

2010
URBAN WATER
MANAGEMENT PLAN



WATER DIVISION
164 W. MAGNOLIA BOULEVARD
JUNE 2011

Preface

The City of Burbank, A sustainable City

Burbank strives to be a City that maintains a sustainable society, one that can provide services for residents while reversing the trends of increased pollution and environmental degradation. It is important to emphasize that the means to reach sustainability is through community effort and providing tools with which to build it. Burbank's 2010 Urban Water Master Plan discusses many of the tools used by the City and its customers to protect or extend its water resources. This Preface highlights the City's paradigm shift towards a holistic approach to sustainability.

In January 2008, the City Council integrated all the City's environmental programs under one umbrella by adopting the Sustainability Action Plan. This plan is based on the United Nations 2005 Urban Environmental Accords (Accords) which provide a series of goals or "action items" that can be adopted at the local level to achieve urban sustainability, promote healthy economies, advance social equity, and protect the world's ecosystem. The action items can be used as reference points for setting achievable goals and standards that can be tailored to fit the specific structures of individual communities. The Accords include 21 specific actions organized into seven urban themes designed to collectively address urban sustainability concerns. The urban themes range from Energy to Waste Reduction to Water. The Action Items for the water area include Water Efficiency, Drinking Water Protection, and Wastewater Reduction.

Sustainability cannot be achieved without community effort. Burbank City Council established the Sustainable Burbank Task Force (SBTF), a 15-member advisory body, on October 14, 2008. The SBTF advises and makes recommendations to the City Council on matters related to the implementation of the City of Burbank Sustainability Action Plan, and helps engage the community by participating in various public education, outreach, and promotional activities related to environmental sustainability. The SBTF meets monthly to discuss ways to improve sustainable efforts in Burbank. It contains various sub-committees which focus on specific issues two of which are Water Efficiency and Storm Water Management.

Recycled water is a sustainable source of water. For over 40 years, Burbank has been distributing recycled water which has been treated at the Burbank Water Reclamation Plant. BWP operates the recycled water system and delivered over 660 million gallons (MG) of water in 2010 to recycled water customers. BWP prepared a Recycled Water Master Plan (RWMP) in October 2007 that was subsequently endorsed by the BWP Board and City Council. The 2007 RWMP outlined a phased expansion of the recycled water system to ultimately increase the use of recycled water delivered by BWP to one billion gallons per year. The RWMP was updated in October 2010 to include additional projects which were subsequently determined to be economically feasible. The 2010 update was endorsed by the BWP Board and City Council in October 2010.

The projects recommended in the 2007 RWMP include five major pipeline extensions and an upgrade of pump station PS-1. The 2010 update to the RWMP added five projects to the system expansion,

Preface (cont'd)

including one major pipeline extension. Over 106,000 linear feet (LF) of pipelines have or will be constructed as part of the system expansion

The City has begun to evaluate stormwater mitigation methods with the concept of stormwater infiltration and recharge to promote low-impact development (LID). LID improves the effectiveness of groundwater recharge and extraction options by minimizing the loss of recharge areas and requiring certain construction practices that increase or maintain the absorption capability of lands overlying groundwater basins. BWP is completing a pilot percolation (Green Street) project on the Lake Street frontage of its campus.

The Green Street improvements to Lake Street will capture and percolate stormwater from the public right of way. Stormwater will be captured and receive pre-treatment, temporary storage, and recharge the groundwater. Capturing stormwater reduces pollution and increases groundwater recharge. First flush contaminants are captured on site and do not flow to the Los Angeles River and Pacific Ocean. Citywide adoption of infiltration technology will ultimately result in more percolation to the aquifer. This increased percolation will result in higher aquifer levels, minimize subsidence, and decrease pumping costs.

The City of Burbank adopted a voluntary Green Building and Sustainable Architecture program for new construction in order to:

- Reduce energy and water consumption
- Improve indoor and outdoor air quality
- Encourage use of renewable resources and recycled materials
- Divert construction and demolition debris away from landfills

BWP's own campus has been upgraded with new construction following these sustainable codes. The Sustainable Sites Initiative (SITES) announced the selection of the BWP's campus as one of the first landscapes to participate in a new program testing the nation's first rating system for green landscape design, construction and maintenance. This Burbank project is among a number of international pilot projects evaluating the new SITES rating system for sustainable landscapes, with and without buildings. Sustainable landscapes can clean water, reduce pollution and restore habitats, while providing significant economic and social benefits to land owners and cities.

BWP plans to offer and provide its customers more opportunities, incentives and education related to conservation and the smart use of water and energy. The residents and businesses of Burbank have readily responded to calls for water conservation action which produced dramatic results. While the Governor recently declared California's drought over, the reality is that Burbank is located in a semi-arid region where cycles of drought will always occur. BWP's best policy is to be as well-positioned as possible for times of water shortage, and the actions taken today will have long-term positive impacts for future generations.

Preface (cont'd)

Some of the tools that move sustainability practices forward are BWP's many communications outlets. In response to changing and challenging environmental issues, BWP staff has significantly ramped up customer programs and customer communications over the past decade. BWP staff makes use of a variety of media, both active and passive, to engage and inform individuals and organizations about programs and services available to them. BWP hopes that these communication efforts will encourage and motivate the community to preserve resources with heightened attention to sustainability.

In 2009, BWP adopted a policy that annually commits two percent of water sales to fund water conservation in the City. This policy is modeled after the Public Goods Charge mandated by the State of California on electric utilities, such as BWP, to fund energy efficiency, renewable energy, low income programs, and research and development. These funds directly support water use efficiency programs. BWP's operating philosophy has been to create long-term and durable water conservation by replacing inefficient water-using fixtures like toilets, faucet aerators, and showerheads with high-efficiency options. Outdoor water use was specifically targeted, as this is the number one residential use of water and which provides the largest opportunities for conservation without impacting plant or lawn health and required on changes in practice.

During Fiscal Year 2009-10 the goal was to reduce total potable water usage by 2%, or 138 million gallons. With several new water conservation efforts, particularly three day-per-week landscape watering, and a huge amount of information and education provided, the City responded in a big way with water use in Burbank dropping by an estimated 400 million gallons. Sincere thanks are due to the people of Burbank who embraced the message and made changes.

One of the newest tools to help build sustainability in Burbank is Smart Grid. This will allow the City and its residential customers to take advantage of evolving technology and innovations in water and energy. Smart Grid describes the modern water and electric infrastructure composed of advanced meters and systems for enhanced customer and utility efficiency.

With Smart Grid, BWP aims to: enhance and enable customer water and energy efficiency through choice and control; improve and optimize efficiency and reliability; reduce CO2 emissions; support plug-in electric vehicles; and integrate renewable energy sources such as wind and solar. With this information, the utility can make more informed decisions to better manage the entire system and respond more quickly to problems at individual addresses. The program also will help Burbank meet its goal of supplying 33 percent of its customers' energy needs from renewable resources by 2020.

The Smart Grid program is part of BWP's ongoing commitment to provide Burbank residents with safe, reliable and affordable services and to work to preserve the Earth's natural resources.

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EXECUTIVE SUMMARY

California Urban Water Management Planning Act, Water Code Sections 10610 through 10657 requires many urban water suppliers assess the reliability of its water sources over a 20-year planning horizon every five years through the preparation of an Urban Water Management Plan (Plan). Preparation of a Plan is required for suppliers that either provide over 3,000 acre-feet (AF) of water annually or serve 3,000 or more connections. The City of Burbank has over 26,000 water services and supplies more than 17,000 AF of potable water annually.

Plans were completed at the end of 1985, 1990, 1995, 2000, and 2005. In November 2009, Senate Bill 7 (SBx7-7) was passed into law, mandating a 20 percent per capita reduction in water use by December 31, 2020, along with an interim 10 percent reduction by the end of 2015. In order for urban water suppliers to incorporate these new changes into their upcoming 2010 plans, a six month deadline extension was granted, with the 2010 plans being due on or before July 1, 2011.

The Plan must include:

- Assessment of past and future water supplies and demands
- Evaluation of the future reliability of Burbank's water supplies
- Information regarding water conservation and water management activities
- Discussion of water recycling activities
- Contingency planning for water shortages

Highlights of changes in requirements since the 2005 Plan and where the information is contained are:

- Water use projections are required for lower-income households (Section 3.3)
- Indirect potable reuse is required to be described, quantified, and a determination made as to technical and economic feasibility (Section 5.5)
- The water use reduction goals from SBX7-7 (20x 2020) such as baseline use, urban water use target, interim urban water use target must be included with supporting data and calculations (Section 3.2)

Burbank Water and Power (BWP) Staff prepared this 2010 Urban Water Management Plan which was subsequently approved by the Burbank City Council on June 7, 2011. Public involvement and comment was solicited through BWP's website.

The Plan meets all the statutory requirements and includes the calculation of a 2020 water use target of 156 gallons per capita per day (gpcd) and an interim (2015) target of 175 gpcd. Burbank's 2010 water use was less than the 2020 target at 147 gpcd. BWP expects to sustain this level of water use through continued water conservation efforts, continued water system maintenance, and maximizing recycled water use.

The City's potable water supply is composed of surface water resources provided by the Metropolitan Water District (MWD) and groundwater resources. There are factors which could affect the reliability of groundwater supply which BWP cannot control, such as new water quality standards for hexavalent chromium, which may be difficult to meet. This uncertainty is bridged by BWP's status as a member agency of the MWD. MWD stated, through its 2010 Regional Urban Water Management Plan, that it has adequate supplies for its service area through 2035.

SECTION 1: INTRODUCTION/PLAN PREPARATION

1.1 Purpose of the Plan

This Plan has been prepared as a result of the California Urban Water Management Planning Act (Act), Water Code Sections 10610 through 10657. The Act requires urban water suppliers that either provide over 3,000 acre-feet of water annually or serve 3,000 or more connections to assess every five years the reliability of its water sources over a 20-year planning horizon through the preparation of an Urban Water Management Plan (Plan). The Plan must include:

- Assessment of past and future water supplies and demands
- Evaluation of the future reliability of Burbank's water supplies
- Information regarding water conservation and water management activities
- Discussion of water recycling activities
- Contingency planning for water shortages

The complete text of the Act is available on the internet at www.water.ca.gov/urbanwatermanagement. DWR's guidance contains a checklist of the requirements of the Act. The completed 2010 Urban Water Management Plan checklist for the City of Burbank is contained in Appendix A.

Subject to applicable laws and regulations, the City Council of the City of Burbank (the City or Burbank) establishes the policies under which the utility operates. As such, the Council has established the policy that the City will continue and expand its current efforts to encourage the efficient use of water in its service area.

1.2 Previous Efforts

The City prepared Urban Water Management Plans in 1986, 1990, 1995, 2000 and 2005. In 1992, the City prepared an Urban Water Shortage Contingency Plan, which was also required by the Legislature, and was integrated into the Urban Water Management Plan beginning in 1995. In 1997, the City prepared an Integrated Water Resources Plan containing some of the same kinds of information about expected water supplies and demands. The basic information from the Integrated Water Resources Plan has been incorporated into subsequent Urban Water Management Plans.

1.3 Plan Preparation

Coordinated efforts were made by Burbank Water and Power (BWP) in preparation to the 2010 UWMP. BWP worked with Metropolitan Water District of Southern California (MWD), Upper Los Angeles River Area (ULARA) Watermaster, County of Los Angeles, City of Glendale, Burbank Public Works Department, and the General Public in developing the 2010 UWMP. BWP also notified the public, via a post on its website, 60 days prior to a public hearing at BWP's Board Meeting that the Plan is in review. This posting also encouraged the involvement of the public with diverse social, cultural, and economic elements. Another website posting made the 2010 UWMP Draft version available for the public review and also

notified of the time and place of the City Council hearing to adopt the 2010 UWMP. By Section 10635(b), Burbank understands and will provide written assurance that a copy of the 2010 UWMP will be provided to the City Council no later than 60 days after its submission to Department of Water Resources (DWR). Copies of the notifications and postings related to the Plan are contained in Appendix B.

Table 1-1: Coordination with appropriate agencies

Coordinating Agencies	Participated in developing the plan	Commented on the draft	Attended public meetings*	Contacted for assistance	Sent a copy of the draft Plan	Sent a notice of intent to adopt
MWD	X			X		
City of Burbank-CDD	X		X	X	X	
City of Burbank-Public Works	X		X			
County of Los Angeles						X
City of Glendale				X	X	
General Public			X	X	X	X

* Public hearing regarding draft plan adoption

1.4 Plan Adoption

State law requires the Plan be adopted by the City Council prior to July 1, 2011. The Burbank Water and Power Board endorsed the Plan at its meeting on June 2nd, 2011. A public hearing regarding the adoption of the Plan was held at Burbank’s City Council Meeting on June 7th, 2011. At the conclusion of the hearing, the City Council adopted the Plan via resolution and a copy of the adopted resolution is included in Appendices B. The City submitted the adopted UWMP to the California State Library and also posted the Plan on BWP’s website. Burbank will implement its adopted Plan through the actions and policies of the Water Division of BWP.

1.5 Organization of This Document

- Section 1 is an introduction and a brief history of Burbank’s urban water management plan
- Section 2 provides background information on the City of Burbank including:
 - Historical and expected future development
 - Climate and demographic information, including historical and projected population figures
 - Description of the water system
 - Past and current water use data

- Section 3 covers the City's projected water demands
- Section 4 describes the City's water supplies
- Section 5 is about water recycling
- Section 6 is the Water Shortage Contingency Plan
- Section 7 describes demand management measures which have been and will be enacted

The Appendices provide detailed information that is best presented outside the body of the Plan text.

1.6 Project Team

The preparation of this report was under the overall guidance of Bill Mace, AGM-Water systems. The report was prepared by Matt Elsner, Principal Civil Engineer and Bob Doxsee, Civil Engineering Associate, of the BWP Water Division. Support was also provided by Tony Umphenour, Water Quality Analyst, and Shadi Bader, Civil Engineering Assistant.

SECTION 2: SERVICE AREA INFORMATION

2.1 Historical Background

The City of Burbank is located in southern California approximately 12 miles north of downtown Los Angeles, as shown on Figure 2-1. The City covers approximately 17 square miles (10,880 acres) of the eastern end of the San Fernando Valley. The City of Los Angeles lies to the north and west and the City of Glendale to the south and east.

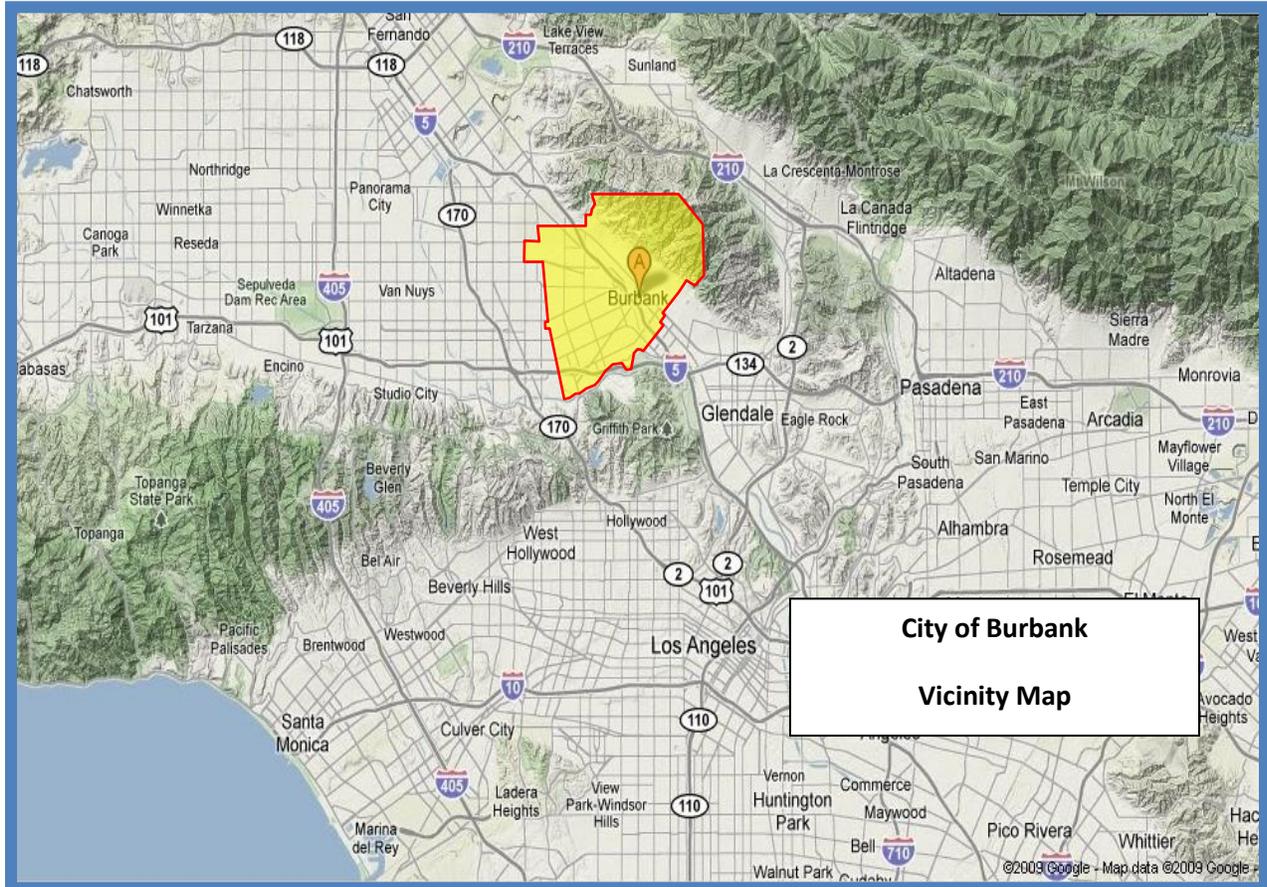


Figure 2-1: Burbank Vicinity Map

There has been a community known as Burbank since 1887. The City of Burbank was officially established in 1911. The municipal water and electric utility was founded in 1913. In 1914, an additional 9.4 square miles were annexed, establishing today's total area of 17.1 square miles. Burbank was one of the 13 founding agencies of the Metropolitan Water District of Southern California (MWD), in 1928.

World War II brought rapid industrial growth. During the war, 94,000 people were employed at Lockheed facilities within the City. Population grew to 53,899 by 1943, and to 78,577 by 1950. Growth continued at a slower rate for the next 20 years. In 1970 the population was 88,871. By 1980 the population had decreased to 84,625 and the average age of citizens had increased. The 1980s brought

new growth, including several high-rise office buildings and dozens of new apartment and condominium buildings on lots that originally had single-family homes although they were zoned for multi-family. Population had increased to 93,643 by 1990.

Lockheed closed its facilities in 1991, when there was also a period of economic recession, but the population did not decline. The 1990s brought expansion by the movie and television industry and a revitalization of the downtown area. The population grew to 100,316 by the 2000 census. Since 2000, former Lockheed and other industrial sites have been redeveloped for commercial and retail uses. Downtown renewal continues. There has been a return to intensive multi-family residential construction that replaces, or sometimes adds on to, older single-family and small multi-family units.

2.2 Population and Demographics

Burbank has a current population of 108,469. There are an estimated 43,338 housing units, approximately half single-family and half multi-family, with a 2.89% vacancy rate. The 42,085 occupied housing units average 2.517 persons per household. Group quarters house 826 people. (Demographic data is from the California Department of Finance’s Demographic Research Unit) Employment is 92,514 according to Southern California Association of Governments (SCAG). Employment is in a variety of commercial and industrial operations, notably entertainment/media, retail, health care, and manufacturing. Population is expected to reach over 130,000 by the year 2035. A summary of current and future population predictions is shown in Table 2-1. This table, and many others required by the DWR for electronic upload into their systems are contained in Appendix C.

