters Issued to Newly Created Lots
VIII	45%	Trees and Shrubs only by Bucket	Remove Meters	No New Permanent Meters Issued to Newly Created Lots
IX	50%	Trees and Shrubs only by Bucket	Remove Meters	No New Permanent Meters Issued to Newly Created Lots

Rationing Stages and Reduction Goals

In order to meet short-term water demand deficiencies and short- or long-term drought requirements, the City will implement its Water Conservation Plan in congruence with the stages outlined in Table 7.2-2 below.

**Table 7.2-2
Phased Water Conservation Plan Rationing Stages**

	Phase I	Phase II	Phase III	Phase IV	Phase V	Phase VI	Phase VII	Phase VIII	Phase IX
Anticipated Shortage in Water Supply	10%	15%	20%	25%	30%	35%	40%	45%	50%
Conservation Target as a % of Target Quantity¹ for 1 1/2" Meter or Larger	90%	85%	80%	75%	70%	65%	60%	45%	50%
Conservation Target as a % of Target Quantity¹ for 1" Meter or Less	90%	85%	80%	75%	70%	65%	60%	55%	50%

¹Target quantity shall be determined by the amount of water used on the customer’s premises during the corresponding billing period of a base period to be defined by the City Council.

Since the City is reliant upon imported water, the City will also respond to the actions of WBMWD. WBMWD implements its water shortage contingency plan in coordination with the policy of Metropolitan’s Water Surplus and Drought Management (WSDM) Plan. The WSDM Plan defines 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.

Metropolitan Water Surplus and Drought Management (WSDM) Plan

In 1999, Metropolitan in conjunction with its member agencies developed the WSDM Plan. This plan addresses both surplus and shortage contingencies.

The WSDM Plan will guide management of regional water supplies to achieve the reliability goals of Southern California’s IRP. The IRP sought to meet long-term supply and reliability goals for future water supply planning. The WSDM Plan guiding principle is to minimize adverse impacts of water shortage and ensure regional reliability. From this guiding principle come the following supporting principles:

- Encourage efficient water use and economical local resource programs.
- Coordinate operations with member agencies to make as much surplus water as possible available for use in dry years.
- Pursue innovative transfers and banking programs to secure more imported water for use in dry years.
- Increase public awareness about water supply issues.

The WSDM Plan guides the operations of water resources (local resources, Colorado River, State Water Project, 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.

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 outline 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.

WSDM Plan Shortage Actions by 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 may make withdrawals from Diamond Valley Lake.

Shortage Stage 2. Metropolitan will continue Shortage Stage 1 actions and may draw from out-of-region groundwater storage.

Shortage Stage 3. Metropolitan will continue Shortage Stage 2 actions and may curtail or temporarily suspend deliveries to Long Term Seasonal and Replenishment Programs in accordance with their discounted rates.

Shortage Stage 4. Metropolitan will continue Shortage Stage 3 actions and may draw from conjunctive use groundwater storage (such as the North Las Posas program) and the SWP terminal reservoirs.

Shortage Stage 5. Metropolitan will continue Shortage Stage 4 actions. Metropolitan's Board of Directors may call for extraordinary conservation through a coordinated outreach effort and may curtail IAWP deliveries in accordance with their discounted rates. 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 any and all water supply option contracts and/or buy water on the open market either for consumptive use or for delivery to regional storage facilities for use during the shortage.

Shortage Stage 7. Metropolitan will discontinue deliveries to regional storage facilities, except on a regulatory or seasonal basis, continue extraordinary conservation efforts, and develop a plan to allocate available supply fairly and efficiently to full-service customers. The allocation plan will be based on the Board-adopted principles for allocation listed previously. Metropolitan intends to enforce these allocations using rate surcharges. Under the current WSDM Plan, the surcharges will be set at a minimum of \$175 per af for any deliveries exceeding a member agency's allotment. *Any deliveries exceeding 102% 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 the two 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.

Allocation of Supply for M&I Demands Under the WSDM Plan

The equitable allocation of supplies is addressed by the Implementation Goals for the WSDM Plan, with the first goal being to “avoid mandatory import water allocations to the extent practicable.” The reliability modeling for the WSDM Plan discussed above results in 100 percent reliability for full-service demands through the year 2010. However, the second fundamental goal of the WSDM Plan is to “equitably allocate imported water on the basis of agencies’ needs.” Factors for consideration in establishing the equitable allocation include retail and economic impacts, recycled water production, conservation levels, growth, local supply production, and participation and investment in Metropolitan’s system and programs. In the event of an extreme shortage, an allocation plan will be adopted in accordance with the principles of the WSDM Plan.

In an effort to avoid allocation, import water reliability is planned through the Southern California IRP and the WSDM Plan. The IRP presents a comprehensive water resource strategy to provide the region with a reliable and affordable water supply for the next 25 years. The WSDM Plan will guide management of regional water supplies to achieve the reliability goals of the IRP.

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 7.2-3 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 7.2-3
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

Conditions prevailing in the City 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.

7.3 ESTIMATE OF MINIMUM SUPPLY FOR NEXT THREE YEARS

Metropolitan projects 100 percent reliability for full-service demands through the year 2030.⁵⁸ Additionally, through a variety of WBMWD reliability programs participated in by the City, supplies are projected to be maintained at demand levels. The City anticipates the ability to meet water demand through the next three years based on the driest historic three-years as shown in Table 7.3-1.

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

Source	Normal Year			Multiple Dry Years		
	2006	2007	2008	2006	2007	2008
Local Supplies (Groundwater)	0	0	1,350	0	0	1,350
Imported Supply	3,300	3,320	3,150	3,240	3,260	3,090
Total	3,300	3,320	4,500	3,240	3,260	4,440

Source: Projections are interpolated from data in Table 4.2-6

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.

The City's Standardized Emergency Management System (SEMS) Multihazard Functional Plan (MHFP) addresses the planned response to extraordinary emergency situations associated with natural disasters, technological incidents, and national security emergencies. Under this Plan, the Operations Section will operate under the following policies during a disaster/emergency as the situation dictates:

- The SEMS will be followed.
- All existing city and departmental operating procedures will be adhered to unless modified by the City Council.
- All on-duty personnel are expected to remain on duty until properly relieved of duty. Off-duty personnel will be expected to return to work in accordance with each respective department's policies and procedures.

⁵⁸ Metropolitan Water District of Southern California, Regional UWMP, September 2005 Draft

- While in a disaster mode, operational periods will normally be 12 hours for the duration of the event. Operational periods will be identified in the Action Plan. Operational periods shall be event driven.

The Operations Section Coordinator for the Water Unit will be assigned by Public Works and will be held responsible for carrying out the following operations:

- Establish liaison with Golden State Water Company.
- Assess impact of incident based on Local Health Department, DHS District Office of Drinking Water, and Utility emergency situation reports and other available information.
- Identify need for and prioritize locations for water distribution (include needs of critical facilities).
- Provide for water quality assurance.
- Evaluate, plan and implement actions to acquire and distribute alternative potable water.
- Determine the need to staff a water task group and secure resources through the Logistics Section.
- If situation requires resources beyond the capability of the EOC, notify the Los Angeles County Operational Area EOC via EMIS (Internet); or if EMIS is not available, then all reports and requests are to be sent to the Lomita Sheriff's Station by means coordinated with and agreed to by the Watch Commander and City staff. The Lomita Sheriff's Station will then be responsible for entering the data into EMIS.
- Provide water utilities in the affected area and the Los Angeles County Operational Area EOC with situation status and information related to actions to provide alternative water supply. Establish/maintain emergency water connections with adjacent water companies.
- Provide information to media as appropriate.

In addition, the City's distribution system has three emergency connections. One connection is with the City of Los Angeles and two connections are with the City of Torrance. The City of Los Angeles connection is an 8-inch, two-way connection with a maximum capacity of 1,800 gpm. The two connections with the City of Torrance are 8-inch, one-way connections with a maximum capacity of 1,350 gpm. These three connections allow water to flow to the City's water system during emergencies. Maintaining the system pressure beyond the connections is the City's responsibility.

The City will also rely on Metropolitan's catastrophic event plan to utilize the Diamond Valley Lake reservoir, which can be filled with double the storage capacity for Southern

California and provide six months of emergency supply. If there were a catastrophic failure of the California Aqueduct or the CRA conveyance facilities, Metropolitan could draw on emergency supplies in Diamond Valley Lake. In addition, Metropolitan has established an emergency communication system, known as Member Agency Response System (MARS), with its member's agencies to keep them informed in case of a catastrophic event.

Locally, WBMWD, as the Metropolitan member agency, utilizes MARS to immediately contact its customer agencies and Metropolitan during an emergency about potential interruption of services. MARS is a radio communication system developed by Metropolitan and its member agencies to provide an alternative means of communication in extreme circumstances. WBMWD is currently in the process of enhancing its communication system in order to provide a more rapid response for the benefit of the City and its other member agencies.

4.3 PROHIBITIONS, PENALTIES, AND CONSUMPTION REDUCTION METHODS

The City implements several measures to curtail water consumption during times of supply shortages. As of March 18, 1991 the City adopted Ordinance No. 479 (Appendix G). Prohibitions pertain to customers or persons who utilize the water utility of the City based on the extent of the water shortage, where mandatory measures are implemented in Phase III through Phase IX. Such prohibited activities are summarized below and include the following:

- Hosing or washing sidewalks, walkways, driveways etc.
- Landscape Watering between the hours 10:00 a.m. and 5:00 p.m.
- Excessive irrigation to the extent to cause run-off into adjacent streets, parking lots or alleys is prohibited.
- Indoor and outdoor Plumbing to be inspected and repaired if needed as soon as possible.
- Washing of motor vehicles, boats, trailers or other type of mobile equipment is prohibited except at a commercial car wash, or with reclaimed water, unless such vehicle is washed by using hand-held bucket or water hose equipped with automatic shutoff nozzle.
- Serving drinking water to customers without consent.
- Water used in decorative fountains must flow through a recycling system.
- Use of a hose for car washing, lawn watering, or any other use requiring intermittent water is prohibited, unless an automatic shut off nozzle on the hose used for said purpose.

The City's Water Conservation Plan includes stringent measures to reduce the City's water demand in the short-term ranging from 10 percent during Phase I and up to 50 percent by Phase IX. The stages of action are identified in Table 7.2-2 Phased Water Conservation Plan Rationing Stages.

In the event that the Phased Water Conservation Plan is violated, the City reserves the right to impose penalties. Penalties will be imposed through a three tier system, as included under the City Municipal Code, Section 12-4, and include the following:

- (1) *First Violation.* \$100 dollar fine
- (2) *Second Violation.* \$200 dollar fine
- (3) *Third and Subsequent Violation.* \$500 dollar fine

7.6 REVENUE AND EXPENDITURE IMPACTS AND MEASURES TO OVERCOME THOSE IMPACTS

To ameliorate any financial loss due to the water shortage, the City will implement the Phased Water Conservation Plan. The City has prepared stringent measures, as outlined in the plan, to effectively mitigate water supply in the event of a catastrophic water shortage or drought. A reduction in water consumption could result in loss of revenues needed to maintain and operate the water system. The following actions will take place under such circumstances:

- Implement a conservation surcharge during drought periods to help offset a portion of revenue lost due to reduction of water sales.
- Delay capital improvement projects.
- Consider temporary increase of water rates to meet operation and maintenance costs.

7.7 WATER SHORTAGE CONTINGENCY ORDINANCE AND DRAFT RESOLUTION

On March 18, 1991, the City adopted Ordinance No. 479 to implement several measures in order to curtail water consumption during times of supply shortages. The Ordinance includes specific stages of actions to be implemented during a declared water shortage, prohibited actions, and penalties for violations of the Ordinance. A copy of the Ordinance is included in Appendix G.

Additionally, the City Council will implement the provisions of the Water Conservation Plan by resolution, following a public hearing, to determine the projected water shortage and the appropriate measures or stages that should be implemented. A Draft Resolution is available for this use and included in Appendix H.

7.8 MECHANISMS TO DETERMINE REDUCTIONS IN WATER USE

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

In normal water supply conditions, production figures are recorded and are incorporated into the bi-monthly water production report. During rationing conditions, water shortages will be monitored on a weekly, daily, or hourly basis depending on the severity of the drought. During a disaster shortage, production figures will be monitored on an ongoing basis. The City's monitoring system will warn of any critical conditions instantly. In addition, meter readings will occur more frequently than the current bi-monthly schedule.

As stages of water shortage are declared by WBMWD, the City will follow implementation of those stages and continue to monitor water demand levels. As a member agency of Metropolitan, WBMWD will follow Metropolitan's WSDM Plan. It is not until Shortage Stage 5 that Metropolitan may call for extraordinary conservation. During this stage, Metropolitan's Drought Program Officer will coordinate public information activities with WBMWD and monitor the effectiveness of ongoing conservation programs. Monthly reporting on estimated conservation water savings will be provided.

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 region'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 area's high likelihood of drought. As treatment technology continues to improve, demand for recycled water will also increase.

In response to the increasing demands for water, limitations on imported water supplies and the threat of drought, WBMWD has developed a regional water recycling programs. WBMWD purchases secondary effluent from the Hyperion Treatment Plant and provides subsequent tertiary treatment to meet applicable Title 22 standards.⁵⁹ The recycled water deliveries began in 1995, and in 1991, the WBMWD Board of Directors authorized the West Basin Recycling Program to recycle 100,000 AFY of wastewater from the Hyperion Treatment Plant. WBMWD distributes the recycled water to retailers in its service area including the cities of Carson, Culver City, El Segundo, Hawthorne, Hermosa Beach, Inglewood, Lawndale, Lomita, Los Angeles, Manhattan Beach, Palos Verdes Estates, Rancho Palos Verdes, Redondo Beach, Rolling Hills, Rolling Hills Estates and Torrance.

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 West Basin 2000 Water Recycling Master Plan is currently being updated for 2005. The Water Recycling Master Plan was prepared in conjunction with various water purveyors and cities within WBMWD's service area, LACSD and WRD.⁶⁰

The City does not currently utilize recycled water to offset its potable water demands. However, future extensions of recycled water pipelines through the City of Torrance (as part of the WBMWD capital project for 2006) will bring recycled water closer to the City of Lomita's service area, providing more opportunity of its potential use.

⁵⁹ West Basin Municipal Water District, 2005 UWMP.

⁶⁰ West Basin Municipal Water District, 2005 UWMP.

The City recognizes the benefits from projects being implemented by WRD and WBMWD to use recycled water to protect the Basin through groundwater recharge and seawater intrusion barrier projects.

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 sewage from the City is conveyed through sewer mains and is routed to the Joint Water Pollution Control Plant (JWPCP) in the City of Carson. The maximum design flow of the JWPCP is 385 MGD and the maximum design peak flow is 540 MGD. Treated wastewater from the JWPCP is disposed into an outfall in the Pacific Ocean located two miles offshore from White Point on the Palos Verdes Peninsula. The depth of the discharge point is approximately 200 feet below sea level.⁶¹ The JWPCP has an advanced primary treatment with 60 percent secondary treatment.

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. Estimates of the wastewater flows in the City's service area are included in Table 8.3-1. The wastewater flows were calculated assuming wastewater flow is equivalent to 80 percent of the water demand. Because all wastewater treated at the JWPCP is discharged to the ocean, none of the City's wastewater is treated to recycled water standards.

**Table 8.3-1
Wastewater Collection Within the City of Lomita Service Area
(AFY)**

	2000	2005	2010	2015	2020	2025	2030
Water Demand	2,800	2,813	2,830	2,900	2,970	3,040	3,120
Wastewater Flow	2,240	2,250	2,265	2,320	2,375	2,430	2,500

Although not used in the City, recycled water for the region comes from the West Basin Water Recycling Plant (WBWRP) located in El Segundo via a 36-inch pipeline. The WBWRP provides additional treatment to secondary-treated wastewater from the City of Los Angeles' Hyperion Wastewater Treatment Plant. The secondary-treated wastewater receives further treatment to meet Title 22 requirements. WBMWD produces five different qualities of recycled water including: 1) Disinfected Tertiary Water, 2) Nitrified Water, 3) Softened Reverse Osmosis Water, 4) Pure Reverse Osmosis, and 5) Ultra-Pure Reverse Osmosis Water.

⁶¹City of Lomita General Plan.

WBMWD distributes recycled water to customer sites in its service area, the City of Torrance, and the City of Los Angeles. WBMWD recycles approximately 24 MGD, or roughly 7.7 percent of the effluent from Hyperion. The remaining secondary treated wastewater is discharged to the ocean.

8.4 RECYCLED WATER PLANNING

Although the City does not currently use recycled water nor is planning to use recycled water in the near future, WBMWD is planning on constructing a recycled water transmission line that has the potential to provide recycled water to City customers. This project is discussed further in the following section.

8.4.1 Potential Uses of Recycled Water

As mentioned previously, WBMWD is pursuing multiple recycled water use projects. Although customers within the City's service area will not benefit directly from these projects, the recycled water in the region will increase, thereby, benefiting the region's reliance on imported water.

The West Basin 2000 Water Recycling Master Plan identified and prioritized areas where the recycled water program could expand. WBMWD projected an increase in recycled water production to 55,500 AFY by 2030 through the West Basin Water Recycling Treatment Plant in El Segundo. Since the 1993 Master Plan, WBMWD has revised their transmission main alignments and in 2000 prepared a Recycled Water Master Plan that identified an additional 1,400 AFY of recycled water demand within the City. These users include such areas as City parks, parkway medians, and multi-use fields.