Table 2-1: Population Projections

Year	2005	2010	2015	2020	2025	2030	2035
Population	106,739	108,469	115,986	120,428	124,732	128,888	132,877

The greatest amount of growth in the next several decades is expected to be in the commercial area. The City expects to see an intensification of commercial land use in the downtown area and an increased amount of mixed-use development (i.e., residential/commercial/retail) along transportation corridors and transportation nodes. New residential development will be predominantly multi-family which will increase the population density due to redevelopment of older single-family homes on lots zoned for multi-family developments. Redevelopment of areas adjacent to downtown is expected to continue, especially along the South San Fernando Boulevard corridor and the area around the Metrolink station. The smallest expected growth will be in the number of single-family residential dwelling units.

2.3 Climate

Burbank’s climate is warm during summer when temperatures tend to be in the 80’s and cool during winter when temperatures tend to be in the 50’s. A summary of monthly climate data is contained in Table 2-2 below. The warmest month of the year is August with an average maximum temperature of

almost 90° F, while the coldest month of the year is December with an average minimum temperature of nearly 41° F. Temperature variations between night and day tend to be moderate during summer with a difference that can reach 27° F, and moderate during winter with an average difference of 25° F.

The historical annual average precipitation in Burbank is 17.5 inches. Winter months tend to be wetter than summer months. The wettest month of the year is February with an average rainfall of 4.3 inches.

Table 2-2: Climate Data for Burbank

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Max °F	67.5	69.5	70.6	74.9	77.5	83.2	88.9	89.9	87.1	81.5	73.5	67.9
Mean °F	54.8	56.9	58.4	62.2	65.9	70.8	75.5	76.2	73.5	67.6	59.5	54.6
Min °F	42.0	44.3	46.2	49.5	54.2	58.3	62.1	62.4	59.9	53.6	45.4	41.3
Precip. (in)	3.56	4.29	3.88	1.02	0.37	0.12	0.02	0.18	0.30	0.55	1.05	2.15
ET (in)	2.20	2.45	3.64	4.74	5.31	6.06	6.75	6.66	5.01	3.95	2.73	2.31
ET deficit (in)	0.00	0.00	0.00	3.72	4.94	5.94	6.73	6.48	4.71	3.40	1.68	0.16

There is considerable water demand for landscape irrigation because Burbank’s climate is favorable for growing a variety of plants. The total average ET deficit, which must be made up with irrigation, is almost 38 in/year. Water meter data indicates that historic irrigation rates between 42 in/yr and 48 in/yr are common for turf areas.

2.4 Water System

BWP provides potable water and recycled water to customers within the City. BWP's potable water is supplied by a combination of MWD imported water from the State Water Project and the Colorado River supplies and groundwater from local wells. The groundwater is treated for the removal of Volatile Organic Compounds (VOCs) at the Burbank Operable Unit (BOU) prior to entering the distribution system. Recycled water is produced at the Burbank Water Reclamation Plant (BWRP), operated by the Burbank Public Works Department, and is delivered via an independent distribution system. Section 3 contains more information about potable water supplies, and Section 5 describes the recycled water system.

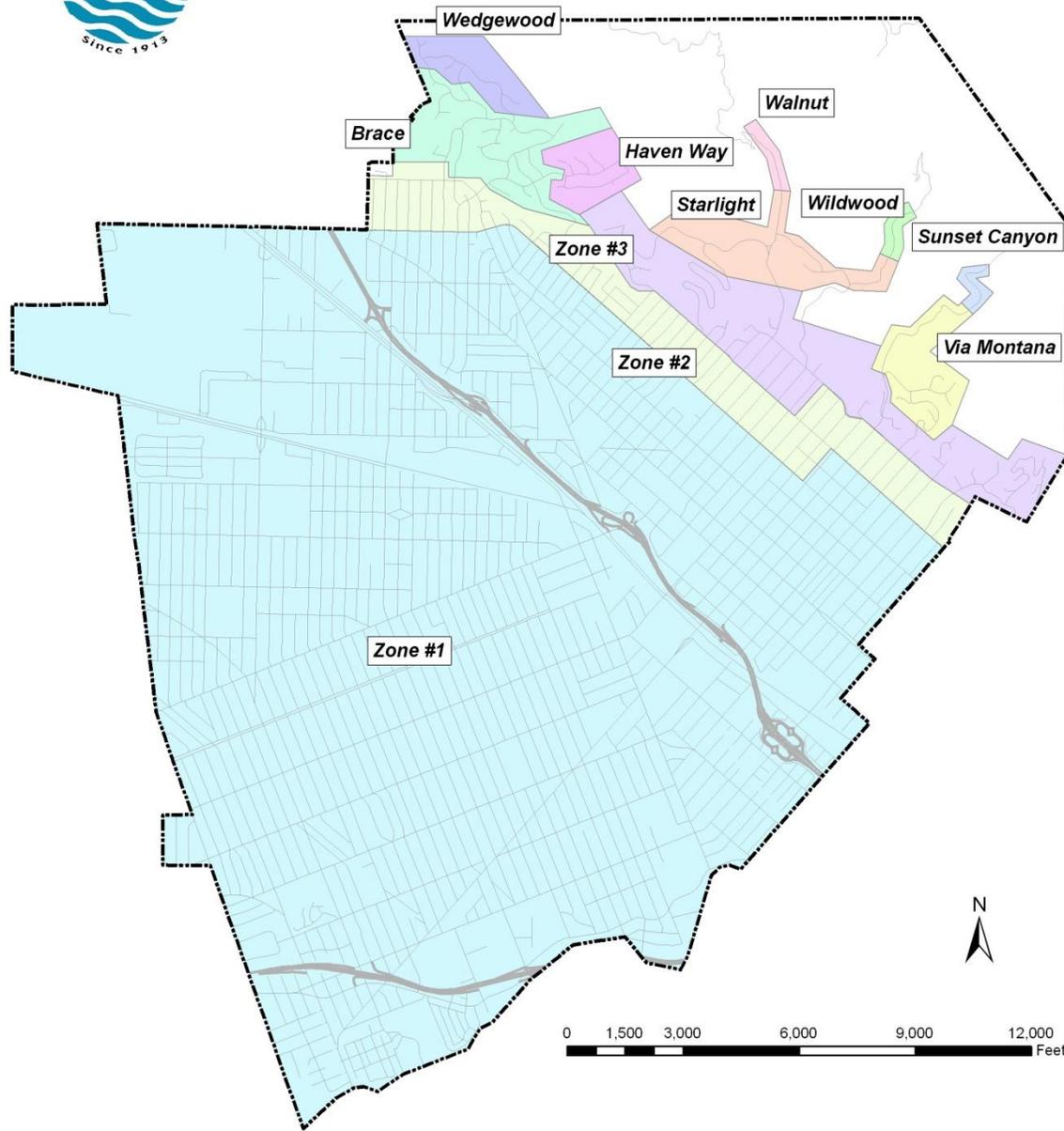
The Burbank potable water system is composed of approximately 280 miles of pipelines ranging in size from 30 inches to 1-1/2 inches in diameter, booster pumps, reservoirs, wells, MWD connections, and over 26,000 service connections. The water distribution system consists of three major pressure zones and 8 smaller hillside zones (see Figure 2-2). The three largest pressure zones are denoted Zones 1, 2, and 3. Zone 1 comprises approximately 90% of the total City service area and is the principle pressure zone. The water demand in Zone 1 represents 88% of the total City demand. The ground surface elevations in Zone 1 range from 480 feet at the southerly boundary at Chavez Street and Linden Avenue, to 830 feet on Bel Aire Drive at Orange Grove Avenue. The reservoirs that serve Zone 1 have a hydraulic elevation of 904 feet.

Almost all of the water supplies enter the system in Zone 1. The only exception is that some water from one of the five MWD connections (B-5) can feed Zone 2. Water is pumped from Zone 1 to Zones 2 and 3 at hydraulic elevations 991 and 1,156 feet above sea level, respectively. From Zones 2 and 3, water is pumped to the eight hillside zones through successive pumping stations.

The system has 21 tanks and reservoirs ranging in capacity from 13,500 gallons to 25 million gallons. The combined storage capability of all the reservoirs is approximately 53 million gallons. The storage capability for Zone 1 is approximately 43 million gallons, 81% of the total system storage.

Water demands by individual customers are subject to wide fluctuations from day to day and throughout the year. Burbank's system has been designed to recognize the inherent variability of water demands. Large storage reservoirs are included in the system and these reservoirs provide for hourly flow/demand variations throughout the distribution system. The storage capacity is large enough to allow for short interruptions (1 to 3 days at average flow) in the water supply.

All of Burbank's pressure zones except for two very small zones are open zones (i.e., are open to the atmosphere and float on the reservoirs' water levels). The two closed pressure zones are a zone near the DeBell Golf Course and a zone in Wildwood Canyon Park. Therefore it is not possible to reduce losses, leakage, or consumption by lowering pressures as would be feasible in some closed distribution systems. Burbank has very low rates of unaccounted for water in the range of 2.2% annually. This is discussed further in Section 3.1.



Potable Water Pressure Zones

Twells 5/9/11

Figure 2-2: Burbank's Potable Water System and Pressure Zones

SECTION 3: SYSTEM DEMANDS

3.1 Past and Current Water Use

Burbank's water use is for urban purposes which encompass residential, industrial, commercial, and governmental uses. There are no agricultural water services although some services are used exclusively for landscape irrigation. Burbank maintains records of the following:

- Water delivered from MWD
- Groundwater produced and treated
- Water sales in units of 100 cubic feet (CCF) by class of service
- Number of water meters for each of the customer classes
- Recycled water delivered

The following customer classes are contained in BWP's billing system:

- Single-family Residential
- Multi-family Residential
- Commercial
- Industrial
- Recycled
- City
- School
- Fire Protection

Recycled water is discussed separately in Section 5, while the rest of Section 3 predominantly focuses on potable water. The annual potable water sales for 2006 through 2010 averaged 8,934,302 CCF (6,683 million gallons or 20,510 acre-feet). Table 3-1 identifies the breakdown of water sales by class.

Table 3-1: Water Sales Percentages by Class

Residential uses	73.4%
Commercial uses	19.9%
Industrial uses	3.8%
City Departments	2.8%
Fire Protection	0.1%

Over the same five years, the average water demand was 18.7 million gallons per day (MGD). Annual maximum day demands averaged 27.6 MGD. The maximum day usually occurs in the period from June to September. Burbank's weather in the last five years was relatively moderate which may have significantly impacted water demands.

Variation in water demand is attributed to changes in temperature and rainfall, as well as changes in economic conditions, and scarcity (i.e., requests to conserve during droughts). An exceptionally wet,

cool year will reduce the water use, while a hot, dry year will increase water use. Demands may be higher than average during drought years, although calls for conservation can reduce demand.

Unaccounted-for water averaged 2.2% over the past five years, compared to 4.0% for 2000-2005. Unaccounted-for water is calculated as the difference between water delivered to the system, changes in storage or reservoir levels, and metered sales to customers. Unaccounted-for water is lost through unmetered use (flow testing, reservoir cleaning, main flushing, fire fighting, etc.), faulty meters, evaporation, and system leaks. It should be noted that the industry average for unaccounted-for water is 7%.

Burbank's water demands have decreased compared to the early 1970s. The average daily water demand decreased from 24.0 to 19.6 MGD between 1970 and 1999. Maximum day water demands were 37 to 39 MGD in the early 1970s, but have not exceeded 36 MGD since 1976. The gallons per capita per day (gpcd) figures decreased due to efficient water use after major droughts in the 1970s, 1990s, and especially in response to the water shortage of the past few years. Industrial use also reduced since some major industries have closed. Stepped-up programs of water meter maintenance, testing, and replacement have clearly helped to reduce unaccounted-for water.

Water use varies with the seasons and also during the course of each day. Water use for the maximum day of the year generally is 150% of (one and one-half times) the average daily water use. On a hot summer day, water use reaches its peak at 7 p.m. and its minimum at 3 a.m. The rate of water use at the peak hour of the maximum day is about 200% of (twice) the rate for the entire maximum day, while the minimum flow rate at 3 a.m. is about 40% of the maximum day demand.

Non-residential users, which include government, schools, industrial and commercial entities, consume approximately 27% of the total system water use. They do not contribute very much to the peak hour and peak season. School and park landscape irrigation may have a slight effect on water use patterns due to its 200% monthly peak from winter to summer. Residential water use, on the other hand, dominates the system water use pattern. It is the major contributor of the system peak hour water use.

2005 and 2010 calendar year water deliveries to customers by water use sector are presented in Tables 3-2 and 3-3, respectively. Single-family and multi-family water uses were combined as the residential class in BWP's billing system prior to July 2010. Therefore, the single-family and multi-family data from June 2010 through January 2011 was used to determine typical splits between these two types of users for other time periods. This split was used to separate the residential amount for January through May 2010 as well as 2005 data.

Limited existing records of dedicated irrigation meters, which are not a separate class in Burbank's billing system, provide an estimated number of services and amounts of water used for landscape irrigation. The irrigation meters and volumes were subtracted from the other classes and put into a separate water use sector. The City and Schools classes in Burbank's billing system were combined to form the Institutional/Governmental sector, while Fire Protection and Temporary make up the sector

labeled “Other”. Existing data was used for 2005, where available, along with estimates based on the 2010 splits.

Table 3-2: 2005 Actual Water Deliveries

Water Use Sector	Metered		Unmetered		Total Volume (AF)
	# of Accounts	Volume (AF)	# of Accounts	Volume (AF)	
Single-family	18,733	10,216	0	0	10,216
Multi-family	3,345	4,970	0	0	4,970
Commercial	2,975	3,800	0	0	3,800
Industrial	117	858	0	0	858
Institutional/ Governmental	174	772	0	0	772
Landscape	187	413	30	1	414
Other	758	20	0	0	20
TOTAL	26,289	21,049	30	1	21,050

Table 3-3: 2010 Actual Water Deliveries

Water Use Sector	Metered		Unmetered		Total Volume (AF)
	# of Accounts	Volume (AF)	# of Accounts	Volume (AF)	
Single-family	18,681	8,663	0	0	8,663
Multi-family	3,353	4,027	0	0	4,027
Commercial	3,018	3,409	0	0	3,409
Industrial	110	660	0	0	660
Institutional/ Governmental	165	460	0	0	460
Landscape	187	336	30	1	337
Other	888	35	0	0	35
TOTAL	26,402	17,590	30	1	17,591

3.2 Baselines and Targets

The Water Conservation Bill of 2009 required urban water suppliers to reduce per capita water use 20% by 2020. DWR prepared a manual with methodologies for calculating compliance. The first step to compliance is determining the target which will represent a 20% reduction in water sales. Calculating the target begins with collecting the data contained in Table 3-4 below.

Recycled water use in 2008 was less than 10% of total deliveries. As a result, the City is required to use a ten-year base period for the calculation. Any ten-year base period between 1995 and 2010 can be selected for the base period. After evaluating recorded water production for the calendar years from 1995 through 2010, the ten-year base period of 1996 through 2005 was selected. Similarly, a five year base period between 2003 and 2010 must be selected for another step of the calculation. The years 2003 through 2007 will be used for the five-year period.

Table 3-4: 2010 Base Period Information

Base Period	Parameter	Value
10 to 15-year Base Period	2008 Total Water Deliveries	23,909 AF
	2008 Total Volume of Delivered Recycled Water*	2,032 AF
	2008 Recycled Water as a Percent of Total Deliveries	8.5%
	Number of Years in Base Period	10 years
	Year Beginning Base Period	1996
	Year Ending Base Period Range	2005
5-Year Base Period	Number of Years in Base Period	5 years
	Year beginning Base Period Range	2003
	Year Ending Base Period Range	2007

Note: *Includes power plant recycled water use.

Table 3-5 contains the water supply and population data for each of the ten years in the base period and the resulting daily per capita water use figures. Water use is BWP's total potable production which comprises MWD treated water and local treated groundwater. The population data was obtained from the California Department of Finance's website. Averaging over the ten-year base period results in a base daily per capita water use of 195 gpcd for the ten-year base period.

Table 3-5: Ten-Year Base Period (1996-2005)

Sequence Year	Calendar Year	Distribution System Population	Daily System Gross Water Use (mgd)	Annual Daily per Capita Water Use (gpcd)
Year 1	1996	97,302	19	191
Year 2	1997	97,326	20	201
Year 3	1998	98,303	19	188
Year 4	1999	98,817	20	198
Year 5	2000	100,316	21	205
Year 6	2001	101,457	20	196
Year 7	2002	102,741	20	196
Year 8	2003	104,287	20	194
Year 9	2004	105,112	20	194
Year 10	2005	105,985	19	184
Base Daily Per Capita Water Use (average)				195

Per DWR’s calculation method 1, the Urban Water Use Target for the year 2020 is 80% of the ten-year base period average. Accordingly, 80% of 195 is equal to 156 gpcd.

Regulations require this target be less than 95% of the five-year base period annual average. The five-year base period data is contained in Table 3-6 below.

Table 3-6: Five-Year Base Period (2003-2007)

Sequence Year	Calendar Year	Distribution System Population	Daily System Gross Water Use (mgd)	Annual Daily per Capita Water Use (gpcd)
Year 1	2003	104,287	20	194
Year 2	2004	105,112	20	194
Year 3	2005	105,985	19	184
Year 4	2006	106,475	20	188
Year 5	2007	106,886	21	192
Base Daily Per Capita Water Use (average)				190

The five-year base period average use is 190 gpcd. 95% of that value is 181 gpcd, which is greater than 156 gpcd ten-year target. **Therefore, the Burbank’s urban water use target for the year 2020 is 156 gpcd.**

Regulations also require meeting a 5-year Interim Urban Water Use Target in the year 2015. The 2015 target is the average of the 2020 Urban Water Use Target (156 gpcd) and the base use (195 gpcd). This results in a target use of 175 gpcd. Burbank’s water use is already well below this target.

3.3 Water Demand Projections

Burbank’s water use reached the required 20x2020 levels in the 2010 Calendar Year, although 2010 had mild weather which may have contributed to the reduction. The City believes it can sustain low water use with continued conservation efforts. The FY 2011/12 financial plan projects five years of water sales (out to FY 2015/16) which are less than the 2015 Interim Urban Water Use Target. The expected water use for 2015 is 137 gpcd, including system losses.

Using available population projections, the subsequent years of 2020, 2025, 2030 and 2035 are estimated using the same gallons per capita rates as planned for 2015. Projected deliveries by water use classes are estimated using the 2010 percentage breakdown. Table 3-7 contains the projected demands by water use classes.

Table 3-7: Future Water Deliveries

Water Use Sector	2015 (AF)	2020 (AF)	2025 (AF)	2030 (AF)	2035 (AF)
Single-family	8,479	8,828	9,144	9,449	9,741
Multi-family	3,941	4,104	4,251	4,392	4,528
Commercial	3,337	3,474	3,598	3,718	3,833
Industrial	646	673	697	720	742
Institutional/ Governmental	450	469	486	502	517
Landscape	330	343	355	366	378
Other	34	36	37	38	39
TOTAL*	17,217	17,927	18,568	19,185	19,778

* Note: Does not include system losses

The single-family and multi-family residential classes include low-income households. Water demands attributed to low-income households were estimated by calculating the percentages of accounts under the Burbank Water and Power Lifeline program compared with the total numbers of residential units, and applying the results to the projected single-family and multi-family water demands. (Single-family used the total water service accounts, while multi-family used the housing units from Department of Finance Table E-5, 1/1/2010.) This assumes that the water use patterns are similar among all residential customers, and that the numbers of low-income households will increase over time in proportion to the total households. The estimated volumes are shown in Table 3-8.