Currently WBMWD, in conjunction with the U.S Army Corps of Engineers, is constructing the Harbor/South Bay Water Recycling Project. This federally funded project is scheduled for completion in 2010 and is expected to conserve more than 490 MG of portable water annually. The first two laterals of the overall project were constructed in 2003 and included the Victoria Lateral and the California State University at Irvine Dominguez Hills Main Line Extension. Ongoing activities of the Harbor/South Bay Project in 2005 include the design and construction of the Madrona Lateral/Palos Verdes Extension, and the Lateral V. The customers served by the Madrona/Palos Verdes extension will include parks and schools in the City of Torrance, along with several golf courses, parks, schools and a cemetery in the Palos Verdes Peninsula area.⁶² Recycled water is scheduled to be available off of the Madrona Lateral in 2006 and off the Palos Verdes Lateral in 2007.

WBMWD plans on expanding the recycling facility in El Segundo to accommodate for the additional recycled water used in the Harbor/South Bay Project. The expansion project is known as the WBWRP Phase IV Expansion. The WBWRP Phase IV

⁶² West Basin Municipal Water District, 2005 UWMP. June 2005 Draft

Expansion will add 5 MGD of barrier water treatment capacity by the end of 2005 and 10 MGD of Title 22 treatment capacity in 2006 to supply the Harbor/Bay System expansion.

8.4.2 Encouraging Recycled Water Use

WBMWD's marketing efforts have been successful in changing the perception of recycled water from merely a conservation tool with minimal application to a cost-effective business tool. The target customer is expanding from traditional irrigation users such as golf courses to unconventional commercial and industrial users.

WBMWD encourages the use of recycled water by increasing marketing efforts as well as providing financial incentives. Financial incentives include wholesaling recycled water at a rate lower than potable water and funding plumbing retrofits to accept recycled water. WBMWD has projected the increase in regional recycled water demands due to these actions.

WBMWD provides other financial incentives. Some potential recycled water users do not have the financial capability to pay for on-site plumbing retrofits necessary to accept recycled water. WBMWD advances funds for retrofit expenses and are subsequently reimbursed through monthly payments. The on-site facilities fees are amortized over a period of time up to ten-years at WBMWD's cost of funds. Repayment is made using the differential between potable and recycled water rates such that the customer never pays more than the potable rate. Once the loan is repaid, the rate reverts to the current recycled rates.

WBMWD has projected the amount of additional recycled water to be used because of methods to encourage recycled water use within the region. The increase is for the region and included in Table 8.4.2-1.

Table 8.4.2-1
WBMWD Service Area
Methods to Encourage Recycled Water Use
(AFY)

Action	2010	2015	2020	2025	2030
Financial Incentives	6,750	4,500	2,250	2,250	4,500
Marketing Efforts	750	500	250	250	450
Total	7,500	5,000	2,500	2,500	5,000

Source: West Basin Municipal Water District, 2005 UWMP

8.4.3 Optimizing Recycled Water Use

Because the City does not currently use recycled water, the City has not prepared an optimization plan. However, WBMWD is currently updating its 2000 Recycled Water Master Plan which will identify future users of recycled water, including potential users

in the City. WBMWD is also evaluating their Recycled Water Marketing Plan and will consider modifications to better “sell” recycled water.

Another aspect of optimizing recycled water use is continual search for funding opportunities. WBMWD participates in Metropolitan’s LRP and federal and state funding programs for recycled water projects when available.

8.4.4 2000 Projection Comparison to 2005

The City has not used recycled water from 2000 to 2005. Recycled water use was not planned for the year 2005, although future plans may develop based on the City’s needs and the growing recycled water infrastructure planned by WBMWD. Between the City’s 2000 and 2005 Urban Water Management Plans, recycled water use has remained unchanged.

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APPENDIX A

***CALIFORNIA URBAN WATER
MANAGEMENT PLANNING 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.

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APPENDIX B

***2005 DWR 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 Lomita 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
Sec 1, p.1-3 Reference & Page Number

Table 1 Coordination with Appropriate Agencies							
Check at least one box on each row	Participated in developing the plan	Commented on the draft	Attended public meetings	Was contacted for assistance	Was sent a copy of the draft plan	Was sent a notice of intention to adopt	Not Involved / No Information
City of Lomita Water Dept	X	X	X	X	X	X	
City of Lomita Public Works	X	X	X	X	X	X	
City Administrator's Office						X	
Community Development Dept				X		X	
Economic Development Dept				X		X	
Metropolitan				X		X	
West Basin MWD				X		X	
Los Angeles County Sanitation District				X		X	
Interested Public						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 _____ (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 Sec 1, p.1-6 Reference & Page Number
- Population projections were based on data from state, regional or local agency Sec 1, p.1-6 Reference & Page Number

Table 2						
Population - Current and Projected						
	2005	2010	2015	2020	2025	2030 - opt
Service Area Population	21,153	21,700	22,250	22,800	23,400	24,000

- Describe climate characteristics that affect water management Sec 1, p.1-4 Reference & Page Number
- Describe other demographic factors affecting water management Sec 1, p.1-4 Reference & Page Number

Table 3						
Climate						
	January	February	March	April	May	June
Standard Average ETo	1.88	2.24	3.41	4.8	5.58	6.3
Average Rainfall	2.7	2.8	2.1	0.9	0.1	0.1
Average Temperature	66.7	67.6	67.6	70.3	71.8	74.7

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	49.7
Average Rainfall	0	0	0.3	0.3	1.3	2.0	12.6
Average Temperature	78.8	79.9	79.2	76.6	71.2	66.7	72.6

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:						
Metropolitan Water District of Southern California - Imported	2,813	3,000	2,630	2,480	2,380	2,280
Groundwater - West Coast GW Basin	0	1,350	1,350	1,350	1,350	1,350
Total	2,813	4,350	3,980	3,830	3,730	3,630

If Groundwater identified as existing or planned source

(Water Code §10631 (b)(1-4))

- | | | | |
|-------------------------------------|-------------------------------------------------|-----------------------------|-------------------------|
| <input type="checkbox"/> | Has management plan | | Reference & Page Number |
| <input type="checkbox"/> | Attached management plan (b)(1) | | Reference & Page Number |
| <input checked="" type="checkbox"/> | Description of basin(s) (b)(2) | <u>Sec 2, p.2-4</u> | Reference & Page Number |
| <input checked="" type="checkbox"/> | Basin is adjudicated | <u>Sec 2, p.2-4</u> | Reference & Page Number |
| <input checked="" type="checkbox"/> | If adjudicated, attached order or decree (b)(2) | Sec 2, p.2-4 and Appendix F | Reference & Page Number |
| <input checked="" type="checkbox"/> | Quantified amount of legal pumping right (b)(2) | <u>Sec 2, p.2-4</u> | Reference & Page Number |

Table 5 Groundwater Pumping Rights - AF Year	
Basin Name	Pumping Right - AFY
West Coast Groundwater Basin	1,352
Total	1,352

- | | | | |
|-------------------------------------|--------------------------------------------------------------------|---------------------|-------------------------|
| <input checked="" type="checkbox"/> | DWR identified, or projected to be, in overdraft (b)(2) | <u>Sec 2, p.2-5</u> | Reference & Page Number |
| <input checked="" type="checkbox"/> | Plan to eliminate overdraft (b)(2) | <u>Sec 2, p.2-5</u> | Reference & Page Number |
| <input checked="" type="checkbox"/> | Analysis of location, amount & sufficiency, last five years (b)(3) | <u>Sec 2, p.2-6</u> | Reference & Page Number |
| <input checked="" type="checkbox"/> | Analysis of location & amount projected, 20 years (b)(4) | <u>Sec 2, p.2-6</u> | Reference & Page Number |

Table 6 Amount of Groundwater pumped - AFY					
Basin Name (s)	2000	2001	2002	2003	2004
West Coast Groundwater Basin	0	0	0	0	0
% of Total Water Supply	0.00%	0.00%	0.00%	0.00%	0.00%

Table 7 Amount of Groundwater projected to be pumped - AFY					
Basin Name(s)	2010	2015	2020	2025	2030 - opt
West Coast Groundwater Basin	500	750	1,000	1,000	1,000
% of Total Water Supply	11.5%	18.8%	26.1%	26.8%	27.5%

Reliability of Supply

(Water Code §10631 (c) (1-3)

Describes the reliability of the water supply and vulnerability to seasonal or climatic shortage Sec 4,4-1,25 Reference & Page Number

Table 8 Supply Reliability - AF Year					
Average / Normal Water Year	Single Dry Water Year (2010)	Multiple Dry Water Years			
		Year 1 (2007)	Year 2 (2008)	Year 3 (2009)	Year 4 (2010)
Dry Year	5,070.0	3,220.0	4,440.0	4,360.0	4,300.0
Normal Year	4,350.0	3,220.0	4,500.0	4,420.0	4,350.0
% of Normal	116.6%	100.0%	98.7%	98.6%	98.9%

Table 9 Basis of Water Year Data			
Water Year Type	Year	Source name	Source name
Average Water Year	2001	City of Lomita	LA Rainfall
Single-Dry Water Year	2002	WBMWD	
Multiple-Dry Water Years	2002-2004	WBMWD	

Sec 4, p.4-15 Reference & Page Number

Sec 4, p.4-15 Reference & Page Number

Sec 4, p.4-15 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.4-25 Reference & Page Number
- Describe the vulnerability of the water supply to seasonal or climatic shortages Sec 4, p.4-25 Reference & Page Number
- No unreliable sources Sec 4, p.4-25 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 Sec 4, p.4-1,25 Reference & Page Number

Transfer or Exchange Opportunities

(Water Code §10631 (d))

- Describe short term and long term exchange or transfer opportunities Sec 4, p.4-34 Reference & Page Number
- No transfer opportunities Sec 4, p.4-35 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	2,765	1,848	2,781	1,873	2,810	1,850
Multi-family	925	616	927	610	940	610
Commercial/Institutional	393	280	393	280	400	280
Landscape Irrigation	59	42	51	40	50	40
other	9	14	9	10	10	10
Total	4,151	2,800	4,161	2,813	4,210	2,790

TABLE12 (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	2,840	1,890	2,870	1,900	2,910	1,930	2,940	1,950
Multi-family	950	610	960	620	970	630	980	640
Commercial/Institutional	400	280	410	280	410	290	420	290
Landscape Irrigation	50	40	50	40	50	40	50	40
other	10	10	10	10	10	10	10	10
Total	4,250	2,830	4,300	2,850	4,350	2,900	4,400	2,930

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

_____ Reference & Page Number
 _____ Reference & Page Number

Table 13 Sales to Other Agencies - AF Year							
Water Distributed	2000	2005	2010	2015	2020	2025	2030 - opt
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
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	2,800	2,813	2,790	2,830	2,850	2,900	2,930

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))	
<input checked="" type="checkbox"/>	No non-implemented / not scheduled DMMs	<u>Sec 6, p.6-1</u>	Reference & Page Number
<input type="checkbox"/>	Cost-Benefit includes economic and non-economic factors (environmental, social, health, customer impact, and technological factors)	<u> </u>	Reference & Page Number
<input type="checkbox"/>	Cost-Benefit analysis includes total benefits and total costs	<u> </u>	Reference & Page Number
<input type="checkbox"/>	Identifies funding available for Projects with higher per-unit-cost than DMMs	<u> </u>	Reference & Page Number
<input checked="" type="checkbox"/>	Identifies Suppliers' legal authority to implement DMMs, efforts to implement the measures and efforts to identify cost share partners	<u>Sec 6, p.6-1</u>	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, p4-25+</u>	Reference & Page Number
<input checked="" type="checkbox"/>	Timeline for each proposed project	<u>Sec 4, p4-25+</u>	Reference & Page Number
<input checked="" type="checkbox"/>	Quantification of each projects normal yield (AFY)	<u>Sec 4, p4-25+</u>	Reference & Page Number
<input type="checkbox"/>	Quantification of each projects single dry-year yield (AFY)	<u> </u>	Reference & Page Number
<input type="checkbox"/>	Quantification of each projects multiple dry-year yield (AFY)	<u> </u>	Reference & Page Number

Table 17 Future Water Supply Projects					
Project Name	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 No. 5	1,000	1,000	1,000	1,000	1,000

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.4-35 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 (by Metropolitan)	X
Brackish ocean water	
Brackish groundwater	X

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 2, p.4-18 Reference & Page Number
 - Agency provided written demand projections to wholesaler, 20 years Sec 2, p.4-18 Reference & Page Number

Table 19					
Agency demand projections provided to wholesale suppliers - AFY					
Wholesaler	2010	2015	2020	2025	2030 - opt
Metropolitan WD of So Calif	2,290	2,080	1,860	1,900	1,930

- Wholesaler provided written water availability projections, by source, to agency, 20 years Sec 4, p.4-18 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 WD of So Calif	3,000	2,630	2,480	2,380	2,280

- Reliability of wholesale supply provided in writing by wholesale agency Sec 4, 4-12,21 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 (2010)	Year 1 (2007)	Year 2 (2008)	Year 3 (2009)	Year 4 (2010)
Metropolitan WD of So Calif	106.5%	100.0%	98.2%	98.2%	98.2%

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
- Provide the water supply conditions for each stage
- Includes plan for 50 percent supply shortage

- Sec 7, p.7-1 Reference & Page Number
- Sec 7, p.7-2 Reference & Page Number
- Sec 7, p.7-3 Reference & Page Number

Table 23					
Water Supply Shortage Stages and Conditions					
RATIONING STAGES					
Water Supply Conditions	Stage No. (City of Lomita Water Conservation Plan)				
	Phase I	Phase II	Phase III	Phase IV	Phase V
Anticipated Shortage in Water Supply	10%	15%	20%	25%	30%
Conservation Target as a percent of Target Quantity for 1 1/2" Meter or Larger	90%	85%	80%	75%	70%
Conservation Target as a percent of Target Quantity for 1" Meter or Less	90%	85%	80%	75%	70%
	Phase VI	Phase VII	Phase VIII	Phase IX	
Anticipated Shortage in Water Supply	35%	40%	45%	50%	
Conservation Target as a percent of Target Quantity for 1 1/2" Meter or Larger	65%	60%	45%	50%	
Conservation Target as a percent of Target Quantity for 1" Meter or Less	65%	60%	55%	50%	

Three-Year Minimum Water Supply

(Water Code §10632 (b))

- Identifies driest 3-year period
- Minimum water supply available by source for the next three years

- Sec 4, p.4-15 Reference & Page Number
- Sec 7, p.7-8 Reference & Page Number

Table 24 Three-Year Estimated Minimum Water Supply - AF Year						
source**	Normal			Multiple Dry Years		
	2006	2007	2008	2006	2007	2008
Local Supplies	0	0	1,350	0	0	1,350
Imported Supply	3,300	3,320	3,150	3,240	3,260	3,090
Total	3,300	3,320	4,500	3,240	3,260	4,440

Preparation for catastrophic water supply interruption

(Water Code §10632 (c))

Provided catastrophic supply interruption plan

Sec 7, p.7-8 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.7-10 Reference & Page Number

Table 26 Mandatory Prohibitions	
Examples of Prohibitions	Stage When Prohibition Becomes Mandatory
Hosing or washing sidewalks, walkways, driveways	City of Lomita determination in event of a drought
Landscape watering between specific hours	City of Lomita determination in event of a drought
Excessive irrigation to cause run-off into adjacent streets, parking lots, alley	City of Lomita determination in event of a drought
Indoor & outdoor plumbing repaired immediately	City of Lomita determination in event of a drought
Washing of motor vehicles, boats, trailers	City of Lomita determination in event of a drought
Restaurant water service unless requested	City of Lomita determination in event of a drought
Water used in decorative fountains must flow through recycling system	City of Lomita determination in event of a drought
Use of a hose for car washing, lawn watering prohibited unless an automatic shut off nozzle on the hose is used	City of Lomita determination in event of a drought

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 (%)
Landscape Watering Restrictions	Phase I-IX	10%-50%
Construction Meter Restrictions	Phase I-IX	10%-50%
Other Restrictions	Phase I-IX	10%-50%

Penalties**(Water Code § 10632 (f))**

List excessive use penalties or charges for excessive use

Sec 7, p.7-11 Reference & Page Number

Table 28 Penalties and Charges	
Penalties or Charges	Stage When Penalty Takes Effect
\$100 dollar fine	First Violation
\$200 dollar fine	Second Violation
\$500 dollar fine	Third Violation

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

Describe how actions and conditions impact revenues

Sec 7, p.7-11 Reference & Page Number

Describe how actions and conditions impact expenditures

Sec 7, p.7-11 Reference & Page Number

Describe measures to overcome the revenue and expenditure impacts

Sec 7, p.7-11 Reference & Page Number

Table 29 Proposed measures to overcome revenue impacts	
Names of measures	Check if Discussed
Phased Water Conservation Plan	X

Table 30 Proposed measures to overcome expenditure impacts	
Names of measures	Check if Discussed
Phased Water Conservation Plan	X

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

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

Sec 7, p.7-11 Reference & Page Number

Reduction Measuring Mechanism

(Water Code § 10632 (i))

Provided mechanisms for determining actual reductions

Sec 7, p.7-12 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 Officer activities	Monitored effectiveness

Recycling Plan Agency Coordination

Water Code § 10633

Describe the coordination of the recycling plan preparation information to the extent available