Table 3-8: Projected Low Income Water Demands

Water Use Sector	2015 (AF)	2020 (AF)	2025 (AF)	2030 (AF)	2035 (AF)
Single-family	80	80	85	90	90
Multi-family	320	330	340	355	365
TOTAL	400	410	425	445	455

To complete the calculation of total water demands, non-potable water uses and losses must be evaluated so the totals can be compared to total water supplies. Table 3-9 contains a summary of the expected amounts of groundwater recharge, recycled water deliveries (described in Section 5), and system losses. Losses are estimated conservatively at 3% of potable water deliveries. Losses for 2010 were approximately 1% of potable water deliveries.

Table 3-9: Additional Water Uses and Losses

Water Use	2005 (AF)	2010 (AF)	2015 (AF)	2020 (AF)	2025 (AF)	2030 (AF)
Groundwater Recharge*	0	2,034	2,100	500	300	200
Recycled Water	995	2,010	3,160	3,160	3,160	3,160
System Losses	790	178	534	554	573	594
TOTAL	1,785	4,222	5,794	4,214	4,033	3,954

Note:* assumes purchase of 4,200 AF/yr of Physical Solution water as described in section 4.2.

Table 3-10 combines the data from several tables to calculate the total water use. Total deliveries are from Tables 3-2, 3-3, and 3-7. The City plans to exchange 500 AF of recycled water with LADWP for landscape uses by 2015, increasing to 2,000 AF/year by 2020.

DWR requires water wholesalers and retailers to exchange water demand information. Burbank routinely works with MWD to coordinate actual recorded water demand amounts and water demand projections. Table 3-11 contains the City’s projected demands on MWD as developed in this Plan. MWD will receive a final version of Burbank’s Plan.

Table 3-10: Total Water Use

Water Use	2005 (AF)	2010 (AF)	2015 (AF)	2020 (AF)	2025 (AF)	2030 (AF)
Total Deliveries (from Table 3-7)	21,049	17,590	17,217	17,927	18,568	19,185
Sales to Other Agencies*	0	0	500	2,000	2,000	2,000
Additional Uses and Losses (from Table 3-9)	1,785	4,222	5,794	4,214	4,033	3,954
TOTAL	22,835	21,813	23,511	24,141	24,601	25,139

*Recycled water exchanges with LADWP

Table 3-11: Anticipated MWD Demands

Wholesaler	2010 (AF)	2015 (AF)	2020 (AF)	2025 (AF)	2030 (AF)	2035 (AF)
MWD Treated Potable	7,852	6,750	7,481	8,141	8,779	9,391
MWD Untreated GW Replenishment*	2,034	2,100	500	300	200	100

*Assumes purchase of 4,200 AF/yr of Physical Solution water as described in section 4.2.

3.4 Water Use Reduction Plan

Burbank is confident that measures already in place will meet the 20% urban water use reduction goals. As mentioned before, the City's 2010 water use reached the 2020 target level. Dramatic reductions in water use have been achieved in the last three years by programs which include the following:

- Sustainable Water Use Ordinance
- Commercial/multi-family water fixture upgrade program
- Conservation water rate structure
- Retrofit Upon Resale Ordinance
- Expansion of recycled water system
- Green Home House Call Program

Conservation rates and rules apply to Burbank's residential and business properties. Some programs, such as mandatory fixture upgrades and recycled water connections, apply to business. Recycled water utilization is required by City adoption of Recycled Water Zones as a requirement of water services (not optional). There are financial savings as well as costs associated with improvements in water use efficiency. The programs and policies regarding water use appear to be working.

SECTION 4: SYSTEM SUPPLIES

4.1 Metropolitan Water District

Burbank obtained about 44% of its potable water from MWD in the Calendar Year 2010. MWD imports water for most of Southern California via two sources. Water from Northern California is imported by way of the State Water Project (SWP) and water from the Colorado River reaches the region through the Colorado River Aqueduct (CRA). MWD treats imported water and delivers it to the City at the treated domestic rate of \$744/AF increasing to \$794 on January 1, 2012.

Burbank has five potable water connections to the MWD system, with a maximum rated capacity of 115 cubic feet per second (51,610 gallons per minute). See Table 4-1 below. The MWD system pressure is high enough to deliver water to Burbank's Zone 1 and Zone 2 without pumping, but booster pumps are available at MWD connections B-1 and B-2 to increase the capacity for periods of high demand.

Table 4-1: MWD Service Connection Capacity

MWD Connection	Minimum Flow	Normal Range	90% of Maximum	Maximum Flow
B-1	3.0 CFS	15.0 - 22.0 CFS	27.0 CFS	30.0 CFS
B-2	1.5 CFS	3.0 - 7.0 CFS	13.5 CFS	15.0 CFS
B-3	1.0 CFS	3.0 - 4.0 CFS	9.0 CFS	10.0 CFS
B-4	2.0 CFS	11.0 - 14.0 CFS	18.0 CFS	20.0 CFS
B-5	4.0 CFS	7.0 - 26.0 CFS	36.0 CFS	40.0 CFS
Total	11.5 CFS	39.0 - 73.0 CFS	103.5 CFS	115.0 CFS

Burbank's MWD service connections are not currently equipped for maximum production. If demands in the distant future make it necessary, improvements to the service connections could be performed to realize their maximum potential. The nominal maximum capacity of the five connections is vastly more than expected requirements for the next 25 years. (The water supply tables in this Plan use expected requirements not maximum capacity.)

Burbank's demand for treated MWD water has actually decreased since groundwater treatment facilities described in Section 4.2 have come on-line. In 1990, Burbank used approximately 23,000 AF of treated MWD water. Burbank used approximately 13,700 AF in 2005 and 7,852 AF in 2010. The projection for 2035 is 9,391 AF. (See Table 4-2) The City will continue to depend on MWD treated water for blending purposes and to supplement its local groundwater supplies.

Table 4-2: Water Supplies – Current and Projected

Source	2010	2015	2020	2025	2030	2035
Potable:						
MWD Potable	7,852	6,750	7,481	8,141	8,779	9,391
Supplier-Produced Groundwater	9,917	11,000	11,000	11,000	11,000	11,000
Potable Total*	17,769	17,750	18,481	19,141	19,779	20,391
Non-potable:						
MWD Replenishment	2,034	2,100	500	300	200	100
Recycled Water	2,010	3,660	5,160	5,160	5,160	5,160
Non-Potable Total	4,044	5,760	5,660	5,460	5,360	5,260

*Note: Includes system losses

Recently the City completed a new MWD connection (B-6) to deliver untreated imported water to the existing Pacoima and Lopez spreading grounds in the north San Fernando Valley for groundwater replenishment. In 2010 the City purchased 2,034 AF at the rate of \$484 per AF. A schematic of the project is shown in Figure 4-1 below.

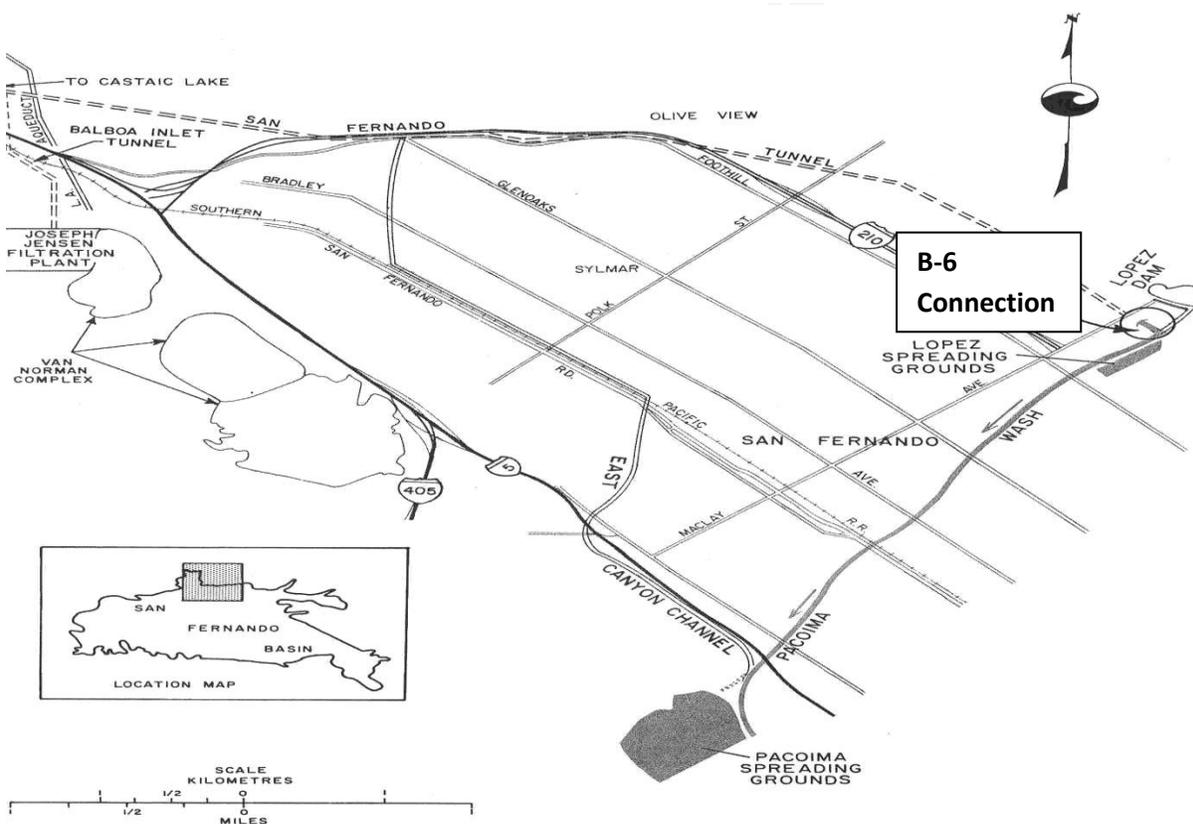


Figure 4-1: Burbank's Groundwater Recharge Project

MWD’s projected demands for Burbank are shown in Table 4-3. These demands are higher than BWP’s projections (Table 4-2) which account for a decrease in water demand due to focused conservation and recycled water exchanges with the City of Los Angeles. Therefore, MWD’s projections are clearly conservative and will be able to reliably provide water at BWP’s water demand projections.

Table 4-3: Wholesale Supplies

Source	2015	2020	2025	2030	2035
MWD Potable	13,293	12,743	12,074	11,411	10,825
MWD Replenishment*	5,200	6,200	6,200	6,200	6,200

Note* Assumes no purchase of Physical Solution water from LADWP as described in Section 4.2

4.2 Groundwater

Burbank extracts its groundwater from the San Fernando Basin (SFB). The SFB consists of 112,000 acres and comprises over 90% of the total San Fernando Valley fill. A map of the basin is shown in Figure 4-2 below. The San Rafael Hills, Verdugo Mountains, and San Gabriel Mountains bound the SFB on the east and northeast. The northern border of the basin is defined by the San Gabriel Mountains and the eroded south limb of the Little Tujunga Syncline which separates it from the Sylmar Basin. The basin is bounded on the northwest and west by the Santa Susana Mountains and Simi Hills and on the south by the Santa Monica Mountains.

Burbank has historically utilized its groundwater resources. Imported water from MWD in the early years was a supplemental supply. During this time, there was well and pumping capacity to serve most of the City’s needs with local groundwater. As the City grew, it used more MWD water, but groundwater was still a major source.

The groundwater rights of the City of Burbank are defined by the Judgment in Superior Court Case No. 650079, entitled "The City of Los Angeles, a Municipal Corporation, Plaintiff, vs. City of San Fernando, et. al., Defendants" (the Judgment). The Judgment, signed on January 26, 1979 and contained in Appendix D, determined that the City of Los Angeles owned the rights to the native groundwater (derived from precipitation) of the San Fernando Basin. The San Fernando Basin is the underlying groundwater basin of the San Fernando Valley, including Burbank. However, Burbank also gained rights in the agreement.

According to the Judgment, Burbank has a right to “import return” water in the amount of 20% of all the water it delivers. Twenty percent of the water delivered within Burbank’s service area, including imported water, groundwater, and recycled water is considered to be returned to the groundwater by percolation and is credited to the City. For example, total deliveries in the 2009-10 water year were 20,513 AF, so the 20% return credit is calculated to be approximately 4,103 AF. The City can accumulate stored water credits if it extracts less than the 20%. It can also purchase MWD water for groundwater replenishment spreading in order to add to its stored water credits.

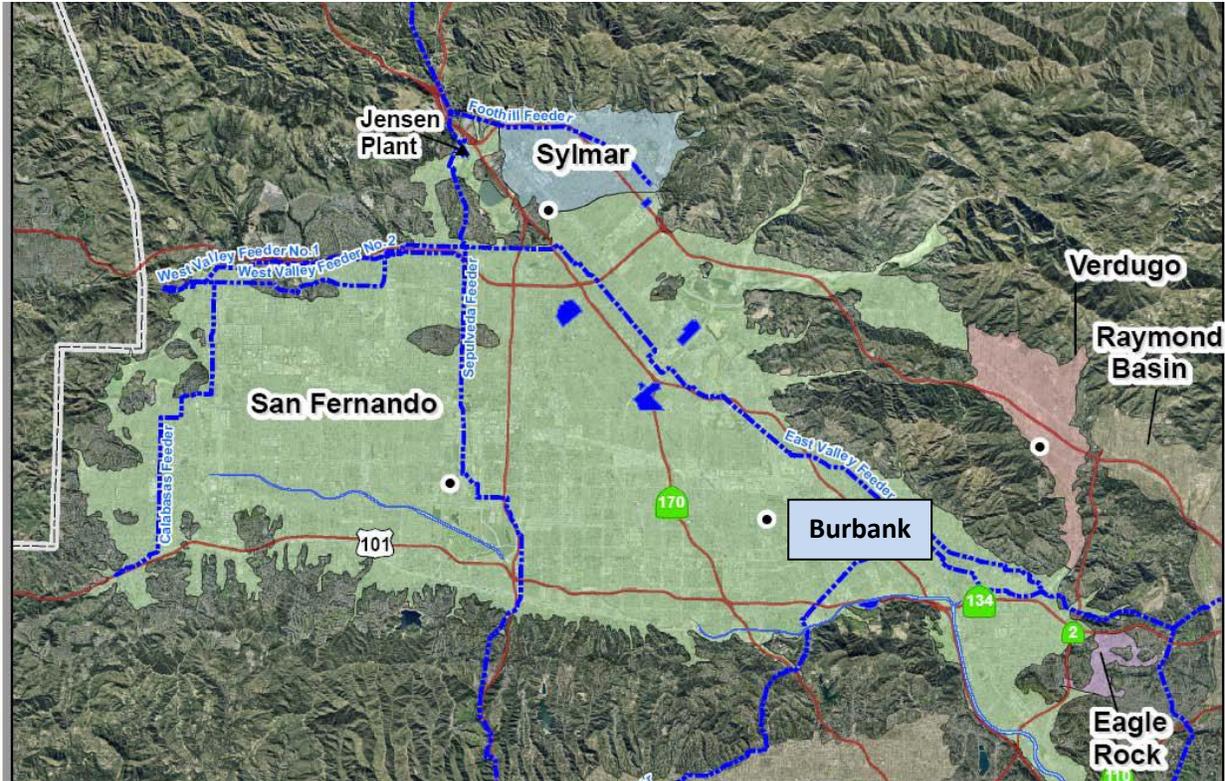


Figure 4-2: San Fernando Groundwater Basin

Burbank has the right to purchase an additional 4,200 AF annually of groundwater from the Los Angeles Department of Water and Power (LADWP) for a rate as calculated in the Judgment under the physical solution provision of the document. Valhalla Cemetery is entitled by the Judgment to purchase up to 300 AF of physical solution water out of Burbank’s 4,200 AF, and Lockheed may purchase 25 AF. Burbank’s stored water credit was 13,341 AF as of October 1, 2010, the beginning of Water Year 2010-11.

Groundwater withdrawals and credits from the San Fernando Groundwater Basin are monitored by the Upper Los Angeles River Area (ULARA) Watermaster. The Watermaster prepares an annual report which describes pumping activities for the basin. Additional information regarding the San Fernando Basin can be found on the ULARA Watermaster’s website at <http://ularawatermaster.ladwp.com/>.

Volatile Organic Compound (VOC) contamination of the groundwater underlying Burbank was discovered in 1980. At this time, similar contamination was being found in all parts of the country. All of the City’s production wells were found to have varying degrees of VOC contamination, resulting in a complete loss of the groundwater supply until treatment plants could be built. Burbank now has two treatment plants for VOC removal, described in the following sections and shown in Figure 4-3 below. Also, inorganic substances like nitrate and chromium have presented problems which are discussed in the following sections.

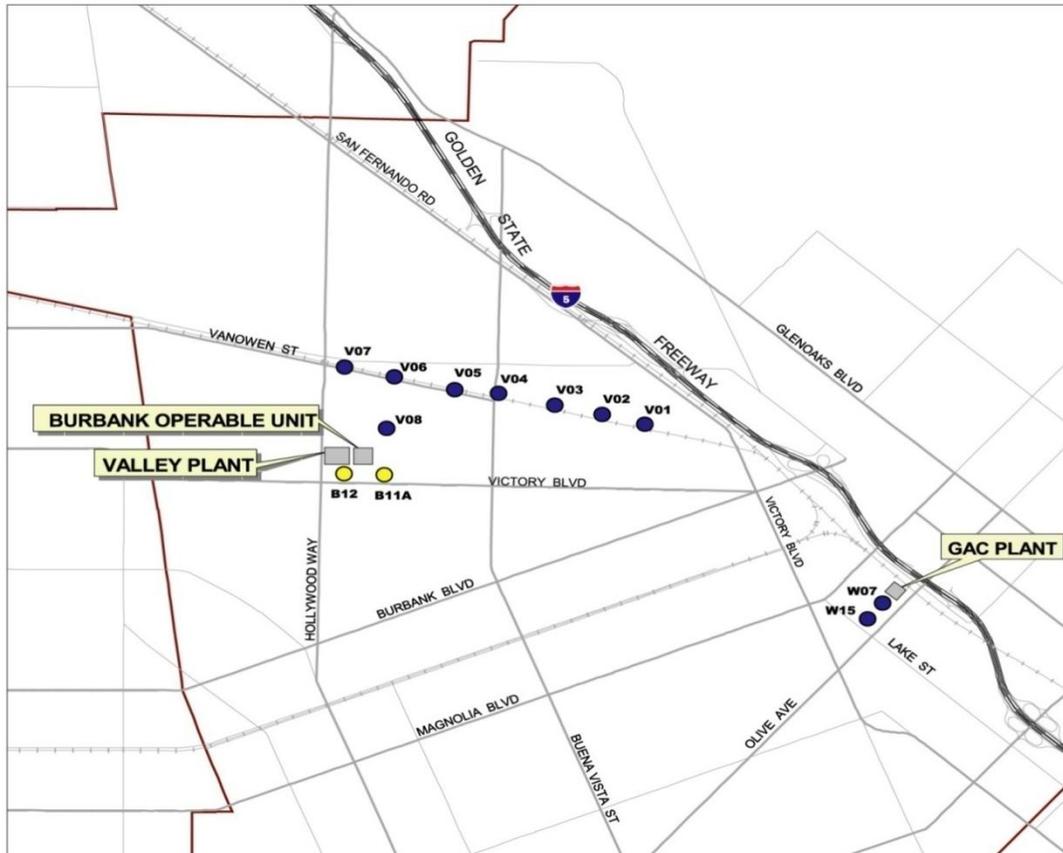


Figure 4-3: Burbank's Groundwater Production Facilities

4.3 Valley/Burbank Operable Unit

The Burbank Operable Unit (BOU) is an EPA-led project to clean up groundwater impacted by historical Lockheed-Martin industrial releases. Completion of this project restored a major component to the City's water supply. The Consent Decree for the project was "entered" on March 25, 1992. The City started construction on June 23, 1993 and the project began operation in January 1996.