Sec 8, p.8-1 Reference & Page Number

Table 32 Participating agencies	
	participated
Water agencies	WBMWD
Wastewater agencies	LACSD
Groundwater agencies	WRD
Planning Agencies	

Wastewater System Description

(Water Code § 10633 (a))

Describe the wastewater collection and treatment systems in the supplier's service area

Sec 8, p.8-2 Reference & Page Number

Quantify the volume of wastewater collected and treated

Sec 8, p.8-2 Reference & Page Number

Table 33 Wastewater Collection and Treatment - AF Year						
Type of Wastewater	2005	2010	2015	2020	2025	2030
Water Demand	2,813	2,830	2,900	2,970	3,040	3,120
Wastewater Flow	2,250	2,265	2,320	2,375	2,430	2,500

Wastewater Disposal and Recycled Water Uses

(Water Code § 10633 (a - d))

- Describes methods of wastewater disposal Sec 8, p.8-2 Reference & Page Number
- Describe the current type, place and use of recycled water Sec 8, p.8-2 Reference & Page Number
- None Sec 8, p.8-2 Reference & Page Number
- Describe and quantify potential uses of recycled water Sec 8, p.8-2 Reference & Page Number

Table 34							
Disposal of wastewater (non-recycled) AF Year							
Method of disposal	Treatment Level	2005	2010	2015	2020	2025	2030 - opt
Ocean Disposal	Primary	2,250	2,265	2,320	2,375	2,430	2,500
Name of method							
Name of method							
Name of method							
Total		2,250	2,265	2,320	2,375	2,430	2,500

Table 35							
Recycled Water Uses - Actual and Potential (AFY)							
User type	Treatment Level	2005	2010	2015	2020	2025	2030 - opt
Agriculture					Potential Based on Transmission Line		
Landscape	Tertiary and 4 others qualities	0	0	1,400	1,400	1,400	1,400
Wildlife Habitat							
Wetlands							
Industrial							
Groundwater Recharge							
Other (user type)							
Other (user type)							
Total		0	0	1,400	1,400	1,400	1,400

- Determination of technical and economic feasibility of serving the potential uses Sec 8, p.8-2/4 Reference & Page Number

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					
	2010	2015	2020	2025	2030 - opt
Projected use of Recycled Water	0	0	0	0	0

- Compare UWMP 2000 projections with UWMP 2005 actual (§ 10633 (e)) Sec 8, p.8-5 Reference & Page Number
- None Sec 8, p.8-5 Reference & Page Number

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

Plan to Optimize Use of Recycled Water

(Water Code § 10633 (f))

- Describe actions that might be taken to encourage recycled water uses Sec 8, p.8-4 Reference & Page Number
- 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

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 (in entire WBMWD service area)	6,750	4,500	2,250	2,250	4,500
Marketing Efforts (in entire WBMWD service area)	750	500	250	250	450
Total	7,500	5,000	2,500	2,500	4,950

Provide a recycled water use optimization plan which includes actions to facilitate the use of Sec 8, p.8-4 Reference & Page Number recycled water (dual distribution systems, promote recirculating uses)

Water quality impacts on availability of supply

(Water Code §10634)

Discusses water quality impacts (by source) upon water management strategies and supply reliability Sec 3, p.3-9 Reference & Page Number

No water quality impacts projected

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.4-18 Reference & Page Number

Table 40 Projected Normal Water Supply - AF Year					
(from table 4)	2010	2015	2020	2025	2030 - opt
Supply	4,350	3,980	3,830	3,730	3,630
% of Normal Year	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	2,790	2,830	2,860	2,900	2,930
% of year 2004	99.2%	100.6%	101.7%	103.1%	104.2%

Table 42 Projected Supply and Demand Comparison - AF Year					
	2010	2015	2020	2025	2030 - opt
Supply totals	4,350	3,980	3,830	3,730	3,630
Demand totals	2,790	2,830	2,860	2,900	2,930
Difference	1,560	1,150	970	830	700
Difference as % of Supply	35.9%	28.9%	25.3%	22.3%	19.3%
Difference as % of Demand	55.9%	40.6%	33.9%	28.6%	23.9%

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.4-19 Reference & Page Number

Table 43 Projected single dry year Water Supply - AF Year					
	2010	2015	2020	2025	2030 - opt
Supply	5,070	4,820	4,680	4,340	4,070
% of projected normal	116.6%	121.1%	122.2%	116.4%	112.1%

Table 44 Projected single dry year Water Demand - AF Year					
	2010	2015	2020	2025	2030 - opt
Demand	2,820	2,860	2,890	2,930	2,960
% of projected normal	101.1%	101.1%	101.0%	101.0%	101.0%

Table 45 Projected single dry year Supply and Demand Comparison - AF Year					
	2010	2015	2020	2025	2030 - opt
Supply totals	5,070	4,820	4,680	4,340	4,070
Demand totals	2,820	2,860	2,890	2,930	2,960
Difference	2,250	1,960	1,790	1,410	1,110
Difference as % of Supply	44.4%	40.7%	38.2%	32.5%	27.3%
Difference as % of Demand	79.8%	68.5%	61.9%	48.1%	37.5%

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.4-20 Reference & Page Number

Table 46 Projected supply during multiple dry year period ending in 2010 - AF Year					
	2006	2007	2008	2009	2010
Supply	3,300	3,220	4,440	4,360	4,300
% of projected normal	100.0%	100.0%	98.7%	98.6%	98.6%

Table 47 Projected demand multiple dry year period ending in 2010 - AFY					
	2006	2007	2008	2009	2010
Demand	2,760	2,770	2,810	2,790	2,880
% of projected normal	100.0%	100.0%	101.0%	100.3%	103.2%

Table 48 Projected Supply and Demand Comparison during multiple dry year period ending in 2010- AF Year					
	2006	2007	2008	2009	2010
Supply totals	3,300	3,220	4,440	4,360	4,300
Demand totals	2,760	2,770	2,810	2,790	2,880
Difference	540	450	1,630	1,570	1,420
Difference as % of Supply	16.4%	14.0%	36.7%	36.0%	33.0%
Difference as % of Demand	19.6%	16.2%	58.0%	56.3%	49.3%

X

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.4-21 Reference & Page Number

Table 49					
Projected supply during multiple dry year period ending in 2015 - AF Year					
	2011	2012	2013	2014	2015
Supply	4,280	4,200	4,320	4,230	4,160
% of projected normal	100.0%	100.0%	104.6%	104.4%	104.5%

Table 50					
Projected demand multiple dry year period ending in 2015 - AFY					
	2011	2012	2013	2014	2015
Demand	2,800	2,810	2,840	2,830	2,920
% of projected normal	100.0%	100.0%	101.0%	100.3%	103.2%

Table 51					
Projected Supply and Demand Comparison during multiple dry year period ending in 2015- AF Year					
	2011	2012	2013	2014	2015
Supply totals	4,280	4,200	4,320	4,230	4,160
Demand totals	2,800	2,810	2,840	2,830	2,920
Difference	1,480	1,390	1,480	1,400	1,240
Difference as % of Supply	34.6%	33.1%	34.3%	33.1%	29.8%
Difference as % of Demand	52.9%	49.5%	52.1%	49.5%	42.5%

X

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

Sec 4, p.4-22 Reference & Page Number

Table 52					
Projected supply during multiple dry year period ending in 2020 - AF Year					
	2016	2017	2018	2019	2020
Supply	3,950	3,920	3,970	3,940	3,910
% of projected normal	100.0%	100.0%	102.1%	102.1%	102.1%

Table 53					
Projected demand multiple dry year period ending in 2020 - AFY					
	2016	2017	2018	2019	2020
Demand	2,830	2,840	2,880	2,860	2,950
% of projected normal	100.0%	100.0%	101.0%	100.3%	103.2%

Table 54					
Projected Supply and Demand Comparison during multiple dry year period ending in 2020- AF Year					
	2016	2017	2018	2019	2020
Supply totals	3,950	3,920	3,970	3,940	3,910
Demand totals	2,830	2,840	2,880	2,860	2,950
Difference	1,120	1,080	1,090	1,080	960
Difference as % of Supply	28.4%	27.6%	27.5%	27.4%	24.6%
Difference as % of Demand	39.6%	38.0%	37.8%	37.8%	32.5%

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

Sec 4, p.4-23 Reference & Page Number

Table 55					
Projected supply during multiple dry year period ending in 2025 - AF Year					
	2021	2022	2023	2024	2025
Supply	3,810	3,790	3,830	3,810	3,790
% of projected normal	100.0%	100.0%	101.6%	101.6%	101.6%

Table 56					
Projected demand multiple dry year period ending in 2025 - AFY					
	2021	2022	2023	2024	2025
Demand	2,870	2,880	2,910	2,900	2,990
% of projected normal	100.0%	100.0%	101.0%	100.3%	103.2%

Table 57 Projected Supply and Demand Comparison during multiple dry year period ending in 2025- AF Year					
	2021	2022	2023	2024	2025
Supply totals	3,810	3,790	3,830	3,810	3,790
Demand totals	2,870	2,880	2,910	2,900	2,990
Difference	940	910	920	910	800
Difference as % of Supply	24.7%	24.0%	24.0%	23.9%	21.1%
Difference as % of Demand	32.8%	31.6%	31.6%	31.4%	26.8%

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 Appendix D 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 Appendix D 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

***2005 DWR 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 1992 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 surveys	24	24	24	24	24
actual expenditures - \$	\$4,900	\$4,900	\$4,900	\$4,900	\$4,900
actual water savings - AFY	0.6	0.6	0.6	0.6	0.6

Table A2					
Planned	2006	2007	2008	2009	2010
# of surveys	24	24	24	24	24
projected expenditures - \$	\$4,900	\$4,900	\$4,900	\$4,900	\$4,900
projected water savings - AFY	0.6	0.6	0.6	0.6	0.6

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
West 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.6-2 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					
Actual	1992-2001	2002	2003	2004	2005
# of single family devices					
# of multi-family devices					
actual expenditures - \$					
actual water savings - AFY					

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
West 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.6-3 Reference & Page Number

Year program started 1992 or Year program scheduled to start _____

Describes steps necessary to implement measure Sec 6, p.6-3 Reference & Page Number

Year of last complete audit Continual Year of next complete audit _____

Actual	2001	2002	2003	2004	2005
% of unaccounted water	7%	7%	7%	7%	7%
miles of mains surveyed	41	41	41	41	7
miles of lines repaired	0.25	0.25	0.25	0.25	2
actual expenditures - \$	\$565,000	\$565,000	\$565,000	\$565,000	2.7 million
actual water savings - AFY					

Planned	2006	2007	2008	2009	2010
% of unaccounted water	7%	7%	7%	7%	7%
miles of mains surveyed	7	7	7	7	7
miles of lines repaired	2	2	2	2	2
projected expenditures - \$	2.7 million				
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.6-4 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
West 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.6-4 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

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.6-4 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 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.6-4 Reference & Page Number

Year program started _____ or Year program scheduled to start _____

Describes steps necessary to implement measure Sec 6, p.6-4/5 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	2001	2002	2003	2004	2005
# of budgets developed					
# of surveys completed					
# of follow-up visits					
actual expenditures - \$					
actual water savings - AFY					

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.6-4/5 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.6-4/5 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))

- 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 E3 - 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
West 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 Sec 6, p.6-5 Reference & Page Number
 implementation (10631 (f) (1)(2))
 Year program started 2003 or Year program scheduled to start _____
 Other agencies offer rebates Yes, WBMWD Cost-effectiveness calcs attached _____

- Describes steps necessary to implement measure Sec 6, p.6-5/6 Reference & Page Number

Table F1			
Actual	2003	2004	Total
\$ per rebate	\$110	\$110	\$110
Total # of Rebates in WBMWD Service Area	104	602	706
Total Water Savings (AFY)	2	9	11
# of Rebates in City's Service Area	15	44	59
Water Savings in City's Service Area (AF)	0.2	0.7	0.9

Table F2						
Planned	2005	2006	2007	2008	2009	2010
\$ per Rebate	\$100	\$100	\$100	\$100	\$100	\$100
# of Rebates in City's Service Area per Year	25	25	25	25	25	25
Water Savings in City's Service Area (AFY)	0.11	0.11	0.11	0.11	0.11	0.11

Describe the methods, if any, used to evaluate the effectiveness of this demand management measure (10631 (f)(3)) Sec 6, p.6-6 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.6-6 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
West 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)) Sec 6, p.6-6 Reference & Page Number

Year program started _____ or Year program scheduled to start _____

Describes steps necessary to implement measure Sec 6, p.6-6 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					
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.6-7 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 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
West Basin Municipal Water District

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))

Sec 6, p.6-7 Reference & Page Number

Year program started 2003 or Year program scheduled to start _____

Describes steps necessary to implement measure

Sec 6, p.6-7 Reference & Page Number

Table H1	No. of class presentations						
	Actual	FY 2000-01	FY 2001-02	FY 2002-03	FY 2003-04	FY 2004-05	Total
Grades K-3rd		240	250	480	690	1,014	2,674
Grades 4th-6th		350	575	450	690	1,632	3,697
Grades 7th-8th		70	36	150	120	876	1,252
High School		0	70	30	30	174	304
Total		660	931	1,110	1,530	3,696	7,927

Table H2		No. of class presentations			
Actual	FY 2005-06	FY 2006-07	FY 2007-08	FY 2008-09	FY 2009-10
Grades 4th-6th	25 students	25 students	25 students	25 students	25 students
Grades 7th-8th	25 students	25 students	25 students	25 students	25 students

- Describe the methods, if any, used to evaluate the effectiveness of this demand management measure (10631 (f)(3)) Sec6,p.6-7-10 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
West 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.6-10 Reference & Page Number
- Year program started 2000 or Year program scheduled to start _____
- Describes steps necessary to implement measure Sec 6, p.6-5 Reference & Page Number
- # of Commercial accounts _____ # of Industrial accounts _____ # of Institutional accounts _____

Table I1						
Actual	2000	2001	2002	2003	2004	2005
# of HECW	24	24	24	24	24	
# of Water Brooms	2	2	2	2	2	
# of ULFTs	10	10	10	10	10	
Water Saving Urinals	6	6	6	6	6	
Water Savings (AFY)	3.7	3.7	3.7	3.7	3.7	

Table I2					
Planned	2006	2007	2008	2009	2010
# of HECW					
# of Water Brooms					
# of ULFTs					

- Describe the methods, if any, used to evaluate the effectiveness of this demand management measure (10631 (f)(3)) Sec 6, p.6-11 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.6-11 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
West Basin Municipal Water District

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)

Implementation

(Section 10631 (f) & (h))

Describe demand management measure currently being implemented or scheduled for implementation (10631 (f) (1)(2)) Sec 6, p.6-10 Reference & Page Number

Year program started 2000 or Year program scheduled to start _____

Describes steps necessary to implement measure _____ Reference & Page Number

Table I4					
Actual	2001	2002	2003	2004	2005
# of commercial replacements					
# of industrial replacements					
# of institutional replacements					
actual expenditures - \$					
actual water savings - AFY					

Table I5					
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)) _____ 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))

Table I6 - 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
West Basin Municipal Water District

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.6-12 Reference & Page Number

- Describes steps necessary to implement measure

Sec 6, p.6-12 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)) _____ 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 J3 - 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
West 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.6-12 Reference & Page Number
- Year program started _____ or Year program scheduled to start _____ 2006
- Agency provides sewer service
- Describes steps necessary to implement measure Sec 6, p.6-12 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
West Basin Municipal Water District

Water Conservation Coordinator (10631 (f)(1)(l))

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 1992 or Year program scheduled to start _____

Describes steps necessary to implement measure Sec 6, p.6-12 Reference & Page Number

Actual	2001	2002	2003	2004	2005
# of full-time positions					
# of full/part-time staff	1	1	1	1	1
actual expenditures - \$					

Planned	2006	2007	2008	2009	2010
# of full-time positions					
# of full/part-time staff	1	1	1	1	1
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))

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
West 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.6-13 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

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)) _____ 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
West Basin Municipal Water District

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.6-13 Reference & Page Number
 Year program started 2000 or Year program scheduled to start _____
 # of SF pre-1992 accounts _____

- Describes steps necessary to implement measure Sec 6, p.6-13 Reference & Page Number

Table N1	Single-Family				
Actual	2000	2001	2002	2003	2004
ULFTs	706	706	706	706	706
Single Family Rebates	9	9	9	9	9
Multi-Family Rebates	7	7	7	7	7
actual expenditures - \$					
actual water savings - AFY	22	22	22	22	22

Table N2	Single-Family				
Planned	2006	2007	2008	2009	2010
ULFTs					
Single Family Rebates					
Multi-Family Rebates					
actual expenditures - \$					
actual water savings - AFY					

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.6-13 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))

- 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
West Basin Municipal Water District

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

***PUBLIC HEARING NOTICE AND DECEMBER 19, 2005
MINUTE ORDER FOR URBAN WATER MANAGEMENT
PLAN ADOPTION***

CITY COUNCIL

SUSAN DEVER
MAGARET ESTRADA
DON SUMINAGA
BARRY WAITE
MARK WARONEK



ADMINISTRATION

TOM A. ODOM
CITY ADMINISTRATOR

DAWN TOMITA
CITY CLERK

CITY OF LOMITA

Public Notice

NOTICE IS HEREBY GIVEN that the Lomita City Council will hold a public hearing and receive public comment on the 2005 Urban Water Management Plan (2005 UWMP), prior to approval and adoption of the 2005 UWMP.