The eight wells and the VOC removal treatment plant were operated by Lockheed-Martin until March 2001, when the City of Burbank took over operation. Plant design capacity is 9,000 gallons per minute (gpm). Assuming 85% availability, the annual production would be 12,336 AF per year, about two thirds of the City's current potable water requirement. However, mechanical problems and requirements to blend water to lower nitrate and chromium concentrations in conjunction with system capacity to accept this blended water had reduced the production levels to less than 10,000 AF for most years.

A summary of recent groundwater pumping is contained in Table 4-4. The projected output for 2011 is 11,334 AF due to ongoing plant improvements and modifications in the past five years. The City expects to produce 11,000 AF per year through 2035.

Table 4-4: Groundwater Volume Pumped

	2006	2007	2008	2009	2010
Groundwater Produced	10,368	9,782	6,999	10,202	9,917
Groundwater as a Percent of Total Water Supply	43%	39%	29%	47%	44%

Elevated levels of nitrate in the groundwater make it necessary to blend with MWD water to meet drinking water standards. The Valley Pumping Plant was designed to allow blending of BOU water with MWD water to reduce nitrate levels. Subsequently, hexavalent chromium has also been found in the groundwater. City Council established a five parts per billion (ppb) total chromium limit in Burbank's water, pending new federal and state regulations for hexavalent chromium. Groundwater from the BOU must also be blended to meet this chromium limit.

Chromium blending results in acceptable nitrate levels. If the MWD supply were to be interrupted, production of groundwater from the Valley/BOU plant would also need to be stopped to avoid exceeding the nitrate standard and the City Council's chromium limit. Recent water quality data shows decreased nitrate levels at the BOU wells indicating it could supply the City without blending in case of an emergency MWD shutdown. However, the facility's drinking water permit requires blending and would have to be amended by California Department of Public Health (CDPH). The City Council would also have to lift its self-imposed chromium limit prior to operating without the MWD blend. The Consent Decree calls for treatment at the rate of 9,000 gpm throughout the year, but the blending requirements interfere with this during low water demand months.

If the groundwater chromium levels were to increase or a new hexavalent chromium limit is enacted below the current City Council standard, production from the plant might be reduced or terminated. The City is cooperating with neighboring agencies to expedite site investigations, which should lead to enforcement actions, and to find effective chromium treatment technologies. It may eventually be necessary to build additional treatment processes for chromium removal, with funding expected to come from parties found to be responsible for the contamination.

4.4 Lake Street GAC

MWD has expanded its role in Southern California's region-wide water resources management over the past two decades. In 1993, the MWD initiated its Integrated Resources Planning (IRP) process, the purpose of which was to develop a Preferred Resource Mix consisting of local water resources, imported supplies, and demand-side management. One of the City's water supply projects, the Lake Street Granular Activated Carbon (GAC) Treatment Plant, was part of the IRP process, and has operated under MWD's Ground Water Recovery Program (GRP). Since Burbank needs to purchase water to replenish the groundwater supply, the groundwater supply can be thought of as storage as well as an actual source. This is still valuable enough that MWD was willing to subsidize its operation through the GRP.

The Lake Street GAC Plant first produced water in November 1992. The plant can treat water from City Wells 7 and 15 to remove VOCs. The flow capacity is 2000 gallons per minute, giving a production capacity of 200 to 250 AF per month, allowing for carbon changes about every two months. The plant would normally be operated only during the warmer months of the year, due to seasonal demand and operational requirements for the other treatment plant.

Treatment at Lake Street GAC can be counted as part of the requirement; however, Lake Street also has chromium concentrations above 5 ppb and no source of blending water. As of 2010, according to CDPH, the Lake Street GAC can supply Burbank with the treated water. However, the Lake Street GAC has remained shut down since March 2001 because of hexavalent chromium levels in the groundwater exceeds the limit of five parts per billion adopted by the City Council. New chromium regulations, when issued, will lead to decisions on the future use of these wells. No production from the GAC plant is included in the current Plan. Lake Street GAC was not designed to remove chromium and blending facilities are not available.

4.5 Stormwater Capture/Infiltration

The City has begun to evaluate Stormwater Mitigation Methods with the concept of stormwater infiltration and recharge to promote low-impact development (LID). LID improves the effectiveness of groundwater recharge and extraction options by minimizing the loss of recharge areas and requiring certain construction practices that increase or maintain the absorption capability of lands overlying groundwater basins. BWP is completing a pilot percolation (Green Street) project on the Lake Street frontage of its campus.

The Green Street improvements to Lake Street will capture and percolate stormwater from the public right of way. Stormwater will be captured and receive pre-treatment, temporary storage, and recharge the groundwater. Capturing stormwater reduces pollution and increases groundwater recharge. First flush contaminants are captured on site and do not flow to the Los Angeles River and Pacific Ocean. Citywide adoption of infiltration technology will ultimately result in more percolation to the aquifer. This increased percolation will result in higher aquifer levels, minimize subsidence, and decrease pumping costs.

The five Stormwater Mitigation Methods the City is implementing with Green Street technology, along with a brief description of each are:

Permeable Pavers & Gravel Reservoir

Modular permeable pavers are structural units, such as concrete blocks, bricks, or reinforced plastic mats, with regularly inter-dispersed void areas used to create a load-bearing pavement surface. The void areas are filled with permeable materials (gravel, sand, or grass turf) to create a system that allows for the infiltration of stormwater. Permeable pavers provide water quality benefits in addition to groundwater recharge and a reduction in stormwater volume. The use of permeable pavers results in a reduction of the effective impermeable area on a site.

Infiltration Planter Bump-Outs

A stormwater bump-out is a vegetated curb extension that protrudes into the street either mid-block or at an intersection, creating a new curb some distance from the existing curb. A bump-out is composed of a layer of stone that is topped with soil and plants. An inlet or curb-cut directs runoff into the bump-out structure where it can be stored, infiltrated, and taken up by the plants (evapotranspiration). Excess runoff is permitted to leave the system and flow to an existing inlet. The vegetation of the bump-out is low enough to allow for open site lines of traffic. Aside from managing stormwater, bump-outs also help with traffic calming, and when located at crosswalks, they provide a pedestrian safety benefit by reducing the street crossing distance.

Filtration Planters at Open Space

A stormwater planter is a specialized planter installed into the sidewalk area that is designed to manage street and sidewalk runoff. It is normally rectangular, with four concrete sides providing structure and curbs for the planter. The planter is lined with a permeable fabric, filled with gravel or stone, and topped off with soil, plants, and, sometimes, trees. The top of the soil in the planter is lower in elevation than the sidewalk, allowing for runoff to flow into the planter through an inlet at street level. These planters manage stormwater by providing storage, infiltration, and evapotranspiration of runoff. Excess runoff is directed into an overflow pipe connected to the existing combined sewer pipe.

Silva Cell System

Silva Cell for trees creates an underground frame that can bear traffic loads and in addition offers freely rootable space that allows urban trees to grow into large and beautiful specimen by the catchment of excess rain or stormwater. It also creates large absorption capacity with uncompacted soil in the cell.

Kristar Tree Pod System

A biofiltration system using conventional tree box filter design criteria that has proven to be effective at the removal of ultra-fine and dissolved pollutants normally found in storm water runoff. A pre-filtration chamber separates and retains gross pollutants such as trash, debris and coarse sediments – pollutants known to reduce efficiency and increase maintenance frequency of typical tree box filters. Collected gross pollutants are removed from the pre-filtration chamber through the maintenance access cover, without disturbing the biofiltration area.

4.6 Exchanges or Transfers

DWR requires water suppliers to describe the opportunities for exchanges or transfers of water on a short-term or long-term basis. Burbank is not currently planning any long-term exchanges or transfers of water. Burbank has two system interconnections with the City of Glendale. These have been used on several occasions to solve short-term operational problems, such as a need for extra water because an MWD connection or pump station is out of service. The policy has been to return the same amount of water, rather than buying and selling water. If MWD had to ration water during a drought, both cities would be affected. The interconnections would only help if one city had extra groundwater capacity to share. Future system interties with the City of Los Angeles would be beneficial. As a member agency of

the MWD, Burbank may contribute to the development of exchanges, transfers and water banking through its MWD water purchases.

4.7 Desalinated Water

Burbank, located inland in the San Fernando Valley, does not see an opportunity for desalination of ocean water. The groundwater is not brackish. To remove substances like chromium or nitrate, membrane processes like those often used for desalination may one day be used. However, disposal of the brine from such processes is more of a problem than for seaside locations which can send it to an ocean outfall.

As a member agency of the MWD, Burbank supports local water supply projects like the development of desalinated water supplies. Burbank is in favor of desalination projects, if they prove to meet standards of engineering and economic feasibility.

4.8 Future Water Projects

The following water supply-related projects are underway:

- Chromium removal pilot study
- Expanded water recycling (discussed in Section 5)
- Aggressive conservation measures (detailed in Section 6)

Burbank has no other future water projects or water supply programs to meet the total projected water use.

SECTION 5: WATER RECYCLING

5.1 Wastewater Collection and Treatment

Wastewater generated within the City is collected and conveyed by approximately 230 miles of underground wastewater pipelines located within the City. The collection system includes sewer pipelines ranging in diameter from 6" to 30", 2 pump stations, and 19 diversion manholes. The Los Angeles 48" North Outfall Sewer (NOS) line runs from west to east through the southern portion of the City.

The Burbank Water Reclamation Plant (BWRP) currently treats approximately 8.5 million gallons per day (MGD), but was recently upgraded to a design capacity of 12.5 MGD. This upgrade included the installation of a new influent equalization basin and secondary clarifiers. The benefits of the equalization basin are:

- Providing additional recycled water availability for night-time uses like irrigation
- Allowing for a more steady and efficient treatment process
- Freeing up downstream sewer capacity while having more cost control

BWRP produces a disinfected tertiary effluent which means the water has received both primary and secondary treatment and is subsequently sand-filtered and chlorinated (tertiary treatment). Not only does the effluent meet discharge limitations issued by the RWQCB-LA NPDES Permit but also BWRP's recycled water meets the State of California Department of Public Health most stringent criteria defined in the California Code of Regulations, Title 22, Division 4, Chapter 3 requirement as *Disinfected Tertiary Recycled Water*.

The recycled water from the BWRP is currently utilized for irrigation of golf courses, parks, playgrounds, schoolyards, residential landscaping, and evaporative cooling. The recycled water is approved for all uses except human consumption. It is estimated that over 10,000 AF of recycled water per year will be available for reuse.

5.2 Current Recycled Water Use

Power Plants

Recycled water was first used at BWP's electric power plant for cooling in 1967. Blowdown water from the cooling towers, and all the treated effluent not diverted for other recycled uses, was discharged to the Burbank Western Channel, which is adjacent to both the BWRP and the BWP power plant. In August 2005, the new Magnolia Power Plant (300 megawatts) was completed and all recycled water discharge to the Burbank Western Channel was discontinued at the BWP campus. The Magnolia power plant has a demand of approximately 1.2 to 1.9 MGD for cooling and all other power plant process uses. The average annual usage is estimated to be approximately 1.2 MGD (1,350 AFY). The power plant recycles all its process and cooling water to extinction through its zero liquid discharge (ZLD) unit. The ZLD unit

purifies and filters all recaptured water for reuse. The byproduct is a salt cake that is condensed and trucked to a landfill. The two remaining Olive power plants only run as needed. All cooling and process water will be recycled water with the blowdown from the Olive cooling towers going into the sanitary sewer.

Landscape Irrigation

CalTrans began using recycled water in 1988 for landscape irrigation along the Golden State (I-5) Freeway. The City installed a pipeline under the Golden State Freeway (I-5) in 1992 to distribute recycled water to the east side of the freeway to new customers like the Media City Center and a regional shopping center.

A significant expansion of the recycled water system which quadrupled recycled water use began in 1994. Phase I of the expansion was completed in 1997 and recycled water was used at the Burbank landfill, the DeBell Golf Course, John Muir Middle School, and McCambridge Park. This expansion included upgrading BWRP's existing booster station plus two new booster stations, storage tanks, and 17,000 feet of pipeline.

Phase II of the expansion continued with the joint support of the Redevelopment Agency, BWP and infrastructure improvements at major redevelopment sites. The recycled water system now extends to the Chandler Bikeway, Costco, the Empire Center and Robert Gross Park. The AMC theater complex and Burbank High School were also connected to the existing recycled water system.

5.3 Current Recycled System Expansion

BWP prepared a Recycled Water Master Plan (RWMP) in October 2007 that was subsequently approved by the BWP Board and City Council. The 2007 RWMP outlined a phased expansion of the recycled water system to ultimately increase the use of recycled water provided by BWP by over 900 AF per year. BWP's revised its RWMP in October 2010 to include additional projects which were determined to be economical. This expansion is currently underway. BWP's 2007 and 2010 RWMPs can be found at: <http://www.burbankwaterandpower.com/recycled-water>.

The recycled water system expansion includes six major pipeline installation projects totaling over 20 miles in length and an upgrade of pump station PS-1. Construction of the majority of the expansion will be complete by the end of 2011. Some of the pipelines contained in this expansion extend to areas near the Burbank/City of Los Angeles (LA) border.

Planning efforts by the Los Angeles Department of Water and Power (LADWP) have identified potential recycled water use sites within LA which cannot be economically served from LADWP's recycled water system. Several of these sites are close to the Burbank/LA Border, including the LA portion of the Chandler Bikeway. BWP and LADWP have worked together to identify other locations within LA which are feasible to serve with recycled water provided by BWP. Agreements defining the terms of the exchange were executed in January 2011.

Table 5-1 below contains an estimate of future recycled water use.

Table 5-1: Recycled Water Use

Year	2010 Predicted (UWMP)	2010 Actual	2015	2020	2025	2030	2035
Landscape Irrigation (AF)	650	140	975	975	975	975	975
Commercial Irrigation (AF)	150	250	525	525	525	525	525
Golf Course Irrigation (AF)	300	240	300	300	300	300	300
Industrial Reuse- BWP Power Plants (AF)	1,700	1,380	1,360	1,360	1,360	1,360	1,360
Deliveries to LADWP (AF)	0	0	500	2,000	2,000	2,000	2,000
TOTAL (AF)	2,800	2,010	3,660	5,160	5,160	5,160	5,160
Recycled Water Produced (AF)	NA	9,000	10,080	10,080	10,080	10,080	10,080
Recycled Water Discharged (AF)	NA	6,990	6,420	4,920	4,920	4,920	4,920

5.4 Recycled Water Policies

City Council and Department Managers have always maintained a positive outlook towards the use of recycled water. The use of recycled water has been a tremendous opportunity for the City of Burbank to do its part in conserving the scarce and very important State and local potable water supplies. The citizens and existing users have expressed positive feedback about the use of the recycled water system. Also required public notification signs provide a friendly message about its use.

The City has full-time staff to help existing users comply with regulatory requirements as well as to inform and encourage the development of new users. To encourage the use of recycled water, the City offers recycled water at approximately 85% of the corresponding potable water rate.

The Rules and Regulations also contain other procedures to clarify what is required to receive recycled water service, which standardizes and thus facilitates recycled water use.

City Council expressed support for the addition of new required uses of recycled water where practical and appropriate when the 2007 RWMP was endorsed on October 9, 2007. City Council approved a policy in December 2008 which mandated recycled water use at certain parcels. A copy of the staff report

outlining this policy is available on BWP’s website at <http://www.burbankwaterandpower.com/download/Recycled-Water-Zones-Policy.pdf>. The Council policy authorized modifications to BWP’s Rules and Regulations to require the use of recycled water where these conditions are met. The use of recycled water, when required, is a condition of potable water service.

Four recycled water “zones” were developed to assist a landowner in determining recycled water use requirements for a given parcel. The zones are shown in Figure 5-1 below. The first three zones, identified as Recycled Water Zones 1, 2, and 3, were delineated in the following manner:

- Zone 1—parcels which are located adjacent to a current or proposed recycled water main
- Zone 2—parcels which will require an additional (not contained in the RWMP) recycled water distribution main ≤ 250 feet long to serve the subject parcel with recycled water
- Zone 3—parcels which will require an additional recycled water distribution main >250 feet but $\leq 1,000$ feet long to serve the subject parcel with recycled water

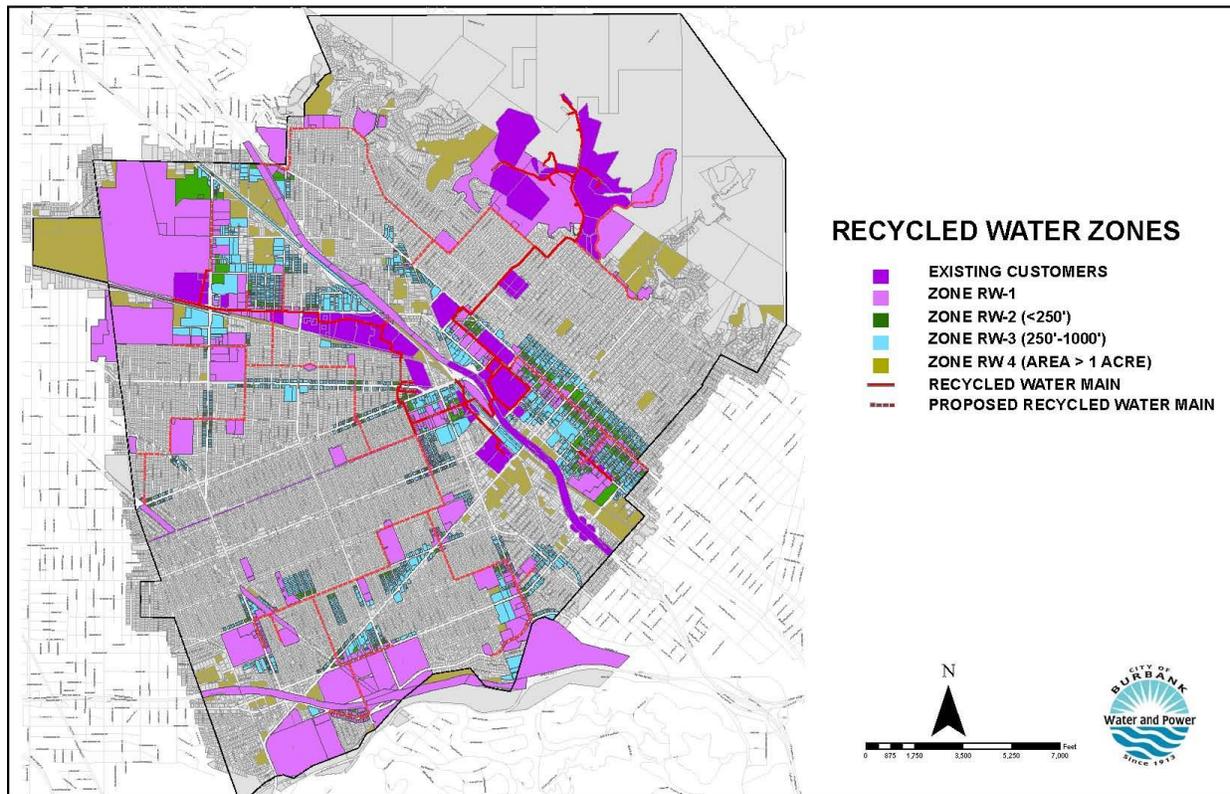


Figure 5-1: Recycled Water Zones

Residential parcels zoned R-1 and R-2 (single-family and duplex) were exempted from inclusion in the recycled water zones.

Recycled water use will be required for all parcels within Recycled Water Zones 1, 2, and 3 which have greater than 2,500 square feet of landscaped area or greater than 50,000 gallons per year of potable water use which can be substituted with recycled water.

The first phase of the expansion of the recycled water system as currently defined in the updated 2010 RWMP will provide recycled water to all parcels located in Recycled Water Zone 1. These parcels must be ready to utilize recycled water upon completion of the recycled water transmission main which fronts a portion of the subject parcel. BWP will install the service line and meter during the construction of the recycled water main at no additional cost to the property owner.