Said Hearing is scheduled for Monday, December 19, 2005 at 7:00 p.m., in the City Council Chambers of Lomita City Hall, 24300 Narbonne Avenue. Interested citizens should attend.

Should you require further information in regards to the 2005 UWMP, please contact Glen W.C. Kau, Public Works Director/City Engineer at (310) 325-7110, extension 124.

Dawn Tomita
City Clerk

December 7, 2005

CITY COUNCIL

SUSAN Y. DEVER
MARGARET ESTRADA
DON SUMINAGA
BARRY WAITE
MARK A. WARONEK



CITY OF LOMITA

ADMINISTRATION

TOM A. ODOM
CITY ADMINISTRATOR

DAWN TOMITA
CITY CLERK

PUBLIC HEARINGS

7. URBAN WATER MANAGEMENT PLAN

Director of Public Works Kau stated that the California Water Management Planning Act as amended requires urban water suppliers to develop an Urban Water Management Plan (UWMP) every five years in the years ending in zero and five. The act requires urban water suppliers to prepare plans that describe and evaluate reasonable and practical efficient water uses, recycling and conservation activities, which provides long term resource planning to ensure adequate and reliable water supplies.

Mayor Suminaga opened the public hearing.

There being no one wishing to speak, the public hearing was closed.

Councilmember Waite moved to approve and adopt the 2005 Urban Water Management Plan and its recommendation and submit the Plan to the State of California.

Councilmember Waronek seconded the motion which carried by the following roll call vote:

AYES: COUNCILMEMBERS: Dever, Estrada, Waite, Waronek and
Mayor Suminaga

NOES: COUNCILMEMBERS: None

I HEREBY CERTIFY that the foregoing is a true and correct copy of minutes of a City Council meeting held on December 19, 2005.



Dawn Tomita
Dawn Tomita, City Clerk



APPENDIX E

REFERENCES

City of Lomita
2005 Urban Water Management Plan

REFERENCES

-
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- Water Replenishment District of Southern California [On-line],
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http://www.westbasin.org/service_area.php

APPENDIX F

WEST COAST BASIN JUDGMENT



West Coast Basin Judgment

California Water Service Company, et al. vs. City of Compton, et al.

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INTRODUCTION

The above - entitled matter came on regularly for further trial before the Honorable George Francis, Judge of the Superior Court of the State of California, assigned by the Chairman of the Judicial Council to sit in this case on Friday the 21st day of July, 1961. Thereupon plaintiffs filed a dismissal of the action as to certain defendants named in the Complaint and in the Amended Complaint herein who are not mentioned or referred to in Paragraph III of this Judgment, and the further trial of the action proceeded in respect to the remaining parties.

The objections to the Report of Referee and to all supplemental Reports thereto, having been considered upon exceptions thereto filed with the Clerk of the Court in the manner of and within the time allowed by law, were overruled.

Oral and documentary evidence was introduced, and the matter was submitted to the Court for decision. Findings of Fact, Conclusions of Law and Judgment herein 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 under said Judgment is currently assigned to the HONORABLE JULIUS M. TITLE.

The motion of defendant herein, DOMINGUEZ WATER CORPORATION, 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 48 of the above-entitled Court on March 21, 1980, at 1:30 o'clock P.M., before said HONORABLE JULIUS M. TITLE. Defendant, DOMINGUEZ WATER CORPORATION, was represented by its attorneys, Helm, Budinger & Lemieux, and Ralph B. Helm. Various other parties were represented by counsel of record appearing on the Clerk's records. Hearing thereon was concluded on that date. The within "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, it 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.

NOW, THEREFORE, IT IS HEREBY ORDERED, ADJUDGED AND DECREED AS FOLLOWS:

I. Existence of Basin and Boundaries Thereof.

There exists in the County of Los Angeles, State of California, an underground water basin or reservoir known and hereinafter referred to as "West Coast Basin", "West Basin" or the "Basin", and the boundaries thereof are described as follows:

Commencing at a point in the Baldwin Hills about 1300 feet north and about 100 feet west of the intersection of Marvale Drive and Northridge Drive; thence through a point about 200 feet northeasterly along Northridge Drive from the intersection of Marvale and Northridge Drives to the base of the escarpment of the Potrero fault; thence along the base of the escarpment of the Potrero fault in a straight line passing through a point about 200 feet south of the intersection of Century and Crenshaw Boulevards and extending about 2650 feet beyond this point to the southerly end of the Potrero escarpment; thence from the southerly end of the Potrero escarpment in a line passing about 700 feet south of the intersection of Western Avenue and Imperial Boulevard and about 400 feet north of the intersection of El Segundo Boulevard and Vermont Avenue and about 1700 feet south of the intersection of El Segundo Boulevard

and Figueroa Street to the northerly end of the escarpment of the Avalon-Compton fault at a point on said fault about 700 feet west of the intersection of Avalon Boulevard and Rosecrans Avenue; thence along the escarpment of the Avalon-Compton fault to a point in the Dominguez Hills located about 1300 feet north and about 850 feet west of the intersection of Central Avenue and Victoria Street; thence along the crest of the Dominguez Hills in a straight line to a point on Alameda Street about 2900 feet north of Del Amo Boulevard as measured along Alameda Street; thence in a straight line extending through a point located on Del Amo Boulevard about 900 feet west of the Pacific Electric Railway to a point about 100 feet north and west of the intersection of Bixby Road and Del Mar Avenue; thence in a straight line to a point located about 750 feet west and about 730 feet south of the intersection of Wardlow Road and Long Beach Boulevard at the escarpment of the Cherry Hill fault; thence along the escarpment of the Cherry Hill fault through the intersection of Orange Avenue and Willow Street to a point about 400 feet east of the intersection of Walnut and Creston Avenues; thence to a point on Pacific Coast Highway about 300 feet west of its intersection with Obispo Avenue; thence along Pacific Coast Highway easterly to a point located about 650 feet west of the intersection of the center line of said Pacific Coast Highway with the intersection of the center line of Lakewood Boulevard; thence along the escarpment of the Reservoir Hill fault to a point about 650 feet north and about 700 feet east of the intersection of Anaheim Street and Ximeno Avenue; thence along the trace of said Reservoir Hill fault to a point on the Los Angeles - Orange County line about 1700 feet northeast of the Long Beach City limit measured along the County line; thence along said Los Angeles - Orange County line in a southwesterly direction to the shore line of the Pacific Ocean; thence in a northerly and westerly direction along the shore line of the Pacific Ocean to the intersection of said shore line with the southerly end of the drainage divide of the Palos Verdes Hills; thence along the drainage divide of the Palos Verdes Hills to the intersection of the northerly end of said drainage divide with the shore line of the Pacific Ocean; thence northerly along the shore line of the Pacific Ocean to the intersection of said shore line with the westerly projection of the crest of the Ballona escarpment; thence easterly along the crest of the Ballona escarpment to the mouth of Centinela Creek; thence easterly from the mouth of Centinela Creek across the Baldwin Hills in a line encompassing the entire watershed of Centinela Creek to the point of beginning.

All streets, railways and boundaries of Cities and Counties hereinabove referred to are as the same existed at 12:00 o'clock noon on August 20, 1961.

The area included within the foregoing boundaries is approximately 101,000 acres in extent.

II. Definitions:

1. Basin, West Coast Basin and West Basin, as these terms are interchangeably used herein, mean the ground water basin underlying the area described in Paragraph I hereof.
2. A fiscal year, as that term is used herein, is a twelve month period beginning July 1 and ending June 30.
3. A water purveyor, as that term is used in Paragraph XII hereof, means a party which sells water to the public, whether a regulated public utility, mutual water company or public entity, which has a connection or connections for the taking of imported water through The Metropolitan Water District of Southern California, through West Basin Municipal Water District, or access to such imported water through such connection, and which normally supplies at least a part of its customers' water needs with such imported water.
4. A water year, as that term is used herein, is a twelve month period beginning October 1 and ending September 30, until it is changed to a "fiscal year," as provided in Paragraph XVI hereof.

III. Declaration of Rights - Water Rights Adjudicated.

Certain of the parties to this action have no right to extract water from the Basin. The name of each of said parties is listed below with a zero following his name, and the absence of such right in said parties is hereby established and declared. Certain of the parties to this action and/or their successors in interest (through September 30, 1978) are the owners of rights to extract water from the Basin, which rights are of the same legal force and effect and without priority with reference to each other, and the amount of such rights, stated in acre-feet per year, hereinafter referred to as "Adjudicated Rights" is listed below following such parties' names, and the rights of the last-mentioned parties are hereby declared and established accordingly. Provided, however, that the Adjudicated Rights so declared and established shall be subject to the condition that the water, when used, shall be put to beneficial use through reasonable methods of use and reasonable methods of diversion; and provided further that the exercise of all of said Rights shall be subject to a pro rata reduction, if such reduction is required, to preserve said Basin as a common source of water supply.

IV. Adjudicated Rights Transferable.

Any rights decreed and adjudicated herein may be transferred, assigned, licensed or leased by the owner thereof provided, however, that no such transfer shall be complete until compliance with the appropriate notice procedures established by the Watermaster herein.

Rights adjudicated herein which are temporarily transferred, licensed or leased shall be considered the production from the Basin on behalf of such transferee, licensee or lessee which next follows his production of released exchange pool water, if any.

V. Physical Solution - Carry-over, Excess Production and Drought Carry-over.

1. *Carry-over.* In order to add flexibility to the operation of this Judgment and to assist in a physical solution to meet the water requirements in the West Basin, each of the parties to this action who is adjudged in Paragraph III hereof to have an Adjudicated Right and who, during a water year, does not extract from the Basin all of such party's Adjudicated Right, is permitted to carry over from such water year the right to extract from the Basin in the next succeeding water year an amount of water equivalent to the excess of his Adjudicated Right over his extraction during said water year not to exceed, however, 10% of such party's Adjudicated Right or two acre-feet, whichever is the larger.
2. *Excess Production.* In order to meet possible emergencies, each of the parties to this action who is adjudged in paragraph III hereof to have an Adjudicated Right is permitted to extract from the Basin in any water year for beneficial use an amount in excess of each such party's Adjudicated Right not to exceed 2 acre-feet or ten per cent (10%) of such party's Adjudicated Rights, whichever is the larger, and in addition thereto, such greater amount as may be approved by the Court. If such greater amount is recommended by the Watermaster, such order of Court may be made *ex parte*. Each such party so extracting water in excess of his Adjudicated Rights shall be required to reduce his extractions below his Adjudicated Rights by an equivalent amount in the water year next following. Such requirement shall be subject to the proviso that in the event the Court determines that such reduction will impose upon such a party, or others relying for water service upon such party, an unreasonable hardship, the Court may grant an extension of time within which such party may be required to reduce his extractions by the amount of the excess theretofore extracted by such party. If such extension of time is recommended by the Watermaster, such order of Court may be granted *ex parte*.
3. *Drought Carry-over.* By reason of this Court's Orders dated June 2, 1977, and September 29, 1977, for the water years 1976-77 and 1977-78 any party herein (including any successor in interest) can "carry-over" until utilized, any Adjudicated Right (including any authorized carry-over rights from prior years) unexercised during said water years.

VI. Physical Solution - Exchange Pool Provisions.

As a further part of said physical solution herein imposed:

1. *Mandatory Offer to Exchange Pool.* Not less than sixty (60) days prior to the beginning of each water year, each party having supplemental water available to him through then existing facilities, other than water which any such party has the right to extract hereunder, shall file with the Watermaster the offer of such party to release to the Exchange Pool the amount by which such party's Adjudicated Right exceeds one-half of the estimated total required use of water by such party during the ensuing water year, provided that the amount required to be so offered for release shall not exceed the amount such party can replace with supplemental water so available to him.

(a) *Basis of Offer to Exchange Pool - Redetermination of Offer by Watermaster.* Such estimate of total required use and such mandatory offer shall be made in good faith and shall state the basis on which the offer is made, and shall be subject to review and redetermination by the Watermaster, who may take into consideration the prior use by such party for earlier water years and all other factors indicating the amount of such total required use and the availability of replacement water.

(b) *Voluntary Offer to Exchange Pool.* Any party filing an offer to release water under the mandatory provisions of this Paragraph VI may also file a voluntary offer to release any part or all of any remaining amount of water which such party has the right under this Judgment to pump or otherwise extract from the Basin, and any party who is not required to file an offer to release water may file a voluntary offer to release any part or all of the amount of water which such party has the right under this Judgment to pump or otherwise extract from the basin. All such voluntary offers shall be made not less than sixty (60) days prior to the beginning of each water year.

2. *Price of Water Offered to Exchange Pool.* Each offer to release water under the foregoing subparagraph [1 (a) and 1 (b)] shall be the price per acre-foot declared and determined at the time of the filing of such offer by the releasing party; provided:

(a) *Replacement Cost.* That such price per acre-foot shall not exceed the price which the releasing party would have to pay to obtain from others, in equal monthly amounts, through existing facilities, a quantity of supplemental water equal in amount to that offered to be released; *or*

(b) *Maximum Price.* If any such releasing party has no existing facilities through which to obtain water from others, such price shall not exceed the sum of the price per acre-foot charged by the Metropolitan Water District of Southern California to West Basin Municipal Water District plus the additional amount per acre-foot charged by the latter to municipalities and public utilities for water received from said Metropolitan Water District.

3. *Price Dispute -Objection - Watermaster Determination Court Determination.* In the event of a dispute as to any price at which is offered for release, any party affected thereby may, within thirty (30) days thereafter, by an objection in writing, refer the matter to the Watermaster for determination. Within thirty (30) days after such objection is filed the Watermaster shall consider said objection and shall make his finding as to the price at which said water should be offered for release and notify all interested parties thereof. Any party in compliance to these Exchange Pool Provisions may file with the Court, within thirty (30) days thereafter, any objection to such finding or determination 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 each of the interested parties. The Court may affirm, modify, amend or overrule such finding or determination of the Watermaster. Pending such determination if the water so offered has been allocated, the party making the offer shall be paid the price declared in his offer, subject to appropriate adjustment upon final determination. The costs of such determination shall be apportioned or assessed by the Watermaster in his discretion between or to the parties to such dispute, and the Watermaster shall

have the power to require, at any time prior to making such determination, any party or parties to such dispute to deposit with the Watermaster funds sufficient to pay the cost of such determination, subject to final adjustment and review by the Court as provided in this Paragraph.

4. *Request for Water From Exchange Pool.* Not less than sixty (60) days prior to the beginning of each water year any party whose estimated required use of water during the ensuing water year exceeds the sum of the quantity of water which such party has the right under this Judgment to extract from the Basin and the quantity available to him through then existing facilities, may file with the Watermaster a request for the release of water in the amount that his said estimated use exceeds his said available supply. Such request shall be made in good faith and shall state the basis upon which the request is made, and shall be subject to review and redetermination by the Watermaster. Within thirty (30) days thereafter the Watermaster shall advise, in writing, those requesting water of the estimated price thereof. Any party desiring to amend his request by reducing the amount requested may do so after the service of such notice. Prior to the first day of each water year the Watermaster shall determine if sufficient water has been offered to satisfy all requests. If he determines that sufficient water has not been offered he shall reduce such requests pro rata in the proportion that each request bears to the total of all requests. Thereupon, not later than said first day of each water year, he shall advise all parties offering to release water of the quantities to be released by each and accepted in the Exchange Pool and the price at which such water is offered. Simultaneously, he shall advise all parties requesting water of the quantities of released water allocated from the Exchange Pool and to be taken by each requesting party and the price to be paid therefor.
5. *Allocation of Exchange Pool Water by Watermaster.* In allocating water which has been offered for release to the Exchange Pool under subparagraph 1 hereof, the Watermaster shall first allocate that water required to be offered for release and which is offered at the lowest price pursuant to subparagraph 2 hereof, and progressively thereafter at the next lowest price or prices. If the aggregate quantity of water required to be released is less than the aggregate quantity of all requests for the release of water made pursuant to subparagraph 4 hereof, he shall then allocate water voluntarily offered for release and which is offered at the lowest price and progressively thereafter at the next lowest price or prices, provided that the total allocation of water shall not exceed the aggregate of all such requests.

Any water offered for release under subparagraph 1 hereof and not accepted in the Exchange Pool and not allocated therefrom shall be deemed not to have been offered for release and may be extracted from the Basin by the party offering the same as if such offer had not been made.

Each party requesting the release of water for his use and to whom released water is allocated from the Exchange Pool may thereafter, subject to all of the provisions of this Judgment, extract such allocated amount of water from the Basin, in addition to the amount such party is otherwise entitled to extract hereunder during the water year for which the allocation is made.

6. *Exchange Pool Water Pumped Before Pumper's Own Right.* From and after the first day of each water year, all water extracted from the Basin by any party requesting the release of water and to whom such water is allocated shall be deemed to have been water so released until the full amount released for use by him shall have been taken, and no such party shall be deemed to have extracted from the Basin any water under his own right so to do until said amount of released water shall have been extracted. Water extracted from the Basin by parties pursuant to their request for the release of water shall be deemed to have been taken by the offerors of such water under their own rights to extract water from the Basin.
7. *Price and Payment for Water Released for Exchange Pool.* All parties allocated water under subparagraph 4 hereof shall pay a uniform price per acre-foot for such water, which price shall be the weighted average of the prices at which all the water allocated was offered for release.