It is the parcel owner's responsibility to perform all onsite retrofits necessary to use recycled water on the property. Conversion to recycled water will be required when the recycled transmission main fronting the parcel is put in service. The City expects this policy to result in an additional 120 AF per year of recycled water use. The policy will also be used to facilitate recycled water conversions of landowners opposed to recycled water use.

5.5 Indirect Potable Reuse

At this time, the City of Burbank has no intention of using recycled water to augment groundwater in the basin. The City of Los Angeles, which owns the majority of the water rights in the San Fernando Basin, has shown interest in using recycled water for groundwater replenishment. LADWP will utilize advanced treatment that includes reverse osmosis, microfiltration, and advanced oxidation. This level of treatment will address water quality concerns for the health of the San Fernando basin. The City has excess recycled water available and with future agreements, this water may be used to supplement LADWP's recycled water supply for indirect potable reuse.

SECTION 6: WATER SUPPLY RELIABILITY AND WATER SHORTAGE CONTINGENCY PLAN

6.1 MWD Supply Reliability

Burbank's water supply reliability depends heavily on MWD's supply reliability. Burbank does not own native groundwater rights and therefore, has limited groundwater extraction capabilities. The City of Los Angeles owns the groundwater rights discussed in Section 4.2. The water management tools used by Burbank to maximize resources and minimize the need to import water from other regions are the aggressive expanded use of recycled water, spreading and storing imported water when feasible, and enhanced potable water conservation. These are detailed in Sections 5 and 7, respectively.

Burbank is supplied by two different MWD feeder transmission mains from two separate MWD treatment plants, Jensen and Weymouth. The Weymouth plant can treat water from the Colorado River Aqueduct (CRA) or the State Water Project (SWP). The Jensen plant can only treat water from the SWP. These two feeders allow flexibility in MWD's and Burbank's operations in case of treatment plant or other temporary problems within the system. The City also has the ability to purchase untreated MWD water for groundwater replenishment spreading at Pacoima or Lopez spreading grounds in order to add to its stored water credits.

MWD discusses regional water supply reliability in its Regional Urban Water Management Plan (RUWMP; November 2010). The RUWMP uses information from the 2010 Integrated Water Resources Plan Update (October 2010), the 1999 Water Surplus and Drought Management (WSDM) Plan, and other MWD planning studies. To develop average year supply and demand estimates, MWD used the historic hydrology for 1922 through 2004. For dry year planning, they used the historic one-year (1977) and three-years (1990-1992) dry periods on the SWP because "it is Metropolitan's largest and most variable supply."

MWD works to have access to a "diverse water portfolio" with alternatives that allow it to meet demands even in years when the primary supplies would not be enough. Part of the plan is to have water storage capacity to draw on when supplies are short. They use an "adaptive management" approach to better respond to uncertainty. MWD concludes that it can meet 100% of full-service demands through 2030. Ultimately, if MWD has sufficient water, so does Burbank.

The RUWMP includes water quality information on CRA and SWP supplies. Salinity is the main concern for the CRA supply. MWD is investigating desalination as a contingency plan for the CRA to combat the salinity. Total organic carbon and bromide are SWP supply concerns. These constituents form disinfection byproducts (i.e. trihalomethanes, haloacetic acids, and bromate) during the treatment process. MWD has upgraded its pre-treatment process with ozonation capabilities at three treatment plants and is making upgrades at its remaining two plants. Ozonation reduces trihalomethane and haloacetic acid formation but produces bromate. Treatment plant improvements are expensive and

desalination leads to some water loss. However, MWD does not anticipate any reductions in water supply availability from SWP and CRA supplies due to water quality concerns over the study period.

6.2 Groundwater Supply Reliability

Groundwater is very important to Burbank's overall supply reliability because it provides a reserve during emergencies or droughts. The capacity and reliability of Burbank's groundwater supply requires consideration of many issues including:

- Aquifer storage capacity
- Safe yield
- Physical well and pump capacity
- Treatment capacity
- Water quality issues
- Water rights

As mentioned before, Los Angeles owns the native groundwater rights to the San Fernando Basin. Through the Judgment the aquifer storage capacity is a right to which Burbank is entitled and administered by the ULARA Watermaster. Burbank can purchase MWD water for groundwater replenishment spreading in order to add to its stored water credits. To maintain and optimize groundwater pumping, BWP needs to acquire about 6,200 AF of groundwater per year (AFY) through replenishment or a combination of replenishment and "physical solution" purchases.

Burbank's BOU well capacity is over 22,000 AFY which is more than its water rights or treatment capacity (14,000 AFY). Redundant pump and motor units move treated groundwater into the distribution system, so supply can be maintained in case of failure of one of the units. An electric power outage would interrupt the groundwater supply as well as treatment plant operations. However, Burbank has excellent power supply reliability and electrical generation facilities within the city, so a long-term power outage is extremely unlikely.

Current water quality issues, i.e. hexavalent chromium, nitrate, VOCs and other emerging groundwater contaminants that cannot be removed by Burbank's existing treatment plants could affect water reliability. If the groundwater chromium levels were to increase or a new hexavalent chromium limit is enacted below the current City Council standard, groundwater production might be reduced or halted. The City is cooperating with neighboring agencies to expedite site investigations, which could lead to enforcement actions. Burbank is also working to find cost effective chromium treatment technologies. It may be necessary to build additional treatment processes for chromium removal with funding from parties found to be responsible for the contamination.

Elevated nitrate levels in the groundwater make it necessary to blend with MWD water to meet drinking water standards. The Valley Pumping Plant was designed to allow blending water from the BOU treatment plant and a MWD connection to reduce nitrate levels. New regulations for lower nitrate levels would precipitate additional and costly treatment processes.

Groundwater VOC contamination underlying Burbank has necessitated the construction of two treatment plants for VOC removal. All of the City's production wells have varying degrees of VOC contamination and a shutdown of both treatment plants would create a complete loss of the groundwater supply. Other emerging constituents like 1,4-Dioxane, perchlorate, and uranium may affect groundwater supply reliability in the future.

Burbank's water rights are detailed in Section 4.2. Unavailable replenishment water during a long drought could limit the City's ability to add to its groundwater "bank". However, the City plans to keep a reserve of 10,000 AF in groundwater credits. This would allow normal extractions to continue for about three years without replenishment, assuming the purchase of 4,200 AF/yr of physical solution water from LADWP (see section 4.2). After that, assuming the groundwater basin still held enough water; BWP would have to negotiate the purchase of additional groundwater from LADWP.

6.3 Recycled Water Supply Reliability

The recycled water system is being expanded to serve more customers as detailed in Section 5. The BWRP is managed to be highly reliable but contingencies for recycled water outages must be considered. The existing system includes potable water makeup supplies at the BWRP and at the Golf Course Tank. A recycled water system interconnect with the City of Glendale was completed in 2010 which results in a backup recycled water supply. A potable make-up system is also being installed at the Stough tank and further alternatives for enhanced potable makeup capacity are also being studied. The BWP Magnolia Power Plant has the ability to supplement or replace the recycled water supply with water from two City wells which normally feed the Lake Street GAC.

Increased salt and nutrient loading is a growing concern to the San Fernando Basin. The State Water Resource Control Board is mandating each basin to adopt a Salt and Nutrient Management Plan by 2014. Recycled water usually has higher TDS and sodium content than potable water which may affect groundwater as it infiltrates. Future salt and nutrient regulations may limit recycled water's availability and use. BWP and Burbank's Public Works Department are working with the Los Angeles Regional Water Quality Control Board, LADWP, The City of Glendale, the ULARA Watermaster, and Stakeholders Groups to prepare a Salt and Nutrient Management Plan for the San Fernando Basin.

6.4 Supply and Demand Comparison

DWR requires agencies to provide a comparison of projected water supply and demand for the next 20 years, through 2030. This plan has been extended to 25 years, through 2035 to be useful through the next five years for Water Supply Assessments (SB 610) and Written Verifications of Water Supply (SB 221), which also require a 20-year planning horizon from the year they are performed.

The future water demands for the City and the entire region have been estimated by MWD using the MWD-MAIN Water Use Forecasting System. The computer model uses forecast data from the Southern California Council of Governments (SCAG) for variables including population, housing units, and employment. Although Burbank is using lower demand projections which take into account the

reductions to meet 20x2020, these MWD projections provide the basis for dry-year reliability planning. Table 6-1 contains the years used by MWD for their reliability analysis.

Table 6-1: MWD’s Basis of Water Year Data

Water Year Type	Base Year(s)
Average Water Year	1922-2004
Single-Dry Water Year	1977
Multiple-Dry Water Years	1990-1992

MWD estimates Burbank’s 2015 demand to be 30,691 AF and a multiple dry year demand of 28,832 AF/yr. For this projection, MWD did not count future conservation from additional agency efforts to meet 20x2020 goals. Region-wide, MWD did have 380,000 AF of additional conservation and/or recycling. Therefore, MWD actually expects Burbank water use to be less than the estimates. Burbank’s projections in this Plan go beyond the minimum conservation required even though MWD is planning for somewhat higher demands.

MWD shows similar demands as Burbank for normal and dry years. Generally, dry weather, especially hot, dry weather, causes an increase in water demand, mostly for landscape irrigation. On the other hand, conservation practices during past droughts have been excellent and the demand actually decreased. Burbank achieved a 10% reduction in water use during the 1990/91 drought and a 20% reduction for the 2008-10 drought.

The Plan is required to contain an estimate of minimum water supply during the next three years based on the driest three years on record. Also it requires supply and demand comparisons for a single dry year and for multiple dry years for each of the planning years. MWD analysis provides normal and dry-year estimates for each period. Tables 6-2 through 6-5 apply percentages based on MWD’s analysis to Burbank’s normal-year demand estimates. Since MWD expects to meet demands, and since groundwater and recycled water should be reliable in dry years, the supplies match the demands.

Table 6-2: Current Water Sources

Water Supply Sources	Average Year Supply	Multiple Dry Water Year Supply		
		2011	2012	2013
MWD Potable	7,852	6,472	6,472	6,472
MWD Untreated GW Replenishment	2,034	2,000	2,000	2,000
Burbank-Produced Groundwater	9,917	10,000	10,000	10,000
Recycled Water	2,010	2,010	2,010	2,010
Percent of Normal Year	100%	93.9%	93.9%	93.9%

Table 6-3: Supply and Demand—Normal Year

	2015	2020	2025	2030	2035
Supply Totals	23,510	24,141	24,601	25,139	25,651
Demand Totals	23,510	24,141	24,601	25,139	25,651
Difference	0	0	0	0	0

MWD projects 100% reliability for full-service demands through the year 2035 based on its 2010 Regional Urban Water Management Plan. As a result, Burbank does not expect critical shortages during the 25-year planning period. The City will continue to rely on MWD for water either for direct use or for groundwater replenishment.

Table 6-4: Supply and Demand—Single Dry Year

	2015	2020	2025	2030	2035
Supply Totals	23,510	24,141	24,601	25,139	25,651
Demand Totals	23,510	24,141	24,601	25,139	25,651
Difference	0	0	0	0	0

Table 6-5: Supply and Demand—Multiple Dry Year Events

		2015	2020	2025	2030	2035
Multiple-Dry Year 1 st , 2 nd , & 3 rd Year Supply	Supply Totals	22,086	24,649	24,875	25,420	25,945
	Demand Totals	22,086	24,649	24,875	25,420	25,945
	Difference	0	0	0	0	0

Burbank cooperates with MWD’s regional water supply planning. MWD believes that all member agencies will continue with their demand management efforts since MWD’s water demand projections include significant increases in conservation throughout the planning period.

An important component of MWD’s contingency plan for responding to water shortages is the Water Supply Allocation Plan (WSAP) which MWD’s Board of Directors approved in February 2008. It is based on a guiding principle developed out of the Water Surplus and Drought Management Plan for allocating shortages across MWD’s service area. The WSAP formula uses different adjustments and credits to balance impacts of water shortage at the retail level, where local supplies can vary dramatically, and provide equity on the wholesale level among member agencies. It also takes into account the following:

growth in demand, local investments, change in local supply conditions, the reduction in potable water demand from recycled water, and the implementation of water conservation programs

6.5 Drought Experience

The City of Burbank has not experienced many water supply deficiency problems or water emergencies in the past. During the 1976-77 drought there was no shortage of imported water but customers were encouraged to conserve water. This resulted in a 16% reduction in water usage which helped mitigate the drought effects throughout the City.

In 1991, due to the prolonged drought of 1987-92, the City implemented an Incremental Water Conservation Ordinance. There had already been a call for voluntary conservation efforts to achieve a 10% reduction in water use. The ordinance began a mandatory 20% conservation requirement, compared to base calendar year 1989, on April 1, 1991. This resulted in financial disincentives (Drought Surcharge) to users who failed to conserve the required amount. There was also a Base Rate Adjustment of 15% from April 1, 1991 through March 31, 1992. By April 1, 1992, the water supply outlook had improved as well as water sales reduced 25%, and Burbank went back to a voluntary conservation program. Temperature and rainfall did affect the demand for water with a cool summer and rainy March in 1991. In addition, Lockheed had vacated most of its manufacturing plant since the base year of 1989, accounting for some of the reduction in water use.

In the years 2008-10, California water supplies saw low levels in major reservoirs and on the Colorado River system. Stricter limits on Delta water exports were enacted due to ecological issues. MWD implemented water supply allocation, which had not been expected during the last UWMP update cycle in 2005. With SBx7-7, California passed important new legislation calling for 20% reductions in per-capita urban water use by 2020 (20x2020). Burbank took action by adopting a Sustainable Water Use Ordinance and other actions which are described in more detail in Section 6.7 and other parts of this Plan. In September 2009 the City entered into partial Stage II requirements which limit home watering to three days per week. Customer response was excellent and in 2010 Burbank met its 20% reduction.

6.6 Water Shortage Contingency Planning

DWR requires agencies to plan for water shortages which can be categorized by two major types: catastrophe and drought. The two types should be considered separately although some responses are common to both. MWD, along with its member agencies, developed stages of action that would respond to water supply shortages which are described in the Water Surplus and Drought Management Plan (WSDM). The WSDM Plan provides guidance to minimize the probability of severe shortages and reduce the possibility of extreme shortages and shortage allocations. Furthermore, MWD and its member agencies developed the WSAP which provides a standardized methodology for allocating supplies during times of shortage.

A water shortage can result from a catastrophe like an earthquake disaster, a major power outage, or a water supply source problem, i.e. major breakdown or a water quality disruption. Catastrophes like these occur with little or no warning but typically a partial restoration of supply can be expected within

days or a few weeks. MWD developed a catastrophic supply interruption plan which contains the Emergency Storage Requirements (ESR).

The ESR is based on the three major aqueducts (SWP, CRA, and Los Angeles) being out of service for six months after a major earthquake. Diamond Valley Lake and other Southern California reservoirs and groundwater basins provide emergency storage. After such a disaster, MWD's emergency plan implements a mandatory 25% cutback in firm supplies to member agencies. DWR, with the cooperation of MWD and others, continue to study the effects of extensive levee failures in the Delta. Extraordinary conservation would be required to stay within the reduced supply in either of the above extreme cases.

Burbank has a formal disaster preparedness program. Every City employee is considered a disaster services worker. Training and drills are held regularly. When an emergency occurs, the Emergency Operations Center can be activated. This involves personnel from all City departments and it operates according to the formal *SEMS* (Standardized Emergency Management System) procedures. There is a formal process for checking the water system for problems.

Burbank could manage a short-term deficiency or emergency situations by encouraging voluntary water conservation and also with the following actions:

- Increasing local groundwater pumping
- Purchasing additional water from the MWD to the extent available
- Using emergency interconnections to adjacent water agencies

If Burbank experiences a major power failure, but MWD is still producing water, Burbank can receive water to Zones 1 and 2. Portable diesel pumps are available to move water to higher zones if necessary. If all the City's water supplies were interrupted, stored water in local reservoirs would last up to three days at average use. Immediate curtailment of non-essential uses, i.e. landscaping, could make supplies last much longer. In the case of a major local earthquake, stored water could be lost due to many broken pipelines.

Since Burbank has two groundwater treatment plants, as well as five MWD connections, there is some flexibility in emergency operations. If a problem developed with one of Burbank's plants, MWD could supply additional water from the five connections; or if MWD supply had to be reduced then treated groundwater could supplement the MWD connections. Blending MWD water with Valley/BOU water is necessary to maintain production due to groundwater nitrate levels but an increased BOU/MWD blending ratio could suffice.

There are presently two emergency interconnections with the City of Glendale. These emergency interconnections have proven to be effective in providing a short-term supplemental supply but Glendale relies on MWD water under the same conditions as Burbank. If no emergency connection is possible, mandatory rationing could be imposed by stages which are outlined below in Section 6.7.

Historically, damage to Burbank's water system from the 1971 Sylmar and 1994 Northridge earthquakes was limited. However, future earthquakes might pose greater damage. The strictest emergency water

use restrictions would be put in place, such as prohibiting landscape irrigation, car washing, and reducing water usage to only public health needs. Arrangements could be made to supply drinking water by truck, or depending on system conditions, at distribution points.

Besides catastrophes, a water shortage can result from drought and these drought scenarios are discussed historically in Section 6.5 and sustainably in Section 6.7. Burbank does not expect severe shortages due to drought during the 25-year plan period, based on MWD's RUWMP. The WSDM Plan describes the most severe shortage stage 7 or "extreme shortage", which would require allocation of water supplies to full-service customers. Burbank does have a preferential right to purchase about 0.92% of the available MWD water supply under Section 135 of the Metropolitan Water District Act. However, Burbank supported MWD's WSAP, which did not implement preferential rights, because of the insurance or back-up provision against the loss of local supply, where Burbank has over half of its supply. MWD's WSAP is designed to avoid the extreme shortage stage for some agencies if preferential rights are implemented in lieu of a broader regional allocation.

When advised of a dry water supply year, the City would call for increased voluntary water conservation efforts. In the event of MWD allocation, Burbank would implement water use restrictions in stages contained in the Sustainable Water Use Ordinance as necessary to meet the required water use targets. If DWR or MWD required severe rationing due to extreme drought, the City would implement water rationing in addition to the mandated water use reductions.

6.7 Sustainable Water Use Ordinance

Burbank adopted the Sustainable Water Use Ordinance in June 2008. Stage I and part of Stage II are currently in effect and helping to achieve the new lower water use target. The ordinance defines six stages covering the range from normal water supply to extreme shortages. It provides a basis for achieving water demand reductions which may be required because of emergency or drought conditions. Stage I, consisting of 13 sustainable water use measures, is always in effect. The other five stages can be activated by the City Council in times of water shortage. Examples of measures contained in the ordinance are shown in Table 6-6 below.

Although shortage percentages are not part of the ordinance, Stage VI bans all landscape watering with potable water. This could provide the 50% reduction required by the Act. Also, the Water Division would defer main and fire hydrant flushing and reservoir drainage for maintenance and prohibit the use of potable water for street cleaning. It is likely that a water supply emergency would be declared by the time the maximum reduction was called into effect.

The procedures for recording daily production and monthly metered sales to determine actual reductions in water use are already in place. Regular comparisons to base years and to the previous fiscal year are made every month for metered sales. During a drought, the existing data would be fully utilized to monitor reductions compared to pre-drought conditions. Unaccounted-for water would also be closely watched. Information would be made available to decision-makers as needed for the ongoing drought response.

Table 6-6: Prohibitions Contained in Sustainable Water Use Ordinance

Examples of Prohibitions	Stage When
Thirteen Sustainable Water Use Measures in the Ordinance	I
Landscape Watering Limited to 15 Minutes/day, three days per week, April – October, 1 day per week November - March	II
Landscape Watering Limited to 15 Minutes/day, two days per week, April – October,	III
Do Not Use Outdoor Cooling Devices (mistlers)	III
Prohibition on Watering Between 9AM and 6 PM Extended to Hand Watering	III
Use Pool and Spa Covers	III
Landscape Watering Limited to 15 min/day, 1 day per Week	IV
Watering Limited to Deep Irrigation of Trees and Shrubs, 20 min, 2 days per month	V
No New or Upgraded Potable Water Services Permitted, Except R-1 and R-2, Unless Building Permit Already Issued	V
No Landscape Watering Permitted	VI

There are many fixed costs in operating a water system and the overall revenue would be reduced below budgeted levels by the extraordinary conservation measures. Deferment of capital spending would be considered to further offset the loss of water sales revenues. Financial reserves would be drawn on and a rate adjustment could be requested if necessary.

SECTION 7: DEMAND MANAGEMENT MEASURES

7.1 Burbank's local water conservation programs and ordinances

Burbank moved aggressively forward in creating a sustainable water supply for the future. In just three years Burbank has realized an astounding 23% water savings. In 2007, the gallons per capita daily usage was 196. In 2010 it now stands at 155 gpcd. The following sections contain a description of some of the major milestones Burbank achieved to reach these impressive water savings.

Sustainable Water Use Ordinance

The City Council enacted a Sustainable Water Use Ordinance in 2008 that prohibits the wasteful use of potable water. The Ordinance is comprehensive, including prohibitions on landscape water overspray, requiring that leaks be fixed in a timely manner and that restaurants only serve water by request. Burbank's Sustainable Water Use Ordinance provides a tiered response of water use restrictions, allowing the City a nimble mechanism by which to respond to water supply shortages as needed. The provision of penalties for residents or businesses not acting in accordance with the requirements is built into the Ordinance. The Council in 2009 enacted Stage II of the Ordinance to limit landscape watering to no more than three designated days per week, with an upper limit of 15 minutes of spray time specified for each irrigation station.

Retrofit Upon Resale Ordinance

After much push-back by the real estate industry, the Burbank City Council approved a 2010 Ordinance requiring to upgrade toilets, showerheads, urinals, and faucet aerators to high water efficiency levels as property is resold in Burbank.

Conservation Rate Structure

A tiered water rate, adopted in 2009 for single-family residential water users, increases the cost of potable water as usage increases. The tiered rate for single-family residential customers sends a price signal that discretionary water use is more costly.

Seasonal water rates were also adopted for multi-family residential, commercial and industrial services to encourage conservation during warmer months of the year. In addition, these two sectors are required to certify that indoor plumbing fixtures meet high efficiency levels or they will be assessed a 25% surcharge during the first year and 50% thereafter until the requirements are met. These penalty fees will be used solely to support water conservation programs in Burbank.

Goodwill Capital

To build trust and goodwill, BWP took the position of not being the expert on all water uses and brought in outside experts for Burbank's water consumers. These experts provided education on proper landscape watering and water supply issues facing California.

Lay a Financial Foundation for Water Conservation

In 2009, the City of Burbank adopted a policy that annually commits 2% of water sales to fund water conservation in the City. This policy is modeled after the Public Goods Charge mandated by the State of California on electric utilities to fund energy efficiency, renewable energy, and research and development. The 2% funding commitment provides a foundation that allows water efficiency programs to have a broader scope as well as a longer time horizon.

Community Demonstration Garden Grants

Five Community Demonstration Garden grants of up to \$15,000 each have been awarded to non-profit organizations and schools to demonstrate water efficient landscaping. The host organizations are the Burbank Family YMCA, Burbank Adult School, Burbank Temple Emanu El, the Burbank Housing Corporation, and Providence St. Joseph's Medical Center. Demonstration gardens are supported with interpretive signage and online interactive software to provide detailed information about each garden and practical landscape advice.

Green Home House Call Program

There are a wide variety of water efficiency rebates, programs and services available to Burbank residents and businesses. Many of these programs are very similar to programs offered by other municipal utilities. However, Burbank has an additional service, the Green Home House Call, which offers installed water and electric conservation services and upgrades at no cost to residents. This program far exceeds what other agencies offer, especially as concerns water use both inside of the home and outdoors. The free water upgrades and services of the Green Home House Call include:

- Sprinkler controller programming to meet Burbank's Sustainable Water Use Ordinance
- Sprinkler head adjustments to prevent overspray
- Toilet leak test and repair
- Installation of low flow showerheads and faucet aerators

The program serviced over 1,600 homes in its first year, delivering an estimated water savings of over 56 million gallons. These water savings estimates were based on factors contained in the AWWARF Residential End Uses of Water study.

7.2 Burbank Water Fixture Upgrade Program

Burbank's Water Fixture Upgrade program required the 6,200 businesses and multi-family owners in Burbank to certify that their plumbing fixtures met specified efficiency levels. Failure to certify would lead to a monthly 25% surcharge on their water bill. In nine months 90% responded. The certifications list the number of plumbing fixtures upgraded to meet Burbank's requirement, allowing for estimated water savings.

Requirement notifications were sent via direct mail, online and print advertising, with Burbank committing staff to personally contact over 4,300 customers. Additionally, to help mitigate the financial

impact of replacing plumbing fixtures, Burbank provided at no cost to users nearly 22,000 low-flow showerheads, over 41,000 low-flow faucet aerators, and funded over \$300,000 in High Efficiency Toilet rebates.

Annually, Burbank seeks to reduce potable water usage by 2%, or 139 million gallons. The Burbank Water Fixture Upgrade program alone provided over 231 million gallons (710AF) of water savings, surpassing Burbank’s goal by 88 million gallons. These water savings estimates were based on factors contained in the AWWARF Residential End Uses of Water study.

Table 7-1: Water Fixture Upgrades in the Multi-Family Sector

Upgrade	Units Upgraded	Annual Savings per Upgrade	Annual Water Savings (Gallons)	Annual Water Savings (AF)
Toilets	8,683	8,710	75,628,930	232
Urinals	2	9,775.5	19,551	0.1
Showerheads	12,135	3,016	36,599,160	112
Kitchen Aerators	10,208	1,077	10,994,016	34
Bathroom Aerators	13,797	2,182	30,105,054	92
TOTAL			153,346,711	471

Table 7-2: Water Fixture Upgrades in the Commercial/Industrial Sector

Upgrade	Units Upgraded	Annual Savings per Upgrade	Annual Water Savings (Gallons)	Annual Water Savings (AF)
Toilets	4,740	8,015	37,991,100	117
Urinals	1,205	9,775	11,778,875	36
Showerheads	1,457	3,016	4,394,312	13
Kitchen Aerators	2,564	1,077	2,761,428	8
Bathroom Aerators	7,829	2,182	17,082,878	52
TOTAL			78,008,593	239

7.3 Other Burbank Conservation Efforts

BWP prides itself with many communications outlets to help spread the sustainability issues forward. In response to changing and challenging environmental issues, the BWP staff has significantly ramped up customer programs and customer communications over the past decade. BWP staff makes use of a variety of media, both active and passive, to engage and inform individuals and organizations about programs and services available to them. BWP hopes that these communication efforts will involve the community to preserve resources with heightened attention on sustainability. Current communication vehicles used by BWP staff are described below:

- BWP’s produced Newsletter, “Currents”—8 to 12 page quarterly newsletter mailed to all Burbank addresses covering a wide range of topics
- Utility Bill Newsletter—A City newsletter with BWP items prominently featured is mailed to each BWP account holder with their utility bill
- InfoJunction (video segment on local TV)—InfoJunction is a BWP program where topics are discussed in depth in an interview format
- BWP Sponsored Events—Free workshops on California friendly landscaping are offered to Burbank residents
- City Events with BWP staff present—Ongoing presence at City events to disseminate information and respond to questions
- Burbank Chamber of Commerce Events and Advertising—Attendance at monthly Chamber luncheons with opportunity to speak briefly to business community on water and power issues; monthly program advertising in the Chamber newsletter
- Personalized Customer Communications—Letter and/or phone calls are made to customers related to specific issues
- Paid Advertising—Annual full cover wrap in Burbank’s newspaper, The Burbank Leader, special July 4th advertising pull-out for the Starlight Bowl concert season; Annual Project Share advertising in Burbank Leader; Smart Kart advertising space on grocery store shopping carts
- Event Sponsorship—BWP supports several community organizations and events, receiving advertising as part of the sponsorship
- BWP Website—BWP’s website has about 20,000 unique visitors each month, highlighting BWP programs and issues important to the industry and community
- Twitter—BWP created “BurbankH2OPower” Twitter account which has over 200 followers
- BWP Guest Speakers—Presentations to organizations as requested
- Key Accounts—BWP staff members act in part as Key Account representatives meeting face-to-face three times a year with Burbank’s 40 largest energy water users
- Muzak On-hold Messaging—Customers receive BWP messages while on hold for a Customer Service Representative and messages are reviewed quarterly
- Burbank Unified School District and Student Outreach—BWP has student sustainability programs in place that are run on an annual basis and also participating in ad hoc programs
- Grant and Award Opportunities—BWP actively seeks appropriate grant opportunities
- Press Releases—Over the past two years, BWP has sent out 10 Press Releases highlighting grants awarded, programs, and significant accomplishments

BWP has a multitude of brochures and pamphlets free to anyone who walks through the doors, or can be downloaded directly from the website. These brochures and publications can help customers save energy, water, money and receive rebates. Details of the programs and how to take advantage of them are available at BurbankWaterAndPower.com:

- Water Tips
- Energy Cost Calculator
- Energy Tips
- Fix Leaks
- Home Cooling
- Look for the Label
- Caulking Your Home

There are many effective water saving home improvements that can help a home cut back on the water bill. There is an easy-to-use SAVE WATER AT HOME INTERACTIVE TOOL on the website which shows simple things that can be done inside and outside the home to save water and money, while helping to protect the environment. Also, BWP helps residents with rebates and services to make water efficiency improvement to homes:

- Burbank Water And Power Residential Rebates
- Metropolitan Water District Rebates
- Green Home House Call
- BWP Water Calculator

Burbank responded to the 2010 water supply crisis in a number of ways. Watering lawns was limited to Tuesdays, Thursdays and Saturdays only; fines would be assessed for wasting water; businesses must meet plumbing code standards by October 31, 2010 or face a water use surcharge; the use of recycled water for park irrigation and other large landscaped areas was accelerated; and properties resold in Burbank must meet specific plumbing efficiency standards. BWP had also instituted a number of water-saving programs to help residents and businesses in Burbank reduce their water usage. These efforts worked and Burbank used significantly less water. This information below can be found on the BWP website:

- Burbank's Irrigation Watering Limits
- Burbank's Sustainable Water Use Practices Ordinance
- How to Report a Wasteful Water Use
- Water Conservation is Working
- YOU can make a difference!
- Additional information you may be interested in
- Retrofit Upon Resale Requirement

Other water conservation measures enacted by Burbank Water and Power include the following:

- Residential Drip Irrigation Program—Since March 2006, BWP has been providing free drip irrigation kits to Burbank homeowners. Each kit reduced water usage by an estimated 300 gallons per month. To date, 620 drip irrigation kits have been distributed. BWP was awarded a 50 percent matching grant for this program by the United States Bureau of Reclamation.
- Water-Saving Devices—For at least the past 18 years, BWP has been providing free water-saving devices to Burbank residents and businesses including faucet aerators and low-flow showerheads. At least 3,000 low-flow showerheads and 2,500 water efficient faucet aerators have been distributed since 1989. For this fiscal year alone, water savings from faucet aerators and low-flow showerheads are estimated at 220,000 gallons.
- System Water Audits, Leak Detection & Repair—The City conducts annual audits by comparing metered sales with a total supply entering the system. The unaccounted-for water (difference between water introduced to the system and metered sales) is normally below five percent, which is considered good performance for a water system.
- Metering with Commodity Rates and Conservation Pricing—The City requires all new connections and retrofits to be metered resulting in the identification of wasteful practices. The

City charges customers for water use by volume. The pricing structure includes a small fixed charge, with the majority of the bill depending on water use. There is a flat rate for all volumes of usage. A separate demand charge rewards efforts to control usage during the peak summer months.

- High Efficiency Washing Machine Rebate Program—BWP offers rebates to residential customers who purchase high efficiency washing machines. Approximately 370 rebates will be issued to Burbank residents purchasing high efficiency washing machines in Fiscal Year 2006-2007. These machines reduce water usage by 50 percent. On the high efficiency washers that BWP will provide rebates on this fiscal year, water savings are expected to top over 1.1 million gallons annually.
- Public Information Programs—BWP provides extensive water conservation and efficiency information through workshops, such as the Protector del Agua series and BWP's drip irrigation and native plant landscaping classes. Information is also distributed through advertising, public service announcements, newsletters, and community events.

Here are other efforts taken over the past year to achieve Burbank's considerable water conservation results:

- Business Water Efficiency Self-Certification Requirement: In 2009, the City Council approved a conservation water rate design that included the requirement that all non-residential facilities certify that certain water efficiency measures are installed on their property. These measures include low flush toilets (1.6 gallons per flush which has been California's code standard since 1994), waterless urinals, faucet aerators and showerheads. Businesses were originally given one year to comply and the deadline was subsequently extended by several months. To date, over 5,700 Burbank businesses have certified (92%) and staff continues to work with those that have yet to comply.

To make compliance as easy as possible, BWP provided rebates for highest-efficiency toilets and distributed tens of thousands of low-flow aerators and showerheads at no cost. This effort has been a significant element in Burbank's overall water savings. Here are examples of other BWP programs that helped reduce water usage:

- Green Home House Call: Last year, BWP's Green Home House Call program provided an estimated 38 million gallons in water-savings, both from actions taken inside the home (e.g., installing low-flow showerheads and aerators) and with the exterior landscape. While many utilities offer in-home audit and installation programs, none come close to the extensive array of services offered by BWP's Green Home House Call, including water-saving services for exterior water end-uses. Again, this program is exceptional and we hope that it will serve as a model for others to adopt.
- Retrofit Upon Resale: Without a doubt, the most hard-fought water-saving measure the City adopted was the Retrofit Upon Resale Ordinance. This Ordinance, adopted July 2010, requires that properties resold in Burbank must certify by both seller and buyer that water-using fixtures meet current California Plumbing Code standards. While strongly opposed by the Burbank

Association of Realtors, the requirements have not proved to be problematic. In fact, staff has heard several positive remarks from both realtors and escrow agents, thanking the City for not imposing certification fees and for making the compliance process straight-forward and easy to understand. In just seven months, 148 resale properties have certified, with the following reported replacements:

- Business Bucks Program: Built as an energy-saving audit and installation program, Business Bucks was modified during the height of the water supply crisis to include installation of water-efficient items for Burbank's Mom-and-Pop to medium-sized businesses. In just FY2009-10 alone, over 1,000 water-saving measures were installed through this effort, resulting in annual water savings of 5.3 million gallons, enough to support about 30 Burbank households.

7.4 CUWCC Compliance

Compliance with California Urban Water Conservation Council (CUWCC) Best Management Practices (BMPs) is required to receive financial assistance from the State of California for water projects (grants and loans). Demonstrating compliance with the BMPs has changed significantly since the 2005 UWMP.

The CUWCC's 14 BMPs are now organized into five categories. Two categories, Utility Operations and Education, are "Foundational BMPs", because they are considered to be essential water conservation activities by any utility and are adopted for implementation by all signatories to the MOU as ongoing practices with no time limits.

The remaining BMPs are "Programmatic BMPs" and compliance with the Programmatic water savings goals can be demonstrated in one of three ways:

1. Accomplishing the specific measures as listed in Section A of each BMP listed in the CUWCC Memorandum of Understanding (MOU).
2. Accomplishing a set of measures which achieves equal or greater water savings, referred to in the CUWCC Memorandum of Understanding as the Flex Track Menu.
3. Accomplishing set water savings goals as measured in gallons per capita per day consumption compared to baseline historical water usage, i.e. 20% x 2020.

BWP chose the 3rd option to comply with CUWCC Programmatic reporting standards. This new method allows for results-oriented approach to water conservation, as opposed to the historic specific measures contained in the BMPs. Burbank has met and exceeded the 20% water use reduction already.

The City's completed forms needed to satisfy the CUWCC BMP reporting requirements for years 2009 and 2010 are contained in Attachment E. These submittals show Burbank is in compliance with the Gallons Per Capita per Day option. These forms were submitted to CUWCC before May 31st, 2011. The CUWCC commits to processing these input forms and issuing BWP's compliance report within 30 days.

Appendix A

Completed Urban Water Management Plan Checklist

Appendix A – Urban Water Management Plan Checklist

No.	UWMP requirement	Calif. Water Code reference	Additional clarification	UWMP location
PLAN PREPARATION				
4	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.	10620(d)(2)		Section 1.3
6	Notify, at least 60 days prior to the public hearing on the plan required by Section 10642, any city or county within which the supplier provides water that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan. Any city or county receiving the notice may be consulted and provide comments.	10621(b)		Section 1.3
7	Provide supporting documentation that the UWMP or any amendments to, or changes in, have been adopted as described in Section 10640 et seq.	10621(c)		Section 1.4
54	Provide supporting documentation that the urban water management plan has been or will be provided to any city or county within which it provides water, no later than 60 days after the submission of this urban water management plan.	10635(b)		Section 1.3
55	Provide supporting documentation that the water supplier has encouraged 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.	10642		Section 1.3
56	Provide supporting documentation that the urban water supplier made the plan available for public inspection and held a public hearing about the plan. For public agencies, the hearing notice is to be provided pursuant to Section 6066 of the Government Code. The water supplier is to provide the time and place of the hearing to any city or county within which the supplier provides water. Privately-owned water suppliers shall provide an equivalent notice within its service area.	10642		Section 1.3
57	Provide supporting documentation that the plan has been adopted as prepared or modified.	10642		Section 1.3
58	Provide supporting documentation as to how the water supplier plans to implement its plan.	10643		Section 1.3
59	Provide supporting documentation that, in addition to submittal to DWR, the urban water supplier has submitted this UWMP to the California State Library and any city or county within which the supplier provides water supplies a copy of its plan no later than 30 days after adoption. This also includes amendments or changes.	10644(a)		Section 1.4
60	Provide supporting documentation that, not later than 30 days after filing a copy of its plan with the department, the urban water supplier has or will make the plan available for public review during normal business hours	10645		Section 1.4
SYSTEM DESCRIPTION				
8	Describe the water supplier service area.	10631(a)		Sections 2.1 & 2.4
9	Describe the climate and other demographic factors of the service area of the supplier	10631(a)		Section 2.3-- Table 2-2

No.	UWMP requirement	Calif. Water Code reference	Additional clarification	UWMP location
10	Indicate the current population of the service area	10631(a)	Provide the most recent population data possible. Use the method described in "Baseline Daily Per Capita Water Use." See Section M.	Section 2.2-- Table 2-2
11	Provide population projections for 2015, 2020, 2025, and 2030, based on data from State, regional, or local service area population projections.	10631(a)	2035 and 2040 can also be provided to support consistency with Water Supply Assessments and Written Verification of Water Supply documents.	Section 2.2
12	Describe other demographic factors affecting the supplier's water management planning.	10631(a)		Section 2.2
SYSTEM DEMANDS				
1	Provide baseline daily per capita water use, urban water use target, interim urban water use target, and compliance daily per capita water use, along with the bases for determining those estimates, including references to supporting data.	10608.20(e)		Section 3.2 -- Tables 3-5 & 3-6
2	<i>Wholesalers:</i> Include an assessment of present and proposed future measures, programs, and policies to help achieve the water use reductions. <i>Retailers:</i> Conduct at least one public hearing that includes general discussion of the urban retail water supplier's implementation plan for complying with the Water Conservation Bill of 2009.	10608.36 10608.26(a)	Retailers and wholesalers have slightly different requirements	Section 3.4
3	Report progress in meeting urban water use targets using the standardized form.	10608.40		
25	Quantify past, current, and projected water use, identifying the uses among water use sectors, for the following: (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, conjunctive use, and (I) agriculture.	10631(e)(1)	Consider 'past' to be 2005, present to be 2010, and projected to be 2015, 2020, 2025, and 2030. Provide numbers for each category for each of these years.	Section 3.3 -- Tables 3-3, 3-2, 3-7, 3-10, 3-9, 3-10
33	Provide documentation that either the retail agency provided the wholesale agency with water use projections for at least 20 years, if the UWMP agency is a retail agency, OR, if a wholesale agency, it provided its urban retail customers with future planned and existing water source available to it from the wholesale agency during the required water-year types	10631(k)	Average year, single dry year, multiple dry years for 2015, 2020, 2025, and 2030.	Section 3.3 -- Tables 3-11, 3-4
34	Include projected water use for single-family and multifamily residential housing needed for lower income households, as identified in the housing element of any city, county, or city and county in the service area of the supplier.	10631.1(a)		Section 3.3 -- Table 3-8
SYSTEM SUPPLIES				
13	Identify and quantify the existing and planned sources of water available for 2015, 2020, 2025, and 2030.	10631(b)	The 'existing' water sources should be for the same year as the "current population" in line 10. 2035 and 2040 can also be provided.	Section 4.1 -- Tables 4.2 & 4.3