Each party shall pay to the Watermaster, in five equal monthly installments during the applicable water year, an amount equal to the quantity of water allocated to him multiplied by said uniform price. The Watermaster shall bill each such party monthly for each such installment, the first such billing to be made on or before the first day of the second month of the water year involved, and payment therefor shall be made to the Watermaster within thirty (30) days after the service of each such statement. If such payment be not made within said thirty (30) days such payment shall be delinquent and a penalty shall be assessed thereon at the rate of 1% per month until paid. Such delinquent payment, including penalty, may be enforced against any party delinquent in payment by execution or by suit commenced by the Watermaster or by any party hereto for the benefit of the Watermaster.

Promptly upon receipt of such payment, the Watermaster shall make payment for the water released and allocated, first, to the party or parties which offered such water at the lowest price, and then through successive higher offered prices up to the total allocated.

VII. Additional Pumping Allowed Under Agreement With Central and West Basin Water Replenishment District, During Periods of Emergency.

Central and West Basin Water Replenishment District, a public corporation of the State of California, (Division 18, commencing with Section 60,000 of the Water Code), hereinafter "Replenishment District", overlies West Basin and engages in activities of replenishing the ground waters thereof.

During an actual or threatened temporary shortage of the imported water supply to West Basin, Replenishment District may, by resolution, determine to subsequently replenish the Basin for any water produced in excess of a party's adjudicated rights hereunder, within a reasonable period of time, pursuant to agreements with such parties (to a maximum of 10,000 acre feet), under the terms and conditions hereinafter set forth.

- a. Notwithstanding any other provision of this Judgment, parties (including successors in interest) who are water purveyors, as hereinabove defined, are authorized to enter into agreements with Replenishment District under which such water purveyors may exceed their Adjudicated Rights for a particular water year when the following conditions are met:
 1. Replenishment District is in receipt of a resolution of the Board of Directors of The Metropolitan Water District of Southern California ("MWD") stating 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 in part by overpumping from West Basin.
 2. The Board of Directors of both Replenishment District and West Basin Municipal Water District (WBMWD), by resolutions, concur in the resolution of MWD's Board of Directors and each determine that the temporary overproduction in West Basin will not adversely affect the integrity of the Basin or the sea water barrier maintained along the Coast of West Basin.
 3. In said resolution, Replenishment District's Board of Directors shall set a public hearing, and notice the time, place and date thereof (which may be continued from time to time without further notice) and which said notice shall be given by First Class Mail to the current designees of the parties, filed and served in accordance with Paragraph IX of this Judgment. Said notice shall be mailed at least ten (10) days before said scheduled hearing date.

4. At said public hearing, parties (including successors in interest) shall be given full opportunity to be heard, and at the conclusion thereof the Board of Directors of Replenishment District by resolution decides to proceed with agreements under this Paragraph VII.
- b. All such agreements shall be subject to the following requirements, and such reasonable others as Replenishment District's Board of Directors shall require:
1. They shall be of uniform content except as to the 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 Replenishment District'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 West 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, all of which said agreements shall commence and end on the same day (and which may be executed at any time within said four month period), unless an extension thereof is authorized by the Court, under this Judgment.
 4. They shall contain provisions that the water purveyor executing the agreement pay to the Replenishment District a price, in addition to the applicable replenishment assessment, determined on the following formula: The price per acre foot of WBMWD's treated domestic and municipal water for the water year in which the agreement is to run, less the total of: (a) an amount per acre foot as an allowance on account of incremental cost of pumping, as determined by Replenishment District's Board of Directors; and (b) the rate of the replenishment assessment of Replenishment District for the same fiscal year. If the term of the agreement is for a period which will be partially in one fiscal year and partially in another, and a change in either or both the price per acre foot of WBMWD's treated domestic and municipal water and rate of the replenishment assessment of Replenishment District is scheduled, the price formula shall be determined by averaging the scheduled changes with the price and rate then in effect, based on the number of months each will be in effect during the term of the agreement. Any price for a partial acre-foot shall be computed pro rata. Payments shall be due and payable on the principle that over-extractions under the agreement are 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 Replenishment District if, in the Judgment of Replenishment District'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 Replenishment District'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 for any other reason that Replenishment District's Board of Directors finds good and sufficient.
- c. Other matters applicable to such agreements and over-pumping thereunder are as follows, and to the extent they would affect obligations of the Replenishment District they shall be anticipated in said 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 overpumping under all said agreements during said four months shall not exceed ten thousand (10,000) 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 Replenishment District in entering into such agreements, as to any one emergency or continuation thereof declared by MWD's Board of Directors under sub-paragraph 6 (a) hereof.
4. The *ex parte* provisions of this Judgment may be utilized in lieu of the authority contained herein (which *ex parte* provisions are not limited as to time, nature or relief, or terms of any agreements), but neither Replenishment District nor any other party shall utilize both as to any one such emergency or continuation thereof.
5. If any party claims that it is being damaged or threatened with damage by the over-extractions by any party to such an agreement, the Watermaster or any party hereto may seek appropriate action of the Court for termination of any such agreement upon notice of hearing given by the party complaining, to the party to said agreement, to the Replenishment District, and to all parties who have filed a request herein for such special notice. Any such termination shall not affect the obligation of the terminated party to make payments under the agreement for over-extractions which previously occurred thereunder.
6. Replenishment District shall maintain separate accounting and a separate fund of the proceeds from payments made pursuant to agreements entered into under this Paragraph VII. Said fund shall be utilized solely for purposes of replenishment and the replacement of waters in West Basin. Replenishment District shall, as soon as practicable, cause replenishment in West Basin by the amounts to be overproduced pursuant to this Paragraph VII, whether through spreading, injection, or in-lieu agreements.
7. Over-extractions made pursuant to the said agreements shall not be subject to the "make up" provisions of this Judgment, as amended, provided, that if any party fails to make payments as required by the agreement, Watermaster may require such "make up" under Paragraph V hereof.
8. Water Purveyor under any such agreement may, and is encouraged to, enter into appropriate arrangements with customers who have water rights in West 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 VII limits the exercise of the reserved and continuing jurisdiction of the court as provided in Paragraph XIV hereof.

VIII. Injunction.

On and after the date hereof, each of the parties hereto, their successors and assigns, and each of their agents, employees, attorneys, and any and all persons acting by, through, or under them or any of them, are and each of them is hereby perpetually enjoined and restrained from pumping or otherwise extracting from the Basin any water in excess of said party's Adjudicated Rights, except as provided in Paragraphs V, VI, and VII hereof.

IX. Order of Pumping Credit.

Production of water from the Basin for the use or benefit of the parties hereto shall be credited to each such party in the following order:

1. Exchange Pool production (Paragraph VI).
2. Leased or licensed production (Paragraph IV).
3. Normal carry-over (Paragraph V, 1).
4. Adjudicated Right (Paragraph III).
5. Drought carry-over (Paragraph V, 3).
6. Emergency Production under Agreement with Replenishment District (Paragraph VII).

X. Loss of Decreed Rights.

It is in the best interests of the parties herein and the reasonable beneficial use of the Basin and its water supply that no party be encouraged to take and use more water than is actually required. Failure to produce all of the water to which a party is entitled hereunder shall not, in and of itself, be deemed or constitute an abandonment of such party's right in whole or in part.

No taking of water under Paragraphs III, V, VI and VII hereof, by any party to this action shall constitute a taking adverse to any other party; nor shall any party to this action have the right to plead the statute of limitations or an estoppel against any other party by reason of his said extracting of water from the Basin pursuant to a request for the release of water; nor shall such release of water to the Exchange Pool by any party constitute a forfeiture or abandonment by such party of any part of his Adjudicated Right to water; nor shall such release in anywise constitute a waiver of such right although such water, when released under the terms of this Judgment may be devoted to a public use; nor shall such release of water by any such party in anywise obligate any party so releasing to continue to release or furnish water to any other party or his successor in interest, or to the public generally, or to any party thereof, otherwise than as provided herein.

XI. Watermaster Appointment.

The Watermaster shall be the Department of Water Resources of the Resources Agency of the State of California, to serve at the pleasure of the Court, and said Watermaster shall administer and enforce the provisions of this Judgment and the instructions and subsequent orders of this Court, and shall have the powers and duties hereinafter set forth. If any such provisions, instructions or orders of the Court shall have been disobeyed or disregarded, said Watermaster is hereby empowered and directed to report to the Court such fact and the circumstances connected therewith and leading thereto.

XII. Watermaster - Powers and Duties.

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 in addition to those provided for elsewhere herein:

1. *Parties to Measure and Record Static Water Level of Each Well.* The Watermaster may require each party, at such party's own expense, to measure and record not more often than once a month, the elevation of the static water level in such of his wells in the Basin as are specified by the Watermaster.
2. *Parties to Install Meters on Wells and Record Production Therefrom.* The Watermaster may require any party hereto owning any facilities for pumping or otherwise extracting water from the Basin, at such party's own expense, to install and at all times maintain in good working order, mechanical measuring devices, approved by the Watermaster, and keep records of water

production, as required by the Watermaster, through the use of such devices. However, if in the opinion of the Watermaster such mechanical devices are not practicable or feasible, the Watermaster may require such party to submit estimates of his water production, together with such information and data as is used by such party in making such estimate. Upon the failure of any party to install such device or devices on or before the date the Watermaster shall fix for such installation, or to provide the Watermaster with estimates of water production and information on which such estimates are based, the Watermaster may give the Court and the party notice of such failure for proper action in the premises.

3. *Watermaster to Assemble Records and Data and Evaluate Same.* The Watermaster shall collect and assemble the records and other data required of the parties hereto, and evaluate such records and other data. Such records and other data shall be open to inspection by any party hereto or his representative during normal business hours.
4. *Watermaster's Annual Budget.* The Watermaster shall prepare a tentative budget for each water year, stating the estimated expense for administering the provisions of this Judgment. The Watermaster shall mail a copy of said tentative budget to the designee of each of the parties hereto having an Adjudicated Right, at least sixty (60) days before the beginning of each water year. If any such party has any objection to said tentative budget or any suggestions with respect thereto, he shall present the same in writing to the Watermaster within fifteen (15) days after service of said tentative budget upon him. If no objections are received, the tentative budget shall become the final budget. If objections to said tentative budget are received, the Watermaster shall, within then (10) days thereafter, consider such objections, prepare a final budget, and mail a copy thereof to each such party's designee, together with a statement of the amount assessed to each such party, computed as provided in subparagraph 5 of this Paragraph XII. Any such party whose objections to said tentative budget are denied in whole or in part by the Watermaster may, within fifteen (15) days after the service of the final budget upon him, make written objection thereto by filing his objection with the Court after first mailing a copy of such objection to each party's designee, and shall bring such objection on for hearing before the Court at such time as the Court may direct. If objection to such budget be filed with the Court as herein provided, then the said budget and any and all assessments made as herein provided may be adjusted by the Court following said hearing.
5. *Watermaster's Fees as Parties' Costs.* The fees compensation or other expenses of the Watermaster hereunder shall be borne by the parties hereto having Adjudicated Rights in the proportion that each such party's Adjudicated Right bears to the total Adjudicated Rights of all such parties, and the Court or Watermaster shall assess such costs to each such party accordingly.

Payment thereof, whether or not subject to adjustment by the Court as provided in this Paragraph XII, shall be made by each such party, on or prior to the beginning of the water year to which said final budget and statement of assessed costs is applicable. 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 any order hereinafter made by the Court, or by other proceedings by the Watermaster or by any party hereto on the Watermaster's behalf.

All such payments and penalties received by the Watermaster shall be expended by him for the administration of this Judgment. Any money remaining at the end of any water year shall be available for such use in the following water year.

6. *Watermaster's Annual Report.* The Watermaster shall prepare an annual report within ninety (90) days after the end of each water year covering the work of the Watermaster during the preceding water year and a statement of his receipts and expenditures.

7. *Watermaster Report to Contain All Basin Production.* The Watermaster shall report separately, in said annual report, all water extractions in the Basin, including that by producers who have no "Adjudicated Right."
8. *Watermaster Rules and Regulations.* The Watermaster may prescribe such reasonable Rules and Regulations as will assist him in the performance of his duties hereunder.
9. *Other Watermaster Duties.* The Watermaster shall perform such other duties as directed by the Court and as may be otherwise provided by law.

XIII. Objection to Watermaster Determination - Notice Thereof and Hearing Thereon.

Any party hereto having an Adjudicated Right who has objection to any determination or finding made by the Watermaster, other than as provided in Paragraphs VI and XII hereof, may make such objection in writing to the Watermaster within thirty (30) days after the date the Watermaster gives written notice of the making of such determination or finding, and within thirty (30) days thereafter the Watermaster shall consider said objection and shall amend or affirm such finding or determination and shall give notice thereof to all parties hereto having Adjudicated Rights. Any such party may file with the Court within thirty (30) days from the date of said notice any objection to such final finding or determination 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 each of the parties hereto having an Adjudicated Right. The Court may affirm, modify, amend or overrule any such finding or determination of the Watermaster.

XIV. Reserved and Continuing Jurisdiction of Court.

The Court hereby reserves continuing jurisdiction and, upon application of any party hereto having an Adjudicated Right or upon its own motion, may review (1) its determination of the safe yield of the Basin, or (2) the Adjudicated Rights, in the aggregate, of all of the parties as affected by the abandonment or forfeiture of any such rights, in whole or in part, and by the abandonment or forfeiture of any such rights by any other person or entity, and, in the event material change be found, to adjudge that the Adjudicated Right of each party shall be ratably changed; provided, however, that notice of such review shall be served on all parties hereto having Adjudicated Rights at least thirty (30) days prior thereto. Except as provided herein, and except as rights decreed herein may be abandoned or forfeited in whole or in part, each and every right decreed herein shall be fixed as of the date of the entry hereof.

XV. Judgment Modifications and Further Orders of Court.

The Court further reserves jurisdiction so that at any time, and from time to time, upon its own motion or upon application of any party hereto having an Adjudicated Right, and upon at least thirty (30) days notice to all such parties, to make such modifications of or such additions to, the provisions of this Judgment, or make such further order or orders as may be necessary or desirable for the adequate enforcement, protection or preservation of the Basin and of the rights of the parties as herein determined.

XVI. Subsequent Change From Water Year to Fiscal Year.

"Water year" as used in Paragraphs V, VI, VII and XII hereof shall, beginning with the first "fiscal year" (July 1 - June 30) commencing at least four months after this "Amended Judgment" becomes final, and thereafter, mean the "fiscal year". Since this changeover will provide a transitional accounting period of nine months, October 1 - June 30, notwithstanding the findings and determinations in the annual Watermaster Report for the last preceding water year, the Adjudicated Right of each of the parties hereto permitted to be extracted from the West Basin for said transitional accounting period shall be on the basis of three-quarters of each said party's otherwise Adjudicated Right. The Watermaster herein shall convert the times of his duties hereunder, including the rendition of a nine month report for the said transitional

accounting period (October 1 - June 30), to coincide with the changeover from the water year to the fiscal year hereunder.

XVII. Designees of Parties for Future Notice and Service.

Service of this "Amended Judgment" on those parties who have executed and filed with the Court "Agreement and Stipulation for Judgment" or otherwise have named a designee, filed the same herein and have therein designated a person thereafter to receive notices, requests, demands, objections, reports, and all other papers and processes in this cause, shall be made by first class mail, postage prepaid, addressed to such designees (or their successors) and at the address designated for that purpose.

Each party who has not heretofore made such a designation shall, within thirty (30) days after the Amended Judgment herein shall have been served upon that party or his designee, file with the Court, with proof of service of a copy thereof 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 or successor designation filed and served in the same manner by any party shall be effective from the date of such 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, of any item required to be served upon or delivered to a party under or pursuant to this Judgment, may be by deposit in the mail, first class, postage prepaid, addressed to the latest designee and at the address in said latest designation filed by that party.

Parties hereto who have not entered their appearance or whose default has been entered and who are adjudged herein to have an Adjudicated Right, and who have not named a designee for service herein, shall be served with all said future notices, papers and process herein, and service herein shall be accomplished, by publication of a copy of such said notice, paper or process addressed to, "Parties to the West Basin Adjudication"; said publication shall be made once each week for two successive weeks in a newspaper of general circulation, printed and published in the County of Los Angeles, State of California, and circulated within the West Basin Area; the last publication of which shall be at least two weeks and not more than five weeks immediately preceding the event for which said notice is given or immediately preceding the effective date of any order, paper or process; in the event an effective date other than the date of its execution is fixed by the Court in respect of any order, paper or process, said last publication shall be made not more than five weeks following an event, the entry of an order by the Court, or date of any paper or process with respect to which such notice is given.

XVIII. Intervention of Successors In Interest and New Parties.

Any person who is not a party herein or successor to such party and who proposes to produce water from the Basin may seek to become a party to this Judgment, through a Stipulation In Intervention entered into with the Watermaster. Watermaster 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 thereof to the parties, served as herein provided. Thereafter, if approved by the Court, such Intervenors shall be a party herein, bound by this Judgment and entitled to the rights and privileges accorded under the physical solution imposed herein.

XIX. Judgment Binding on Successors.

Subject to the specific provisions hereinbefore contained, this Judgment and all provisions thereof are applicable to, binding upon and inure to the benefit of 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.

XX. Effect of Amended Judgment on Orders Heretofore Made and Entered Herein.

This Amended Judgment shall not abrogate the rights of any additional carry-over of unused Adjudicated Rights of the parties herein, as may exist pursuant to the orders herein filed June 2, 1977, and September 29, 1977.