No.	UWMP requirement	Calif. Water Code reference	Additional clarification	UWMP location
14	Indicate whether groundwater is an existing or planned source of water available to the supplier. If yes, then complete 15 through 21 of the UWMP Checklist. If no, then indicate "not applicable" in lines 15 through 21 under the UWMP location column.	10631(b)	Source classifications are: surface water, groundwater, recycled water, storm water, desalinated sea water, desalinated brackish groundwater, and other.	Section 4.2
15	Indicate whether a groundwater management plan been adopted by the water supplier or if there is any other specific authorization for groundwater management. Include a copy of the plan or authorization.	10631(b)(1)		Section 4.2
16	Describe the groundwater basin.	10631(b)(2)		Section 4.2
17	Indicate whether the groundwater basin is adjudicated? Include a copy of the court order or decree.	10631(b)(2)		Section 4.2
18	Describe the amount of groundwater the urban water supplier has the legal right to pump under the order or decree. If the basin is not adjudicated, indicate "not applicable" in the UWMP location column.	10631(b)(2)		Section 4.2
19	For groundwater basins that are not adjudicated, provide information as to whether DWR 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. If the basin is adjudicated, indicate "not applicable" in the UWMP location column.	10631(b)(2)		N/A
20	Provide a detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years	10631(b)(3)		Section 4.3 -- Table 4.4
21	Provide a detailed description and analysis of the amount and location of groundwater that is projected to be pumped.	10631(b)(4)	Provide projections for 2015, 2020, 2025, and 2030.	Section 4.3 -- Table 20 not necessary in Plan, summarized
24	Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.	10631(d)		Section 4.6 -- Table 20 not necessary, no plans
30	Include a detailed description of all water supply projects and programs that may be undertaken by the water supplier to address water supply reliability in average, single-dry, and multiple-dry years, excluding demand management programs addressed in (f)(1). Include specific projects, describe water supply impacts, and provide a timeline for each project.	10631(h)		Section 4.8--No need for Table 26
31	Describe desalinated water project opportunities for long-term supply, including, but not limited to, ocean water, brackish water, and groundwater.	10631(i)		Section 4.7
44	Provide information on recycled water and its potential for use as a water source in the service area of the urban water supplier. Coordinate with local water, wastewater, groundwater, and planning agencies that operate within the supplier's service area.	10633		Section 5.1

No.	UWMP requirement	Calif. Water Code reference	Additional clarification	UWMP location
45	Describe 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.	10633(a)		Section 5.1 -- No need for Table 21 in Plan, verbiage summarized
46	Describe the quantity of treated wastewater that meets recycled water standards, is being discharged, and is otherwise available for use in a recycled water project.	10633(b)		Section 5.1 -- Table 5.1
47	Describe the recycled water currently being used in the supplier's service area, including, but not limited to, the type, place, and quantity of use.	10633(c)		Sections 5.2 & 5.3 -- Table 5.1
48	Describe and quantify the potential uses of recycled water, including, but not limited to, agricultural irrigation, landscape irrigation, wildlife habitat enhancement, wetlands, industrial reuse, groundwater recharge, indirect potable reuse, and other appropriate uses, and a determination with regard to the technical and economic feasibility of serving those uses.	10633(d)		Sections 5.3 & 5.6 -- Table 5.1
49	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.	10633(e)		Section 5.3-- Table 5.1
50	Describe the 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.	10633(f)		Sections 5.4 & 5.5--No need for Table 25 in Plan
51	Provide 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.	10633(g)		Sections 5.1 - 5.5
WATER SHORTAGE RELIABILITY AND WATER SHORTAGE CONTINGENCY PLANNING ^b				
5	Describe water management tools and options to maximize resources and minimize the need to import water from other regions.	10620(f)		Section 6.1
22	Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage and provide data for (A) an average water year, (B) a single dry water year, and (C) multiple dry water years.	10631(c)(1)		Sections 6.3, 6.4--Table 6.1--6.4
23	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.	10631(c)(2)		Sections 6.1 & 6.2
35	Provide an urban water shortage contingency analysis that specifies stages of action, including up to a 50-percent water supply reduction, and an outline of specific water supply conditions at each stage	10632(a)		Sections 6.5--6.7
36	Provide 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.	10632(b)		Section 6.4-- Table 6.5
37	Identify 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.	10632(c)		Section 6.6

No.	UWMP requirement	Calif. Water Code reference	Additional clarification	UWMP location
38	Identify 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.	10632(d)		Sections 6.6--6.7
39	Specify 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.	10632(e)		Sections 6.5--6.7
40	Indicated penalties or charges for excessive use, where applicable.	10632(f)		Sections 6.5--6.7
41	Provide 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.	10632(g)		Section 6.7
42	Provide a draft water shortage contingency resolution or ordinance.	10632(h)		Section 6.7
43	Indicate a mechanism for determining actual reductions in water use pursuant to the urban water shortage contingency analysis.	10632(i)		Sections 6.4--6.7
52	Provide information, to the extent practicable, relating to the quality of existing sources of water available to the supplier over the same five-year increments, and the manner in which water quality affects water management strategies and supply reliability	10634	For years 2010, 2015, 2020, 2025, and 2030	Section 6.2
53	Assess the water supply reliability during normal, dry, and multiple dry water years by comparing 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. Base the assessment on the information compiled under Section 10631, including available data from state, regional, or local agency population projections within the service area of the urban water supplier.	10635(a)		Sections 6.3, 6.4--Table 6.1--6.4
DEMAND MANAGEMENT MEASURES				
26	Describe how each water demand management measures is being implemented or scheduled for implementation. Use the list provided.	10631(f)(1)	Discuss each DMM, even if it is not currently or planned for implementation. Provide any appropriate schedules.	Section 7.1
27	Describe the methods the supplier uses to evaluate the effectiveness of DMMs implemented or described in the UWMP.	10631(f)(3)		Section 7.1
28	Provide 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 ability to further reduce demand.	10631(f)(4)		Section 7.1

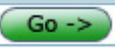
No.	UWMP requirement	Calif. Water Code reference	Additional clarification	UWMP location
29	Evaluate each water demand management measure that is not currently being implemented or scheduled for implementation. The evaluation should include economic and non-economic factors, cost-benefit analysis, available funding, and the water suppliers' legal authority to implement the work.	10631(g)	See 10631(g) for additional wording.	
32	Include the annual reports submitted to meet the Section 6.2 requirements, if a member of the CUWCC and signer of the December 10, 2008 MOU.	10631(j)	Signers of the MOU that submit the annual reports are deemed compliant with Items 28 and 29.	

Appendix B

Documentation of Postings/Notifications



- Residential Services
- Business Services
- City of Burbank



- Home
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- About Us

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- ▣ Climate Action Leader
- ▣ Program Reporting
- ▣ Brochures
- ▣ Power Content Inform
- ▣ Smart Grid Program

• **Water**

- ▣ **Conservation**
 - Water Supply Cris
 - NEW! Water-Wise Gardening
 - Report Water Was
 - Burbank Conserve
 - Water Alert!
 - Delta Vision Plan
 - Water Aerators
 - BWP Water Calcul
 - Rotary Nozzles
 - Retrofit upon Res Requirements

▣ **Quality**

You are here: [Home](#) : Urban Water Management Plan Update

Urban Water Management Plan Update

URBAN WATER MANAGEMENT PLAN UPDATE

The City of Burbank is currently preparing to update its Urban Water Management Plan (UWMP). California law requires the Burbank City Council to adopt an updated UWMP by June 30, 2011. Public involvement and comment are encouraged. A public hearing regarding the draft Plan will be held in May of this year.

The Plan includes the following:

- Assessment of past and future water supplies and demands
- Evaluation of the future reliability of our water supplies
- Information regarding water conservation and water management activities
- Discussion of water recycling activities
- Contingency planning for water shortages

Follow the links below to review the 2005 version of the Plan. Watch this space for the Draft version of the 2011 update and for the public hearing announcement.

[Burbank Urban Water Management Plan 2005](#)

[Annex to the Urban Water Management Plan 2005](#)

For more information, contact Matt Elsner, Principal Civil Engineer at (818) 238-3500 or melsner@ci.burbank.ca.us .



One of the easiest ways to save energy is by using compact fluorescent lights

Find out all about CFLs here

SoCal WaterSmart

Get cash rebates for purchasing water saving products

- Water Quality Annual Reports
- Water Quality Test Results
 - Application
- Treatment
- Chromium 6
 - Chromium 6 in Burbank
 - Testing Reports
 - Press Release
 - PHG Talkin'
- Fluoride Testing Reports

▣ Recycled Water

- Electric
 - ▣ Electric saving tips
 - ▣ Compact Fluorescent Light Bulbs
 - ▣ Home Energy Analyzer
 - ▣ Green Energy Program
 - ▣ Green Home House Call
 - ▣ Solar Support Program

• Electric Vehicles

- ▣ Plug-in Electric Vehicle
- ▣ Charging Locations

• Efficiency and Environmental Programs

- ▣ - for Residents
- ▣ - for Business





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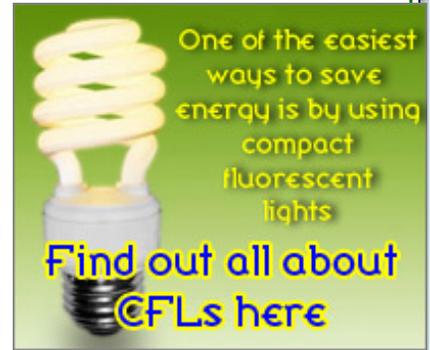
• Efficiency and Environmental Programs

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Urban Water Management Plan Update

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The City of Burbank has prepared a Draft version of its Urban Water Management Plan (UWMP). California law requires the Burbank City Council to adopt an updated UWMP by June 30, 2011. Public involvement and comment are encouraged. A public hearing regarding updating Burbank's UWMP will be held on Tuesday, June 7th, 2011 6:00 P.M., in the Council Chambers, Burbank City Hall, 275 East Olive Avenue, Burbank, California.

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Follow the link below to review the 2010 Draft version of the Plan.

Draft: [Burbank Urban Water Management Plan 2010](#)

For more information, contact Matt Elsner, Principal Civil Engineer at (818) 238-3500 or melsner@ci.burbank.ca.us .

SoCal WaterSmart
Get cash rebates for purchasing water saving products

Business Bucks
Receive a free energy audit of your facility and up to \$2,000 to spend on energy-saving retrofits!

GREEN HOME HOUSE CALL
CITY OF BURBANK Water and Power
House • Yard • Electric • Water • Natural Gas

- Water Quality Annual Reports
- Water Quality Test Results
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 - Chromium 6 in Burbank
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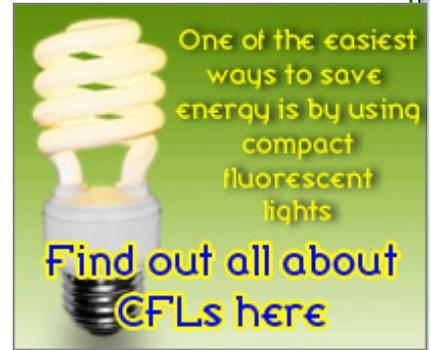
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Burbank Water and Power

MEMORANDUM

DATE: June 2, 2011

TO: BWP Board

FROM: Ron Davis, General Manager

SUBJECT: ENDORSEMENT OF THE 2010 URBAN WATER MANAGEMENT PLAN

PURPOSE:

This report is to request board endorsement of the 2010 Urban Water Management Plan.

BACKGROUND:

California Urban Water Management Planning Act (Act), Water Code Sections 10610 through 10657 requires many urban water suppliers assess the reliability of its water sources over a 20-year planning horizon every five years through the preparation of an Urban Water Management Plan (Plan). Preparation of a Plan is required for suppliers that either provide over 3,000 acre-feet (AF) of water annually or serve 3,000 or more connections. The City of Burbank has over 26,000 water services and supplies more than 17,000 AF of potable water annually.

Plans were completed at the end of 1985, 1990, 1995, 2000, and 2005. In November 2009, Senate Bill 7 (SBx7-7) was passed into law, mandating a 20 percent per capita reduction in water use by December 31, 2020, along with an interim 10 percent reduction by the end of 2015. In order for urban water suppliers to incorporate these new changes into their upcoming 2010 plans, a six month deadline extension was granted, with the 2010 plans being due on or before July 1, 2011.

The Plan must include:

- Assessment of past and future water supplies and demands
- Evaluation of the future reliability of Burbank's water supplies
- Information regarding water conservation and water management activities
- Discussion of water recycling activities
- Contingency planning for water shortages

Highlights of changes in requirements since the 2005 Plan and where the information is contained are:

- Water use projections are required for lower-income households (Section 3.3)
- Indirect potable reuse is required to be described, quantified, and a determination made as to technical and economic feasibility (Section 5.5)
- The water use reduction goals from SBX7-7 (20x 2020) such as baseline use, urban water use target, interim urban water use target must be included with supporting data and calculations (Section 3.2)

Staff has prepared a revised and updated 2010 Urban Water Management Plan, copies of which are attached for Board review and endorsement. Public involvement and comment have been solicited through BWP's website. Staff will present the highlights of the draft plan and requests the Board's comment and endorsement. A public hearing regarding the Plan will be held at the June 7 City Council Meeting. City Council must formally adopt the plan by resolution, after which it will be submitted to the California Department of Water Resources.

RECOMMENDATION:

Staff requests Board endorsement of the 2010 Urban Water Management Plan and recommendation of its approval to City Council.

NOTICE OF PUBLIC HEARING BEFORE THE BURBANK CITY COUNCIL
REGARDING THE CITY OF BURBANK'S 2010 URBAN WATER MANAGEMENT
PLAN

On Tuesday, June 7, 2011, at 6:30 p.m., in the Council Chamber of the City Hall, 275 East Olive Avenue, Burbank, California, the City Council will hold a public hearing regarding the City of Burbank's 2010 Urban Water Management Plan. The California Urban Water Management Planning Act (Assembly Bill 797, California Water Code Division 6, Part 2.6) requires that the City's Urban Water Management Plan be reviewed and updated this year; that the Plan be made available for public inspection; and, that a public hearing be held prior to adoption of the Plan.

The Urban Water Management Plan includes evaluations of historical and future water supplies and demands, and of the reliability of the supplies, and descriptions of water conservation and water management activities, including water recycling and preparation for water shortages.

The Draft 2010 Urban Water Management Plan for the City of Burbank is available for inspection at the Water Division of Burbank Water and Power and on the Burbank Water and Power website, www.burbankwaterandpower.com.

Dated: May 20, 2011
Publish: May 24, 2011
May 31, 2011

CITY COUNCIL
Margarita Campos, City Clerk

Burbank Water and Power

MEMORANDUM

DATE: June 7, 2011

TO: Michael S. Flad

FROM: Ronald E. Davis, General Manager

SUBJECT: APPROVAL OF THE 2010 URBAN WATER MANAGEMENT PLAN

PURPOSE:

This report is to request Council Approval of the 2010 Urban Water Management Plan.

BACKGROUND:

California Urban Water Management Planning Act (Act), Water Code Sections 10610 through 10657 requires many urban water suppliers assess the reliability of its water sources over a 20-year planning horizon every five years through the preparation of an Urban Water Management Plan (Plan). Preparation of a Plan is required for suppliers that either provide over 3,000 acre-feet (AF) of water annually or serve 3,000 or more connections. The City of Burbank has over 26,000 water services and supplies more than 17,000 AF of potable water annually.

Plans were completed at the end of 1985, 1990, 1995, 2000, and 2005. In November 2009, Senate Bill 7 (SBx7-7) was passed into law, mandating a 20 percent per capita reduction in water use by December 31, 2020, along with an interim 10 percent reduction by the end of 2015. In order for urban water suppliers to incorporate these new changes into their upcoming 2010 plans, a six month deadline extension was granted, with the 2010 plans being due on or before July 1, 2011.

The Plan must include:

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Highlights of changes in requirements since the 2005 Plan and where the information is contained are:

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- The water use reduction goals from SBX7-7 (20x 2020) such as baseline use, urban water use target, interim urban water use target must be included with supporting data and calculations (Section 3.2)

DISCUSSION:

Staff has prepared a 2010 Urban Water Management Plan, copies of which are attached for Council comment and approval. Public involvement and comment have been solicited through BWP's website. City Council must formally adopt the plan by resolution by June 30, 2010, after which it will be submitted to the California Department of Water Resources.

The attached Plan meets all the statutory requirements and includes the calculation of a 2020 water use target of 156 gallons per capita per day (gpcd) and an interim (2015) target of 175 gpcd. Burbank's 2010 water use was less than the 2020 target at 147 gpcd. We expect to sustain this level of water use through continued water conservation efforts, continued water system maintenance, and maximizing recycled water use.

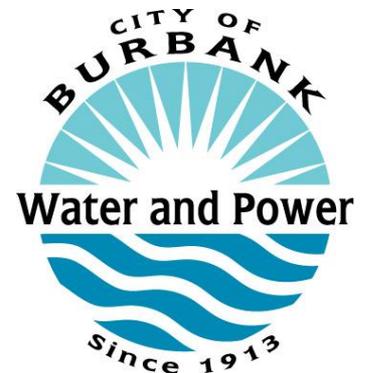
The City's potable water supply is composed of groundwater resources and surface water resources provided by the Metropolitan Water District (MWD). There are factors which could affect the reliability of groundwater supply which we cannot control, such as new water quality standards for Chrome 6, which may be difficult to meet. This uncertainty is bridged by our status as a member agency of the MWD. MWD stated, through its Regional Urban Water Management Plan, that it has adequate supplies for its service area through 2035.

RECOMMENDATION:

Staff requests City Council approval of the 2010 Urban Water Management Plan.

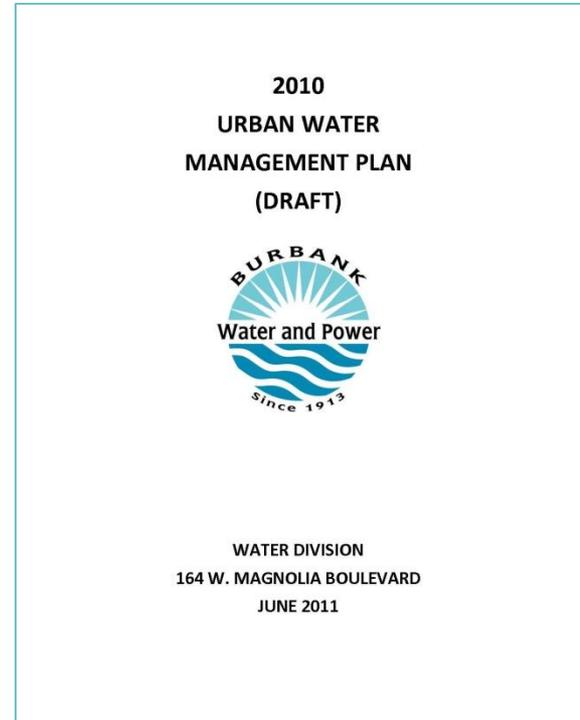
2010 Urban Water Management Plan

Public Hearing
Burbank City Council
June 7, 2011



Tonight's Agenda

- Why we are here
- Contents of the plan
 - Service Area Information
 - System Demands
 - System Supplies
 - Water Recycling
 - Water Supply Reliability
 - Demand Management Measures
- Summary



Why Are We Here?