ORDER AMENDING JUDGMENT

(Filed with County Clerk on March 8, 1989)

GOOD CAUSE APPEARING upon the duly-noticed Motion of West Basin Municipal Water District:

IT IS HEREBY ORDERED THAT THE JUDGMENT HEREIN BE AMENDED AS FOLLOWS:

“NON-CONSUMPTIVE PRACTICES

1. Any party herein may petition the Watermaster for a non-consumptive water use permit as part of a project to recover old refined oil or other pollutants that has leaked into the underground aquifers of the Basin. If the petition is granted as set forth in this part, the petitioner may extract the groundwater covered by the petition without the production counting against the petitioner's production rights.
2. If the Watermaster determines that there is a problem of groundwater contamination which the proposed project will remedy or ameliorate, an operator may make extractions of groundwater to remedy or ameliorate that problem if the water is not applied to beneficial surface use, its extractions are made in compliance with terms and conditions established by the Watermaster, and the Watermaster has determined either of the following:
 - a. The groundwater to be extracted is unusable and cannot be economically blended for use with other water.
 - b. The proposed program involves extraction of usable water in the same quantity as will be returned to the underground without degradation of quality.
3. The Watermaster may provide those terms and conditions the Watermaster deems appropriate, including, but not limited to, restrictions on the quantity of extractions to be so exempted, limitations on time, periodic reviews, requirement of submission of test results from a Watermaster-approved laboratory, and any other relevant terms or conditions.
4. The Watermaster shall conduct a public hearing on the petition and all parties herein and their representatives shall have an opportunity to be heard concerning the same.
5. The Watermaster shall, in its discretion, grant or deny the petition and fix a reasonable annual administrative fee to be paid to the Watermaster by the permittee. Within fifteen (15) days after the rendition of its decision, the Watermaster shall give written notice thereof to the designees of all parties herein.
6. After a noticed, public hearing, the Watermaster may, on the motion of any party herein or on its own motion, interrupt or stop a project for non-compliance with the terms of its permit or rescind or modify the terms of a permit to protect the integrity of the Basin of the Judgment herein. An order to interrupt or stop a project or to rescind or modify the terms of a permit shall apply to groundwater extractions occurring more than 10 days after the date of the order. The permit holder and the designees of all parties herein shall be given two weeks written notice of any hearing to consider interrupting or stopping a permitted project or

the rescission or modification of the terms of a permit. Notice will be deemed given when mailed by first-class mail or when personally delivered.

7. The Watermaster'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 (30) days of the notice thereof and upon thirty (30) days notice to the designees of all parties herein.

8. The Watermaster shall monitor and periodically inspect the project for compliance with the terms and conditions of the permit hereunder.

9. No party shall recover costs from any other party herein.”

IT IS FURTHER ORDERED that the amendment to the judgment approved by the court on March 22, 1984 (“former amendment”) is hereby repealed, provided, all permits issued by the Watermaster under the former amendment shall be deemed under the instant amendment.

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APPENDIX G

***CITY OF LOMITA MUNICIPAL CODE – CHAPTER 3 –
MUNICIPAL WATER SYSTEM AND CHAPTER 4 –
PHASED WATER CONSERVATION***

Chapter 3

MUNICIPAL WATER SYSTEM

ARTICLE I. IN GENERAL

Sec. 12-3.01. Authority to adopt.

The city council may from time to time adopt rules and regulations which shall govern the operation of the city's municipal water system and shall delegate to an identified city employee the power to enforce said rules and regulations.

(Ord. No. 457, § 1, 1-2-90)

Note—See § 12-3.03.

Sec. 12-3.02. Unauthorized use of city water.

No person, company, corporation or other agency shall take water from the city's water system without first obtaining permission to take water from the city's engineer or authorized representative and making payment of applicable processing and water supply charges of the city. For purposes of enforcement of this section, no more than one (1) violation per day per point of access to the city's water supply system will be deemed in violation of this section.

(Ord. No. 457, § 1, 1-2-90)

Note—See § 12-3.03.

Sec. 12-3.03. Rules and regulations adopted.

Editor's note—Ord. No. 520, adopted Aug. 2, 1993, did not specifically amend this Code; hence, inclusion of § 2 as § 12-3.03 was at the discretion of the editor. Existing §§ 12-3.03, 12-3.04 were redesignated §§ 12-3.04, 12-3.05.

The city council does hereby adopt the following rules and regulations governing the operation of the city's municipal water system:

(a) *Disconnection for Nonpayment:*

- (1) Water charges shall be due and payable upon presentation and shall become delinquent if not paid. If water charges are not paid within the period allowed by the city, then the municipal water department ("department") shall mail a notice of delinquency and impending termination of services. The notice shall set a date for disconnection of service.
- (2) The department shall make a reasonable attempt to contact an adult person residing at the premises of the customer by telephone or personal contact at least twenty-four (24) hours prior to any termination of service. Whenever telephone or personal service cannot be accomplished, the public utility shall give by mail, in person or by posting in a conspicuous location at the premises a notice of termination of services, at least forty-eight (48) hours prior to termination.

- (3) Every notice of termination shall include the following information:
- a. The name and address of the customer whose account is delinquent.
 - b. The amount of the delinquency.
 - c. The date by which payment or arrangements for payment is required in order to avoid termination.
 - d. The procedure by which the customer may initiate a complaint or request an investigation servicing service or charges, unless the department's bill contains such information.
 - e. The procedure by which the customer may request amortization of the unpaid charges.
 - f. The procedure for the customer to obtain information on the availability of financial assistance, including private, local, state or federal sources, if applicable.
 - g. The telephone number of a representative of the department who can provide additional information or arrange for payment.
- (4) Upon complying with the notice requirements, the department may disconnect water service unless one (1) of the following situations exists:
- a. During the pendency of an investigation by the public utility of a customer dispute or complaint.
 - b. When a customer has been granted an extension of the period for payment of a bill.
 - c. On a certification of a licensed physician and surgeon that to do so will be life threatening to the customer and the customer is financially unable to pay for service within the normal payment period and is willing to enter into an amortization agreement with the department with respect to all charges that the customer is unable to pay prior to delinquency. If the unpaid balance of the bill is asserted to be beyond the means of the customer to pay within the normal period for payment, the department shall permit the customer to amortize the unpaid balance of the bill over a period not to exceed twelve (12) months.
- (5) Water service may not be disconnected for reasons of delinquency on any Saturday, Sunday, legal holiday or at any time during which the business offices of the public utility are not open to the public.
- (b) *Reconnecting Water Service:*
- (1) There shall be a charge as established by city council resolution for the turning on of any water services after shutoff by reason of delinquency. The charge established by city council resolution for the turning on of any water shall be in addition to payment of past-due amounts for water service and any applicable penalties due because of the delinquency. These required payments shall be made at the cashier's office at City Hall.

- (2) If a prior owner of the property, structure or premises has not paid the past-due amount for water service and any applicable penalties, then water service shall not be reconnected at that location until the current owner of the property, structure or premises has paid the past-due amount for water service and any applicable penalties.
- (3) If water service has been disconnected to any building, apartment or house used for residential purposes by a tenant who is not an owner of the structure, the department shall not seek to recover any charges or penalties for the furnishing of water for the subsequent tenant's residential use on account of nonpayment of previous charges by a previous tenant. The department may, at its sole option, require that water service to subsequent tenants be furnished on the account of the landlord or property owner.
- (Ord. No. 520, § 2, 8-2-93)

Sec. 12-3.04. Citations.

The director of public works shall authorize designated city employees or the city's law enforcement officers who shall be authorized to issue citations to individuals violating any ordinance or regulation of the city governing its water system. Such citation shall be personally served upon the person violating the regulations or ordinances of the city or upon any employee, agent or representative thereof, and shall specify the regulation or ordinance violated, the dates of violation, the date of service of citation, the person issuing the citation, and the person receiving the citation.

(Ord. No. 457, § 1, 1-2-90)

Note—See the editor's note to § 12-3.03.

Sec. 12-3.05. Violation deemed an infraction.

Any violation of this chapter or of the rules and regulations established hereunder shall be deemed an infraction and shall be punishable by a fine of one hundred dollars (\$100.00) for the first violation, two hundred dollars (\$200.00) for a second violation within one (1) year of the first violation, and five hundred dollars (\$500.00) for each additional violation after the second violation which occurs within one (1) year from the first violation.

(Ord. No. 457, § 1, 1-2-90; Ord. No. 477, § I, 2-19-91)

Note—See the editor's note to § 12-3.03.

Secs. 12-3.06—12-3.15. Reserved.

ARTICLE 2. CROSS-CONNECTION CONTROL PROGRAM

Sec. 12-3.16. Purpose.

The purpose of this article is (1) to protect the public water supply against actual or potential contamination through cross-connections by isolating sources of contamination that may occur within a water user's premises because of some undiscovered or unauthorized cross-connection on the premises; (2) to eliminate existing connections between drinking water

systems and other sources of water that are not approved as safe and potable for human consumption; (3) to eliminate cross-connections between drinking water systems and sources of contamination; (4) to prevent the making of cross-connections in the future.

This article is adopted pursuant to the California Health and Safety Code (Sections 4026., 4026 5., 4049 50 and 4049 51 and California Code of Regulations, Title 17, Sections 7583—7605, entitled “Regulations Relating to Cross-Connections”.

It is unlawful for any person, firm, or corporation at any time to make or maintain or cause to be made or maintained, temporarily or permanently, for any period of time whatsoever, any cross-connection between plumbing pipes or water fixtures being served with water by the city and any other source of water supply or to maintain any sanitary fixture or other appurtenances or fixtures which, by reason of their construction, may cause or allow backflow of water or other substances into the water supply system of the city and/or the service of water pipes or fixtures of any consumer of the city.

(Ord. No. 525, § 1, 7-18-94)

Sec. 12-3.17. Definitions.

[For the purpose of this article, the following words and phrases shall have the meanings respectively ascribed to them by this section.]

(a) *Air-Gap Separation*: The term “air-gap separation” means a physical break between a supply pipe and a receiving vessel. The air-gap shall be at least double the diameter of the supply pipe, measured vertically above the top rim of the vessel, in no case less than one (1) inch.

(b) *Approved Backflow Prevention Assembly*: The term “approved backflow prevention assembly” shall mean an assembly which has passed laboratory and field evaluation tests performed by a recognized testing organization which has demonstrated their competency to perform such tests to the California Department of Health Services.

(c) *Approved Water Supply*: The term “approved water supply” means any water supply whose potability is regulated by a state or local health agency.

(d) *Auxiliary Water Supply*: The term “auxiliary water supply” means any water supply on or available to the premises other than an approved water supply.

(e) *AWWA Standard*: The term “AWWA Standard” means an official standard developed and approved by the American Water Works Association (AWWA).

(f) *Backflow*: The term “backflow” shall mean a flow condition, caused by a differential in pressure, that causes the flow of water or other liquids, gases, mixtures, or substances into the distributing pipes of a potable supply of water from any source or sources other than an approved water supply source. Back siphonage is one cause of backflow. Back pressure is, the other cause.

(g) *City*: The City of Lomita, California.

(h) *Contamination*: The term “contamination” means degradation of the quality of the potable water by any foreign substance which creates a hazard to the public health, or which may impair the usefulness or quality of the water.

(i) *Cross-Connection*: The term “cross-connection” as used in this article means any unprotected actual or potential connection between a potable water system used to supply water for drinking purposes and any source or system containing unapproved water or a substance that is not or cannot be approved as safe, wholesome, and potable. Bypass arrangements, jumper connections, removable sections, swivel or changeover assemblies, or other devices through which backflow could occur, shall be considered to be cross-connections.

(j) *Double Check Valve Assembly*: The term “double check valve assembly” means an assembly of two (2) internally loaded, independently acting check valves, including resilient seated shut-off valves on each end of the assembly and test cocks for testing the water tightness of each check valve.

(k) *Health Agency*: The term “health agency” means the California Department of Health Services.

(l) *Local Health Agency*: The term “local health agency” means the Los Angeles County Department of Health Services.

(m) *Person*: The term “person” means an individual, corporation, company, association, partnership, municipality, public utility, or their public body or institution.

(n) *Premises*: The term “premises” means any and all areas on a water user’s property which are served or have the potential to be served by the public water system.

(o) *Public Water System*: The term “public water system” means a system for the provision of piped water to the public for human consumption that has five (5) or more service connections or regularly serves an average of twenty-five (25) individuals daily at least sixty (60) days out of the year.

(p) *Reclaimed Water*: The term “reclaimed water” means a wastewater which, as a result of treatment, is suitable for uses other than potable use.

(q) *Reduced Pressure Principle Backflow Prevention Assembly*: The term “reduced pressure principle backflow prevention assembly” means an assembly incorporating two (2) internally loaded, independently operating check valves and an automatically operating differential relief valves [valve] located between the two (2) checks, including resilient seated shut-off valves on each end of the assembly, and equipped with necessary test cocks for testing the assembly.

(r) *Service Connection*: The term “service connection” refers to the point of connection of a user’s piping to the water supplier’s facilities.

(s) *Water Supplier*: The term “water supplier” means the city who owns and operates the approved water supply system.

(t) *Water User*: The term "water user" means any person obtaining water from an approved water supply stem.

(Ord. No. 525, § 1, 7-18-94)

Sec. 12-3.18. Cross-connection protection requirements.

(a) *General Provisions.*

- (1) Unprotected cross-connections with the public water supply are prohibited.
- (2) Whenever backflow protection has been found necessary, the city will require the water user to install an approved backflow prevention assembly by and at his expense for continued services or before a new service will be granted.
- (3) Wherever backflow protection has been found necessary on a water supply line entering a water user's premises, then any and all water supply lines from the city's mains entering such premises, buildings, or structures shall be protected by an approved backflow prevention assembly. The type of assembly to be installed will be in accordance with the requirements of this article.

(b) *Where Protection is Required.*

- (1) Each service connection from the city's water system for supplying water to premises having an auxiliary water supply shall be protected against backflow of water from the premises into the public water system unless the auxiliary water supply is accepted as an additional source by the city, and is approved by the public health agency having jurisdiction.
- (2) Each service connection from the city's water system for supplying water to any premises on which any substance is handled in such fashion as may allow its entry into the water system shall be protected against backflow of the water from the premises into the public system. This shall include the handling of process waters and waters originating from the city's water system which have been subjected to deterioration in sanitary quality.
- (3) Backflow prevention assemblies shall be installed on the service connection to any premises having (a) internal cross-connection that cannot be permanently corrected and controlled to the satisfaction of the state or local health department and the city's, or (b) intricate plumbing and piping arrangements or where entry to all portions of the premises is not readily accessible for inspection purposes, making it impracticable or impossible to ascertain whether or not cross-connections exist.

(c) *Type of Protection Required.*

- (1) The type of protection that shall be provided to prevent backflow into the approved water supply shall [be] commensurate with the degree of hazard that exists on the consumer's premises. The type of protective assembly that may be required (listing in an increasing level of protection) includes: Double Check Valve Assembly (DC), Reduced Pressure Principle Backflow Prevention Assembly (RP), and an Air-gap Sepa-

ration (AG). The water user may choose a higher level of protection than required by the city. The minimum types of backflow protection required to protect the approved water supply at the user's water connection to premises with varying degrees of hazard are given in Table 1. Situations which are not covered in Table 1 shall be evaluated on a case-by-case basis and the appropriate backflow protection shall be determined by the city and the health agency.

Table 1
TYPE OF BACKFLOW PROTECTION REQUIRED

<i>Degree of Hazard</i>	<i>Minimum Type of Backflow Prevention</i>
(a) Sewage and Hazardous Substances	
(1) Premises where the public water system is used to supplement the reclaimed water supply.	AG
(2) Premises where there are wastewater pumping and/or treatment plants and there is no interconnection with the potable water system. This does not include a single family residence that has a sewage lift pump. A RP may be provided in lieu of an AG if approved by the health agency and the city.	AG
(3) Premises where reclaimed water is used and there is no interconnection with the potable water system. A RP may be provided in lieu of an AG if approved by the health agency and the city.	AG
(4) Premises where hazardous substances are handled in any manner in which the substances may enter a potable water system. This does not include a family RP residence that has a sewage lift pump. A RP may be provided in lieu of an AG if approved by the health agency and the city.	RP
(5) Premises where there are irrigation systems into which fertilizers, herbicides, or pesticides are, or can be, injected.	RP
(b) Auxiliary Water Supplies	
(1) Premises where there is an unapproved auxiliary water supply which is interconnected with the public water system. A RP or DC may be provided in lieu of an AG if approved by the health agency and the city.	AG
(2) Premises where there is an unapproved auxiliary water supply and there are no interconnections with the public water system. A DC may be provided in lieu of a RP if approved by the health agency and city.	

<i>Degree of Hazard</i>	<i>Minimum Type of Backflow Prevention</i>
(c) Fire Protection Systems	
(1) Premises where the fire system is directly supplied from the public water system and there is an unapproved auxiliary water supply on or to the premises (not interconnected).	DC
(2) Premises where the fire system is supplied from the public water system and interconnected with an unapproved auxiliary water supply. A RP may be provided in lieu of an AG if approved by the health agency and city.	AG
(3) Premises where the fire system is supplied from the public water system and where either elevated DC storage tanks or fire pumps which take suction from the private reservoirs or tanks are used.	DC
(d) Docksides Water Points and Marine Facilities	
(1) Pier hydrants for supplying water to vessels for any purpose.	RP
(2) Premises where there are marine facilities.	RP
(e) Premises where entry is restricted so that inspections for cross-connections cannot be made with sufficient frequency or at sufficiently short notice to assure that cross-connections do not exist.	RP
(f) Premises where there is a repeated history of cross-connections being established or re-established.	RP
<p>(2) Two (2) or more services supplying water from different street mains to the same building, structure, or premises through which an interstreet main flow may occur, shall have at a minimum an approved double check valve on each water service to be located adjacent to and on the property side of the respective meters. Such an approved double check valve shall not be considered adequate if backflow protection is deemed necessary to protect the city's mains from pollution or contamination; in such cases the installation of an approved reduced pressure backflow assemblies [assembly] at such service connections shall be required.</p>	

(Ord. No. 525, § 3, 7-18-94)

Sec. 12-3.19. Backflow prevention assemblies.

(a) Approved Backflow Prevention Assemblies

- (1) Only backflow prevention assemblies which have been approved by the city shall be acceptable for installation by a water user connected to the city's potable water system.
- (2) The city will provide, upon request, to any affected customer a list of approved backflow prevention assemblies.

(b) *Backflow Prevention Assembly Installation.*

- (1) Backflow prevention assemblies shall be installed in a manner prescribed in Section 7603, Title 22 of the California Administrative Code. Location of the assemblies should be as close as practical to the user's connection. The city shall have the final authority in determining the required location of a backflow prevention assembly.
- a. *Air-gap separation (AG).* The air-gap separation shall be located on the user's side of and as close to the service connection as is practical. All piping from the service connection to the receiving tank shall be above grade and be entirely visible. No water use shall be provided from any point between the service connection and the air-gap separation. The water inlet piping shall terminate a distance of at least two (2) pipe diameters of the supply inlet but in no case less than one (1) inch above the overflow rim of the receiving tank.
- b. *Reduced pressure principle backflow prevention assembly (RP).* The approved reduced pressure principle backflow prevention assembly shall be installed on the user's side of and as close to the service connection as is practical. The assembly shall be installed a minimum of twelve (12) inches above grade and not more than thirty-six (36) inches above grade measured from the bottom of the assembly and with a minimum of twelve (12) inches side clearance. The assembly shall be installed so that it is readily accessible for maintenance and testing. Water supplied from any point between the service connection and the RP assembly shall be protected in a manner approved by the city.
- c. *Double check valve assembly (DC).* The approved double check valve assembly shall be located as close as practical to the user's connection and shall be installed above grade, if possible, and in a manner where it is readily accessible for testing and maintenance. If a double check valve assembly is put below grade it must be installed in a vault such that there is a minimum of six (6) inches between the bottom of the vault and the bottom of the assembly, so that the top of the assembly is no more than a maximum of eight (8) inches below grade, so there is a minimum of twenty-four (24) inches of clearance between the side of the assembly with the test cocks and the side of the vault, and so there is a minimum of twelve (12) inches clearance between the other side of the assembly and the side of the vault. Special consideration must be given to double check valve assemblies of the "Y" type. These assemblies must be installed on their "side" with the test cocks in a vertical position so that either check valve may be removed for service without removing the assembly. Vaults which do not have an integrated bottom must be placed on a three-inch layer of gravel.

(c) *Backflow Prevention Assembly Testing and Maintenance.*

- (1) The owners of any premises on which, or on account of which, backflow prevention assemblies are installed, shall have the assemblies tested by a person who has demonstrated their competency in testing of these assemblies to the city. Backflow prevention assemblies must be tested at least annually and immediately after installa-

tion, relocation or repair. The city may require a more frequent testing schedule if it is determined to be necessary. No assembly shall be placed back in service unless it is functioning as required. A report in a form acceptable to the city shall be filed with the city each time an assembly is tested, relocated, or repaired. These assemblies shall be serviced, overhauled, or replaced wherever they are found to be defective and all costs of testing, repair, and maintenance shall be borne by the water user.

- (2) The city will supply affected water users with a list of persons acceptable to the city to test backflow prevention assemblies. The city will notify affected customers by mail when annual testing of an assembly is needed and also supply users with the necessary forms which must be filled out each time an assembly is tested or repaired.

(d) *Backflow Prevention Assembly Removal.*

- (1) Approval must be obtained from the city before a backflow prevention assembly is removed, relocated, or replaced.
- a. *Removal:* The use of an assembly may be discontinued and the assembly removed from service upon presentation of sufficient evidence to the city to verify that a hazard no longer exists or is not likely to be created in the future;
 - b. *Relocation:* An assembly may be relocated following confirmation by the city that the relocation will continue to provide the required protection and satisfy installation requirements. A retest will be required following the relocation of the assembly;
 - c. *Repair:* An assembly may be removed for repair, provided the water use is either discontinued until repair is completed and the assembly is returned to service, or the service connection is equipped with other backflow protection approved by the city. A retest will be required following the repair of the assembly; and
 - d. *Replacement:* An assembly may be removed and replaced provided the water use is discontinued until the replacement assembly is installed. All replacement assemblies must be approved by the city and must be commensurate with the degree of hazard involved.

(Ord. No. 525, § 4, 7-18-94)

Sec. 12-3.20. User supervisor.

At each premises where it is necessary, in the opinion of the city, a user supervisor shall be designated by and at the expense of the water user. This user supervisor shall be responsible for the monitoring of the backflow prevention assemblies and for avoidance of cross-connections. In the event of contamination or pollution of the drinking water system due to a cross-connection on the premises, the city shall be promptly notified by the user supervisor so that appropriate measures may be taken to overcome the contamination. The water user shall inform the city of the user supervisor's identity on, as a minimum, an annual basis and whenever a change occurs.

(Ord. No. 525, § 5, 7-18-94)

Sec. 12-3.21. Administrative procedures.*(a) Water System Survey*

- (1) The city shall review all requests for new services to determine if backflow protection is needed. Plans and specifications must be submitted to the city upon request for review of possible cross-connection hazards as a condition of service for new service connections. If it is determined that a backflow prevention assembly is necessary to protect the public water system, the required assembly must be installed before service will be granted.
- (2) The city may require an on-premises inspection to evaluate cross-connection hazards. The city will transmit a written notice requesting an inspection appointment to each affected water user. Any water user who cannot or will not allow an on-premises inspection of his piping system shall be required to install the backflow prevention assembly the city considers necessary.
- (3) The city may, at its discretion, require a reinspection for cross-connection hazards of any premises to which water is served. The city will transmit a written notice requesting an inspection appointment to each affected water user. Any water user who cannot or will not allow an on-premises inspection of his piping system shall be required to install the backflow prevention assembly the city considers necessary.

(b) Customer Notification Assembly Installation.

- (1) The city will notify the water user of the survey findings, listing the corrective actions to be taken if any are required. A period of sixty (60) days will be given to complete all corrective actions required, including installation of backflow prevention assemblies.
- (2) A second notice will be sent to each water user who does not take the required corrective actions prescribed in the first notice within the sixty-day period allowed. The second notice will give the water user a two-week period to take the required corrective action. If no action is taken within the two-week period the city may terminate water service to the affected water user until the required corrective actions are taken.

(d) Customer Notification Testing and Maintenance.

- (1) The city will notify each affected water user when it is time for the backflow prevention assembly installed on their service connection to be tested. This written notice shall give the water user thirty (30) days to have the assembly tested and supply the water user with the necessary form to be completed and resubmitted to the city.
- (2) A second notice shall be sent to each water user which does not have his/her backflow prevention assembly tested as prescribed in the first notice within the thirty-day period allowed. The second notice will give the water user a two-week period to have his/her backflow prevention assembly tested. If no action is taken within the two-week period, the city may terminate water service to the affected water user until the subject assembly is tested.

(Ord. No. 525, § 6, 7-18-94)

Sec. 12-3.22. Water service termination.

(a) *General.* When the city encounters water uses that represent a clear and immediate hazard to the potable water supply that cannot be immediately abated, the city shall institute the procedure for discontinuing the water service.

(b) *Basis For Termination.* Conditions or water uses that create a basis for water service termination shall include, but are not limited to, the following items.

- (1) Refusal to install a required backflow prevention assembly;
- (2) Refusal to test a backflow prevention assembly;
- (3) Refusal to repair a faulty backflow prevention assembly;
- (4) Refusal to replace a faulty backflow prevention assembly;
- (5) Direct or indirect connection between the public water system and a sewer line;
- (6) Unprotected direct or indirect connection between the public water system and a system or equipment containing contaminants;
- (7) Unprotected direct or indirect connection between the public water system and an auxiliary water system;
- (8) A situation which presents an immediate health hazard to the public water system.

(c) *Water Service Termination Procedures.*

- (1) For conditions (1)—(4), the city will terminate service to a customer's premises after two (2) written notices have been sent specifying the corrective action needed and the time period in which it must be done. If no action is taken within the allowed time period, water service may be terminated.
- (2) For conditions (5)—(8), the city will take the following steps:
 - a. Make reasonable effort to advise water user of intent to terminate water service;
 - b. Terminate water supply and lock service valve. The water service will remain inactive until correction of violations have been approved by the city.

(Ord. No. 525, § 7, 7-18-94)

PHASED WATER CONSERVATION PLAN

Sec. 12-4.01. Statement of policy and declaration of purpose.

Because of the water supply conditions prevailing in the area from which the city obtains all or a portion of its water supply, the general welfare requires that the water resources available to the city be put to the maximum beneficial use to the extent to which they are capable, and that the unreasonable use or unreasonable method of use of water be prevented and that the conservation of such water be practiced with a view to the reasonable and beneficial use thereof in the interest of the citizens of Lomita and for the public welfare. The purpose of this phased water conservation plan is to minimize the effect of a shortage of water supplies on the customers of the city water department during a water shortage emergency. (Ord. No. 481, § 1, 6-17-91)

Sec. 12.4.02. Authorization to implement water conservation.

(a) The city council may implement the applicable provisions of this conservation plan, following the public hearing required by subsection (b) of this section, upon its determination that such implementation is necessary to protect the public welfare and safety.

(b) The city council shall hold a public hearing for the purpose of determining whether a shortage exists in the city and which measures provided by this chapter should be implemented. Notice of the time and place of the public hearing shall be published not less than ten (10) days before the hearing in a newspaper of general circulation within the city or posted pursuant to Government Code section 36933 at the discretion of the city clerk.

(c) The city council shall issue its determination of shortage and corrective measures by resolution published in a daily newspaper circulated within the city or posted pursuant to Government Code section 36933 at the discretion of the city clerk. Any provisions requiring curtailment in the use of water shall become effective no sooner than the first full billing period commencing on or after the date of such publication. (Ord. No. 481, § 1, 6-17-91)

Sec. 12-4.03 General prohibition.

(a) No customer of the city water department shall make, cause, use or permit the use of water from the city water department in a manner contrary to any provision of this chapter. (Ord. No. 481, § 1, 6-17-91)

Sec. 12-4.04 Phase I shortage.

(a) A phase I shortage shall be declared whenever the city council determines that it is likely that the city water department will suffer a ten (10) percent shortage in its water supplies.

(b) No customer with a meter size one and one-half (1½) inches or larger shall make, cause or permit the use of an amount of water from the city water department for any purpose during

each billing period in excess of a target quantity of ninety (90) percent. The target quantity shall be determined by the amount of water used on the customer's premises during the corresponding billing period of a base period to be defined by the city council.

(c) For meter sizes of one (1) inch or less, a target quantity shall be computed and will be the larger of the following amounts:

- (1) The average of the water usage for all similar sized meters during the corresponding billing period of a base period to be defined by the city council; or
- (2) The amount of water used on the customer's premises during the corresponding billing period to be defined by the city council.

No customer with a meter size of one (1) inch or less shall make, cause, use or permit the use of an amount of water from the city water department for any purpose during each billing period in excess of ninety (90) percent of the target quantity for that same billing period. (Ord. No. 481, § 1, 6-17-91; Ord. No. 487, § I, 9-3-91)

Sec. 12-4.05. Phase II shortage.

(a) A phase II shortage shall be declared whenever the city council determines that it is likely that the city water department will suffer a shortage of between ten (10) percent and fifteen (15) percent in its water supplies.

(b) No customer with a meter size of one and one-half (1½) inches or larger shall make, cause, use or permit the use of an amount of water from the city water department for any purpose during each billing period in excess of a target quantity of eighty-five (85) percent. The target quantity shall be determined by the amount of water used on the customer's premises during the corresponding billing period of a base period to be defined by the city council.

(c) For meter sizes of one (1) inch or less, a target quantity shall be computed and will be the larger of the following amounts:

- (1) The average of the water usage for all similar sized meters during the corresponding billing period of a base period to be defined by the city council; or
- (2) The amount of water used on the customer's premises during the corresponding billing period to be defined by the city council.

No customer with a meter size of one (1) inch or less shall make, cause, use or permit the use of an amount of water from the city water department for any purpose during each billing period in excess of eighty-five (85) percent of the target quantity for the same billing period. (Ord. No. 481, § 1, 6-17-91; Ord. No. 487, § I, 9-3-91)

Sec. 12-4.06. Phase III shortage.

(a) A phase III shortage shall be declared whenever the city council determines that it is likely that the city water department will suffer a shortage of between fifteen (15) percent and twenty (20) percent in its water supplies.

(b) No customer with a meter size of one and one-half (1½) inches or larger shall make, cause, use or permit the use of an amount of water from the city water department for any purpose during each billing period in excess of a target quantity of eighty-five (85) percent. The target quantity shall be determined by the amount of water used on the customer's premises during the corresponding billing period of a base period to be defined by the city council.

(c) For meter sizes of one (1) inch or less, a target quantity shall be computed and will be the larger of the following amounts:

- (1) The average of the water usage for all similar sized meters during the corresponding billing period of a base period to be defined by the city council; or
- (2) The amount of water used on the customer's premises during the corresponding billing period to be defined by the city council.

No customer with a meter size of one (1) inch or less shall make, cause, use or permit the use of an amount of water from the city water department for any purpose during each billing period in excess of eighty-five (85) percent of the target quantity for the same billing period. (Ord. No. 481, § 1, 6-17-91; Ord. No. 487, § I, 9-3-91)

Sec. 12-4.06. Phase III shortage.

(a) A phase III shortage shall be declared whenever the city council determines that it is likely that the city water department will suffer a shortage of between fifteen (15) percent and twenty (20) percent in its water supplies.

(b) No customer with a meter size of one and one-half (1½) inches or larger shall make, cause or permit the use of an amount of water from the city water department for any purpose during each billing period in excess of a target quantity of eighty (80) percent. The target quantity shall be determined by the amount of water used on the customer's premises during the corresponding billing period of a base period to be defined by the city council.

(c) For meter sizes of one (1) inch or less, a target quantity shall be computed and will be the larger of the following amounts:

- (1) The average of the water usage for all similar sized meters during the corresponding billing period of a base period to be defined by the city council; or
- (2) The amount of water used on the customer's premises during the corresponding billing period to be defined by the city council.

No customer with a meter size of one (1) inch or less shall make, cause, use or permit the use of an amount of water from the city water department for any purpose during each billing period in excess of eighty (80) percent of the target quantity for that same billing period.

(d) The watering of lawns, landscapes or other turf area with water supplied by the city water department shall be limited to not more than every other day and shall be prohibited between the hours of 10:00 a.m. and 5:00 p.m.

(e) New meters to provide construction water service shall not be issued.

(f) Water service letters will be issued, but such letters will be issued with the condition that permanent metered service to any newly created lot will be prohibited until the city determines that the mandatory rationing under the provisions of this chapter is no longer in effect or may be reduced to that required under sections 12-4.04 or 12-4.05 herein. (Ord. No. 481, § 1, 6-17-91; Ord. No. 484, § 1, 7-15-91; Ord. No. 487, § I, 9-3-91)

Sec. 12-4.07. Phase IV shortage.

(a) A phase IV shortage shall be declared whenever the city council determines that it is likely that the city water department will suffer a shortage of between twenty (20) percent and twenty-five (25) percent in its water supplies.

(b) No customer with a meter size of one and one-half (1½) inches or larger shall make, cause, use or permit the use of an amount of water from the city water department for any purpose during each billing period in excess of a target quantity of seventy-five (75) percent. The target quantity shall be determined by the amount of water used on the customer's premises during the corresponding billing period of a base period to be defined by the city council.

(c) For meter sizes of one (1) inch or less, a target quantity shall be computed and will be the larger of the following amounts:

- (1) The average of the water usage for all similar sized meters during the corresponding billing period of a base period to be defined by the city council; or
- (2) The amount of water used on the customer's premises during the corresponding billing period to be defined by the city council.

No customer with a meter size of one (1) inch or less shall make, cause, use or permit the use of an amount of water from the city water department for any purpose during each billing period in excess of seventy-five (75) percent of the target quantity for the same billing period.

(d) The watering of lawns, landscapes or other turf area with water supplied by the city water department shall be limited to not more than every other day and shall be prohibited between the hours of 10:00 a.m. and 5:00 p.m.

(e) New meters to provide construction water service shall not be issued.

(f) Water service ("Will Serve") letters will be issued, but such letters will be issued with the condition that permanent metered service to any newly created lot will be prohibited until the city council determines that the mandatory rationing under the provisions of this chapter is no longer in effect or may be reduced to that required under section 12-4.04 or 12-4.05 herein. (Ord. No. 481, § 1, 6-17-91; Ord. No. 484, § 2, 7-15-91; Ord. No. 487, § I, 9-3-91)

Sec. 12-4.08. Phase V shortage.

(a) A phase V shortage shall be declared whenever the city council determines that it is likely that the city water department will suffer a shortage of between twenty-five (25) and thirty (30) percent in its water supplies.

(b) No customer with a meter size of one and one-half (1½) inches or larger shall make, cause, use or permit the use of an amount of water from the city water department for any purpose during each billing period in excess of a target quantity of seventy (70) percent. The target quantity shall be determined by the amount of water used on the customer's premises during the corresponding billing period of a base period to be defined by the city council.

(c) For meter sizes of one (1) inch or less, a target quantity shall be computed and will be the larger of the following amounts:

- (1) The average of the water usage for all similar sized meters during the corresponding billing period of a base period to be defined by the city council; or
- (2) The amount of water used on the customer's premises during the corresponding billing period to be defined by the city council.

No customer with a meter size of one (1) inch or less shall make, cause, use or permit the use of an amount of water from the city water department for any purpose during each billing period in excess of seventy (70) percent of the target quantity for that same billing period.

(d) The watering of lawns, landscapes or other turf area with water supplied by the city water department shall be limited to not more than every other day and shall be prohibited between the hours of 10:00 a.m. and 5:00 p.m.

(e) New meters to provide construction water service shall not be issued.

(f) Water service ("Will Serve") letters will be issued, but such letters will be issued with the condition that permanent metered service to any newly created lot will be prohibited until the city council determines that the mandatory rationing under the provisions of this chapter is no longer in effect or may be reduced to that required under sections 12-4.04 or 12-4.05 herein. (Ord. No. 481, § 1, 6-17-91; Ord. No. 484, § 2, 7-15-91; Ord. No. 487, § I, 9-3-91)

Sec. 12-4.09. Phase VI shortage.

(a) A phase VI shortage shall be declared whenever the city council determines that it is likely that the city water department will suffer a shortage of between thirty (30) and thirty-five (35) percent in its water supplies.

(b) No customer with a meter size of one and one-half (1½) inches or larger shall make, cause, use or permit the use of an amount of water from the city water department for any purpose during each billing period in excess of a target quantity of sixty-five (65) percent. The target quantity shall be determined by the amount of water used on the customer's premises during the corresponding billing period of a base period to be defined by the city council.

(c) For meter sizes of one (1) inch or less, a target quantity shall be computed and will be the larger of the following amounts:

- (1) The average of the water usage for all similar sized meters during the corresponding billing period of a base period to be defined by the city council; or
- (2) The amount of water used on the customer's premises during the corresponding billing period to be defined by the city council.

No customer with a meter size of one (1) inch or less shall make, cause, use or permit the use of an amount of water from the city water department for any purpose during each billing period in excess of sixty-five (65) percent of the target quantity for that same billing period.

(d) The watering of lawns, landscapes or other turf area with water supplied by the city water department shall be limited to not more than every third day and shall be prohibited between the hours of 10:00 a.m. and 5:00 p.m.

(e) New meters to provide construction water service shall not be issued.

(f) Water service ("Will Serve") letters will be issued, but such letters will be issued with the condition that permanent metered service to any newly created lot will be prohibited until the city council determines that the mandatory rationing under the provisions of this chapter is no longer in effect or may be reduced to that required under sections 12-4.04 or 12-4.05 herein. (Ord. No. 481, § 1, 6-17-91; Ord. No. 484, § 2, 7-15-91; Ord. No. 487, § I, 9-3-91)

Sec. 12-4.10. Phase VII shortage.

(a) A phase VII shortage shall be declared whenever the city council determines that it is likely that the city water department will suffer a shortage of between thirty-five (35) and forty (40) percent in its water supplies.

(b) No customer with a meter size of one and one-half (1½) inches or larger shall make, cause, use or permit the use of an amount of water from the city water department for any purpose during each billing period in excess of a target quantity of sixty (60) percent. The target quantity shall be determined by the amount of water used on the customer's premises during the corresponding billing period of a base period to be defined by the city council.

(c) For meter sizes of one (1) inch or less, a target quantity shall be computed and will be the larger of the following amounts:

- (1) The average of the water usage for all similar sized meters during the corresponding billing period of a base period to be defined by the city council; or
- (2) The amount of water used on the customer's premises during the corresponding billing period to be defined by the city council.

No customer with a meter size of one (1) inch or less shall make, cause, use or permit the use of an amount of water from the city water department for any purpose during each billing period in excess of sixty (60) percent of the target quantity for that same billing period.

(d) The watering of lawns, landscapes or other turf area with water supplied by the city water department shall be prohibited, except that trees and shrubs may be watered at any time by bucket.

(e) All meters to provide construction water shall be removed.

(f) Water service ("Will Serve") letters will be issued, but such letters will be issued with the condition that permanent metered service to any newly created lot will be prohibited until the city council determines that the mandatory rationing under the provisions of this chapter is no longer in effect or may be reduced to that required under sections 12-4.04 or 12-4.05.

(g) No new permanent meters shall be installed. (Ord. No. 481, § 1, 6-17-91; Ord. No. 487, § I, 9-3-91)

Sec. 12-4.11. Phase VIII shortage.

(a) A phase VIII shortage shall be declared whenever the city council determines that it is likely that the city water department will suffer a shortage of between forty (40) and forty-five (45) percent in its water supplies.

(b) No customer with a meter size of one and one-half (1½) inches or larger shall make, cause, use or permit the use of an amount of water from the city water department for any purpose during each billing period in excess of a target quantity of forty-five (45) percent. The target quantity shall be determined by the amount of water used on the customer's premises during the corresponding billing period of a base period to be defined by the city council.

(c) For meter sizes of one (1) inch or less, a target quantity shall be computed and will be the larger of the following amounts:

- (1) The average of the water usage for all similar sized meters during the corresponding billing period of a base period to be defined by the city council; or
- (2) The amount of water used on the customer's premises during the corresponding billing period to be defined by the city council

No customer with a meter size of one (1) inch or less shall make, cause, use or permit the use of an amount of water from the city water department for any purpose during each billing period in excess of fifty-five (55) percent of the target quantity for that same billing period

(d) The watering of lawns, landscapes or other turf area with water supplied by the city water department shall be prohibited, except that trees and shrubs may be watered at any time by bucket.

(e) All meters to provide construction water shall be removed.

(f) Water service ("Will Serve") letters will be issued, but such letters will be issued with the condition that permanent metered service to any newly created lot will be prohibited until the city council determines that the mandatory rationing under the provisions of this chapter is no longer in effect or may be reduced to that required under section 12-4.04 or 12-4.05 herein.

(g) Issuance of permanent metered service to all new lots shall be prohibited until mandatory rationing is no longer in effect. (Ord. No. 481, § 1, 6-17-91; Ord. No. 487, § I, 9-3-91)

Sec. 12-4.12. Phase IX shortage.

(a) A phase IX shortage shall be declared whenever the city council determines that it is likely that the city water department will suffer a shortage of between forty-five (45) and fifty (50) percent in its water supplies.

(b) No customer with a meter size of one and one-half (1½) inches or larger shall make, cause, use or permit the use of an amount of water from the city water department for any purpose during each billing period in excess of a target quantity of fifty (50) percent. The target quantity shall be determined by the amount of water used on the customer's premises during the corresponding billing period of a base period to be defined by the city council.

(c) For meter sizes of one (1) inch or less, a target quantity shall be computed and will be the larger of the following amounts:

- (1) The average of the water usage for all similar sized meters during the corresponding billing period of a base period to be defined by the city council; or
- (2) The amount of water used on the customer's premises during the corresponding billing period to be defined by the city council.

No customer with a meter size of one (1) inch or less shall make, cause, use or permit the use of an amount of water from the city water department for any purpose during each billing period in excess of fifty (50) percent of the target quantity for that same billing period.

(d) The watering of lawns, landscapes or other turf area, including trees and shrubs, with water supplied by the city water department shall be prohibited.

(e) All meters to provide construction water shall be removed.

(f) Water service ("Will Serve") letters will be issued, but such letters will be issued with the condition that permanent metered service to any newly created lot will be prohibited until the board of directors determines that the mandatory rationing under the provisions of this chapter is no longer in effect or may be reduced to that required under section 12-4.04 or 12-4.05 herein.

(g) Issuance of permanent metered service to all new lots shall be prohibited until mandatory rationing is no longer in effect. (Ord. No. 481, § 1, 6-17-91; Ord. No. 487, § I, 9-3-91)

Sec. 12-4.13. Relief from compliance.

(a) A customer may file an application for relief from any provision of this chapter. A water conservation appeals board ("board") shall be appointed by the city council to review, administer and grant such relief, which board shall be made up of residents of the City of Lomita who shall serve for two-year terms. The number of board members and operating panels of said board shall be at the discretion of the city council. The city administrator or his

or his or her designee shall serve as an ex officio, nonvoting member of the board and of each operating panel of the board.

(b) The application for relief may include a request that the customer be relieved, in whole or in part, from the water use curtailment of any provision or provisions herein.

(c) In determining whether to grant relief, and the nature of any relief, the board shall take into consideration all relevant factors, including but not limited to:

- (1) Whether any additional reduction in water consumption will result in unemployment;
- (2) Whether additional members have been added to the household;
- (3) Whether additional landscape property had been added to the property since the corresponding billing period of the base year;
- (4) Changes in vacancy factors in multifamily housing;
- (5) Increased number of employees in commercial, industrial and governmental offices;
- (6) Increased production requiring increased process water;
- (7) Water used during new construction;
- (8) Adjustments to water use caused by emergency health or safety hazards;
- (9) First filling of a permit-constructed swimming pool; and
- (10) Water use necessary for reasons related to family health.

(d) In order to be considered, an application for relief must be filed with the city water department within twenty (20) days from the date of receipt of a water bill or other notice which establishes the adverse impact of this chapter on applicant. No relief shall be granted unless the customer shows that he or she has achieved the maximum practical reduction in water consumption other than in the specific areas in which relief is being sought. No relief shall be granted to any customer who, when requested by the board, fails to provide any information necessary for resolution of the customer's application for relief. The board's decision shall be issued within twenty (20) days and provided to the customer. (Ord. No. 481, § 1, 6-17-91; Ord. No. 486, § I, 9-3-91; Ord. No. 489, § I, 11-4-91)

Sec. 12-4.14. Notification of customers and banking of water usage credits.

(a) Each customer will be notified on his or her bill as to what the target quantity for water usage will be for the applicable billing period and any earned credits as provided in this section.

(b) If a customer uses less than the target quantity in any given month in which a phased water conservation plan is in force, the difference between the target quantity and the amount actually used by the customer will be deemed water usage credits. One (1) water usage credit will be earned for each full cubic foot of water below the target quantity of water that is used by the customer.

(c) Earned water usage credits will continue to accrue from month to month, for as long as the city remains in a continuous phased water conservation plan, until the customer uses more than the target quantity of water specified by the phased water conservation plan. At that time, before the city imposes the penalties specified in section 12-4.15, the city will subtract the accrued water usage credits from the excess usage of that particular month. If the water usage credits exceed the excess usage for that month, then the city will not impose the section 12-4.15 penalties on the customer. Any water usage credits that exceed the excess usage for that month will be rolled over to be used at a future date for as long as the city remains in a continuous phased water conservation plan. If the water usage credits are less than the excess usage amount for that month, then the city will impose penalties based on the difference between the accrued water usage credits and the excess usage for that particular month. (Ord. No. 481, § 1, 6-17-91; Ord. No. 500, § 2, 8-3-92)

Sec. 12-4.15. Failure to comply.

(a) Any customer receiving notice of a third or subsequent violation of the water use prohibitions of section 12-4.06(d), 12-4.07(d), 12-4.08(d), 12-4.09(d), 12-4.10(d), 12-4.11(d), or 12-4.12(d) shall have the right to a hearing by the city administrator or his designee within fifteen (15) days of a mailing or other delivery of the notice of violation.

(b) Violation by any customer of the water use prohibitions of sections 12-406(d), 12-4 07(d), 12-4.08(d), 12-4.09(d), 12-4.10(d), 12-4.11(d) and 12-4.12(d) shall be penalized as follows:

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

(c) All moneys collected by the city water department pursuant to this chapter shall be deposited in that city's general fund as reimbursement for the costs and expenses of administering this conservation plan.

(d) The city shall give notice of violation to the customer committing the violation as follows:

- (1) Notice of violation of the water use curtailment provisions of sections 12-4.04(b), 12-4.04(c), 12-4.05(b), 12-4.05(c), 12-4.06(b), 12-4.06(c), 12-4.07(b), 12-4.07(c), 12-4.08(b), 12-4.08(c), 12-4.09(b), 12-4.09(c), 12-4.10(b), 12-4.10(c), 12-4.11(b), 12-4.11(c), 12-4.12(b) and 12-4.12(c) or of first and second violations of the water use prohibitions of sections 12-4.06(d), 12-4.07(d), 12-4.08(d), 12-4.09(d), 12-4.10(d), 12-4.11(d), and 12-4.12(d), shall be given to the customer in person or by regular mail.
- (2) Notice of third or subsequent violations of the water use prohibitions of sections 12-4.06(d), 12-4.07(d), 12-4.08(d), 12-4.09(d), 12-4.10(d), 12-4.11(d), and 12-4.12(d) shall be given in writing in the following manner:
 - a. By giving notice to the customer personally at both the billing and service addresses;
 - b. If the customer is absent from or unavailable at the premises at which the violation occurred, by leaving a copy with some person of suitable age and discretion at the premises and sending a copy through the regular mail to the address at which the customer is normally billed; or
 - c. If a person of suitable age or discretion cannot be found, then by affixing a copy in a conspicuous place at the premises at which the violation occurred and also sending a copy through the regular mail to the address at which the customer is normally billed.

(e) The notice shall contain a description of the facts of the violation, a statement of the possible penalties for each violation, and a statement informing the customer of his right to a

hearing on the merits of the violation pursuant to section 12-4.16 (Ord. No. 481, § 1, 6-17-91; Ord. No. 484, §§ 3-5, 7-15-91)

Sec. 12-4.16. Hearing regarding violations.

(a) Any customer receiving notice of a third or subsequent violations of the water use prohibitions of section 12-4.07(d), 12-4.08(d), 12-4.09(d), 12-4.10(d), 12-4.11(d) or 12-4.12(d) shall have a right to a hearing by the city administrator or his designee within fifteen (15) days of a mailing or other delivery of the notice of violation.

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

(c) The decision of the Director of Public Works shall be final except for judicial review. (Ord. No. 481, § 1, 6-17-91)

Sec. 12-4.17. Additional water shortage measures.

The city council may order implementation for water conservation measures in addition to those set forth in sections 12-4.04, 12-4.05, 12-4.06, 12-4.07, 12-4.08, 12-4.09, 12-4.10, 12-4.11 and 12-4.12. (Ord. No. 481, § 1, 6-17-91)

Sec. 12-4.18 Public health and safety not to be affected.

Nothing in this chapter shall be construed to require the city to curtail the supply of water to any customer when such water is required by that customer to maintain an adequate level of public health and safety. (Ord. No. 481, § 1, 6-17-91)

APPENDIX H

***CITY OF LOMITA DRAFT WATER
SHORTAGE CONTINGENCY PLAN
RESOLUTION TO ADOPT A STAGE OF ACTION***

----DRAFT----

Resolution No. _____

A RESOLUTION OF THE CITY OF LOMITA DECLARING
A PHASE ___ WATER SHORTAGE.

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 Lomita, receives a major portion of its water supplies from the SWP; and

WHEREAS, MWD 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 Section 12-4 of the City of Lomita Municipal Code, the Council may implement the applicable provisions of the Phased Water Conservation Plan of the City of Lomita in order to protect the public welfare and safety.

NOW, THEREFORE, BE IT RESOLVED that the City Council of the City of Lomita as the governing body of the City of Lomita's Waterworks, does hereby declare that there currently exists a water supply shortage in all areas and; therefore, under the provisions of Section 12-4 of the Municipal Code of the City of Lomita, a Phase ___ Shortage is declared in the City of Lomita. Under the Phase ___ Shortage, the following conditions shall apply:

1. A customer shall be billed at his or her normal established water rate for all water used up to a "target quantity" of ___ percent of the "base quantity". The base quantity shall be defined as follows:
 - a. For meter sizes of one and one-half inches or more, the "base quantity" shall be defined as the amount of water used on the customer's premises during a corresponding billing period of the base period from _____ to _____.
 - b. For meter sizes of one inch or less, a base quantity shall be computer by averaging the water usage for all similar size meters during a corresponding billing period of the base period from _____ to _____.

A conservation surcharge of \$_____ per 100 cubic feet (ccf) shall be assessed for water usage in excess of the "target quantity" but less than the "base quantity". A conservation

surcharge of \$____ per ccf shall be assessed for water usage in excess of the “base quantity”. These surcharges shall be in addition to the normal established water rate.

2. No new meters to provide construction and grading water shall be issued.
3. Water service letters will be issued but will be conditioned that permanent meters will be prohibited until the water shortage is reduced to a Phase __ Shortage (__ percent) or less.

The water prohibitions will become effective immediately. The conservation surcharges for water usage in excess of the target quantities will become effective on a customer’s first full billing period on or after _____, 20XX.

PASSED, APPROVED, AND ADOPTED THIS __ day of _____, 20__

MAYOR

ATTEST:

CITY CLERK

City of Lomita

24300 Narbonne Avenue, Lomita, CA 90717

(310)325-7110