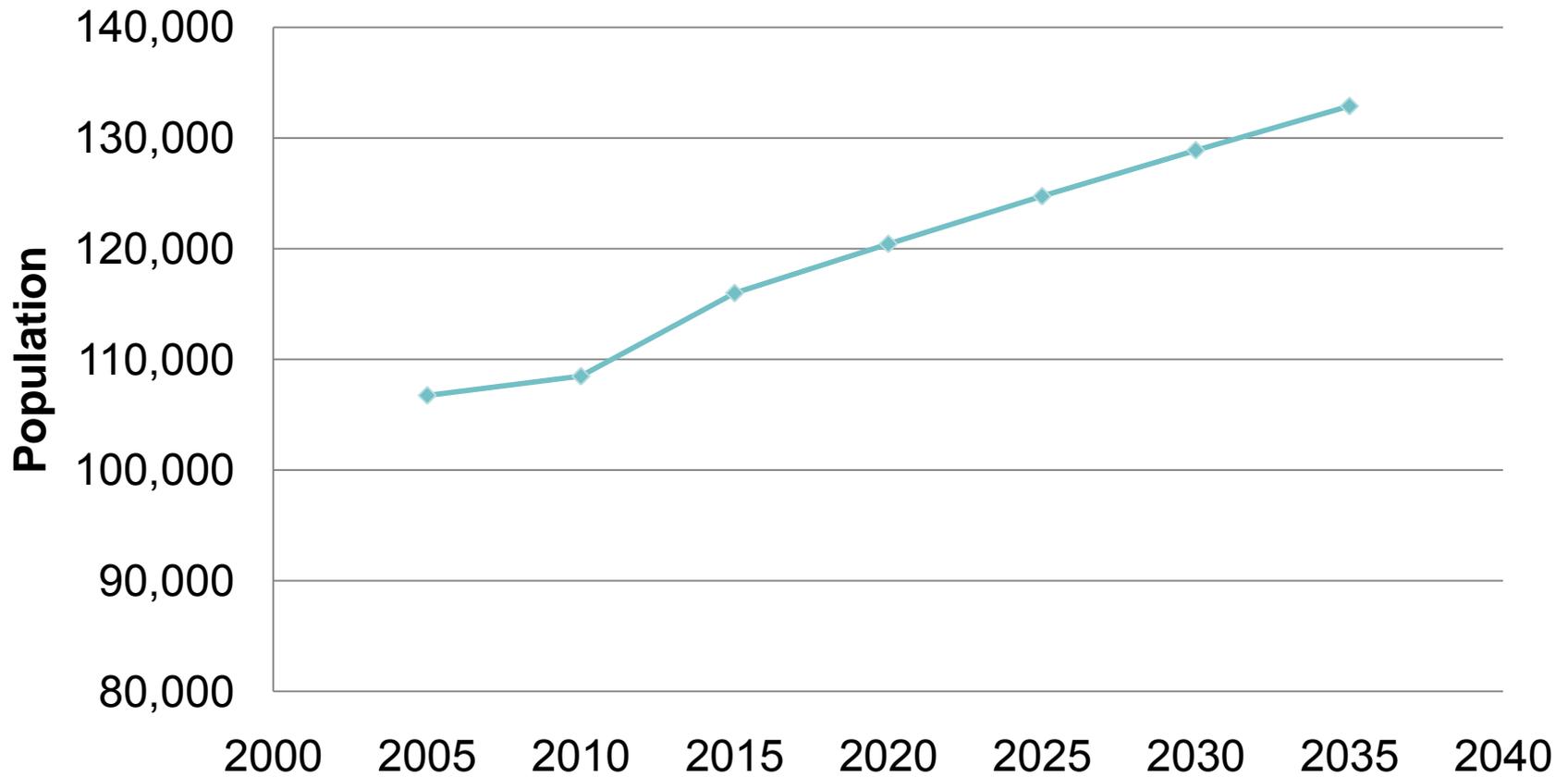
- California Urban Water Management Planning Act
 - Requires an assessment of the reliability of water sources over a 20-year horizon every five years
 - Assessment required for suppliers that provide > 3,000 AF of water annually or serve > 3,000 connections.
- BWP has >26,000 water services and supplies >17,000 AF of potable water annually

Service Area Information

- Area: 17 Sq. Miles
- Population: 100,000 +
- Households: 45,000
- Businesses: 6,000
- Commercial/Industrial:
 - Media: Disney, Warner Bros., NBC, Yahoo
 - Airport
 - Magnolia Power Project (MPP)

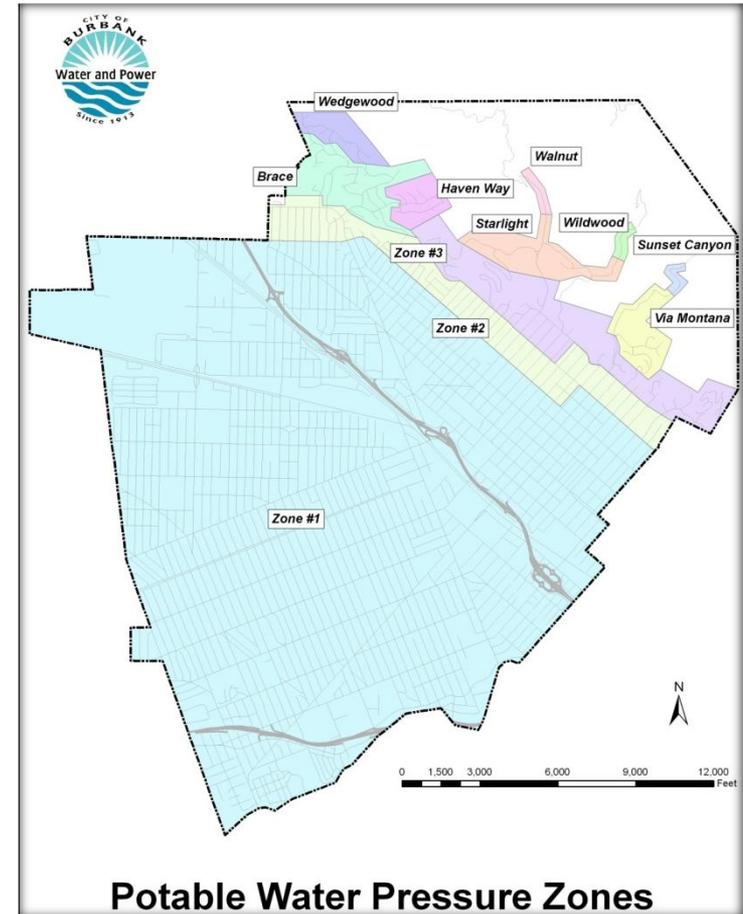


Burbank's Population



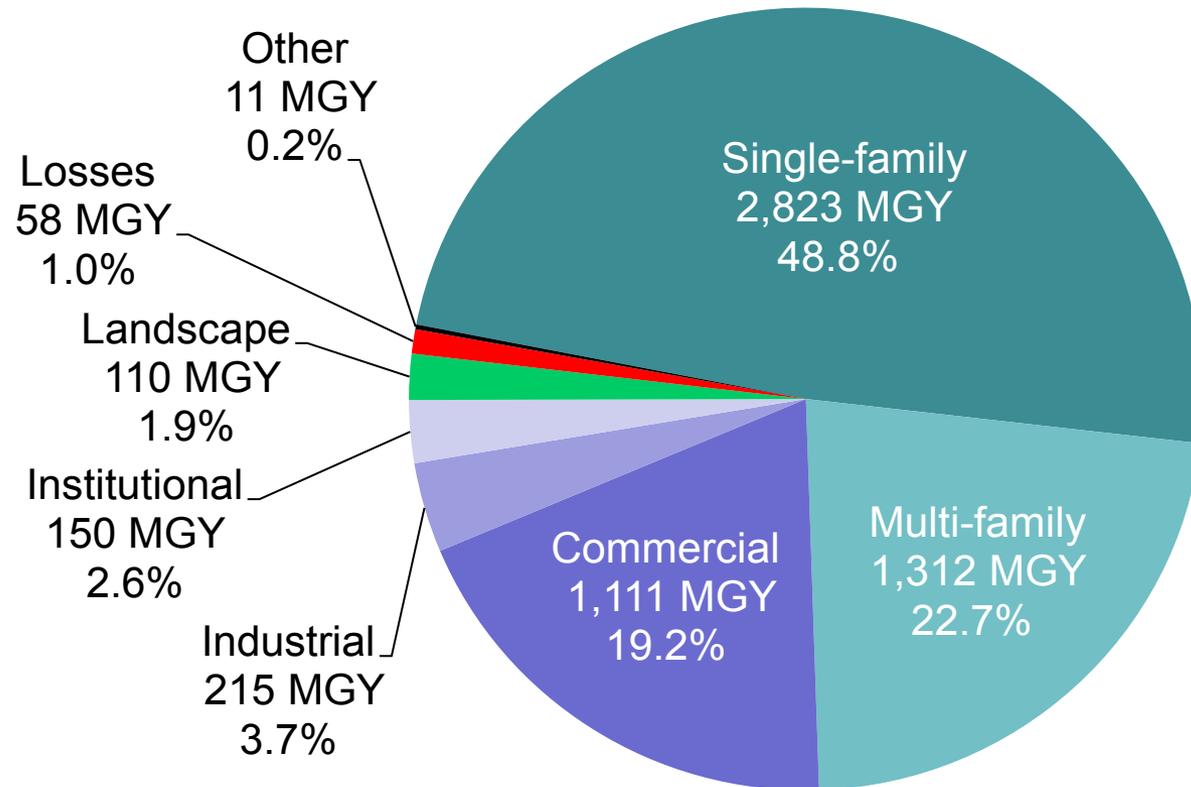
Potable System

- Miles of Pipe: 286
- Valves: 6217
- Hydrants: 1844
- Boosters: 35
- MWD Connections: 5
- Pressure Zones: 13



System Demands

2010 Total Potable Water Use (MGY)



- Total = 5.7 BGY (17,591 AF)

2020 Urban Water Use Target

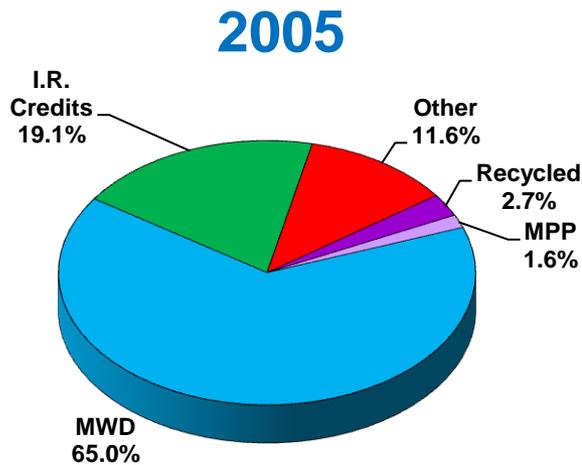
- 10-year base period (1996-2005)
- Base Use = 195 gpcd
- **2020 Target = 156 gpcd**
- 2015 Interim Target = 175 gpcd
- 2010 Actual Water Use = 147 gpcd

Burbank's Water Resources



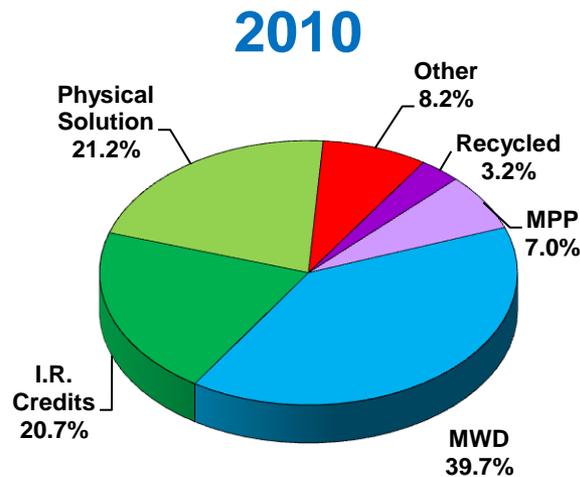
Water Resources

- Increase in Recycled Water Use
- 20% Reduction in Potable Water Use by 2020



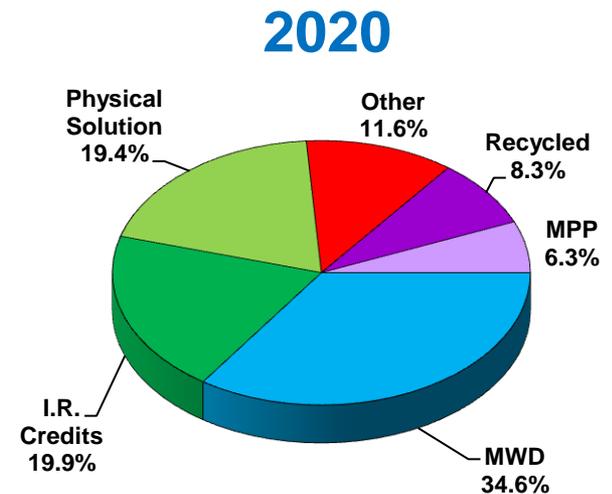
Total: 22,835 AF

Potable: 21,839 AF



Total: 19,779 AF

Potable: 17,769 AF

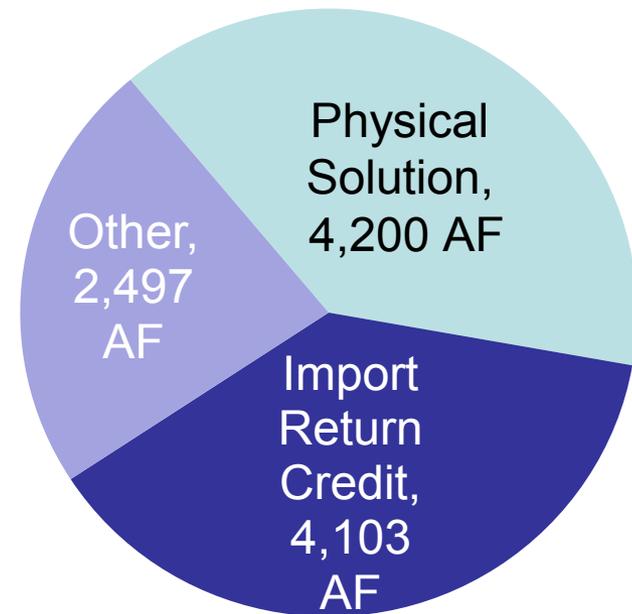


Total: 21641 AF

Potable: 18,481 AF

Potable Water Supplies

- MWD Treated 40% / Groundwater 60%
- Groundwater (BOU)
 - Import Return Credits
 - Physical Solution/
Replenishment
 - Other



2010 Groundwater Credits

Water Recycling

- Delivered via an independent distribution system
- Deliveries of over 675 MG in CY 2010 (3 BGY available)
- Serves BWP, Caltrans, Town Center, DeBell GC, Empire Center, Costco, Chandler Bikeway, Bob Hope Airport, Schools, Parks
- Largest user is Magnolia Power Plant @450 MGY

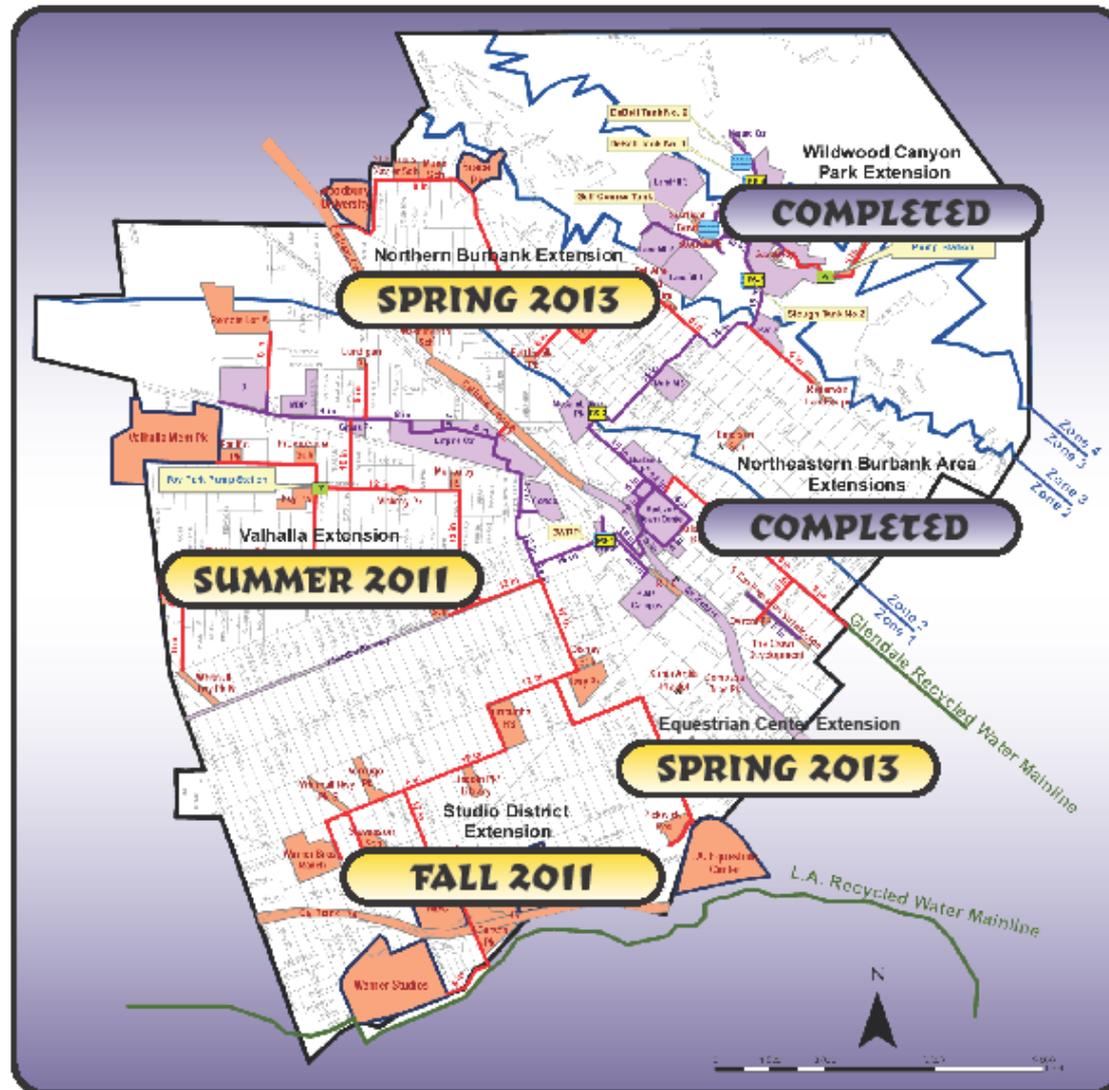


Recycled Water Master Plan

- 300 MGY of additional recycled water deliveries
- 6 Phases:
 - 100,000+ feet of new mains
 - 16 city parks
 - 13 schools
 - 3 Studio Complexes
 - Glendale Interconnect
 - PS-1 Expansion



MAP: Recycled System Expansion

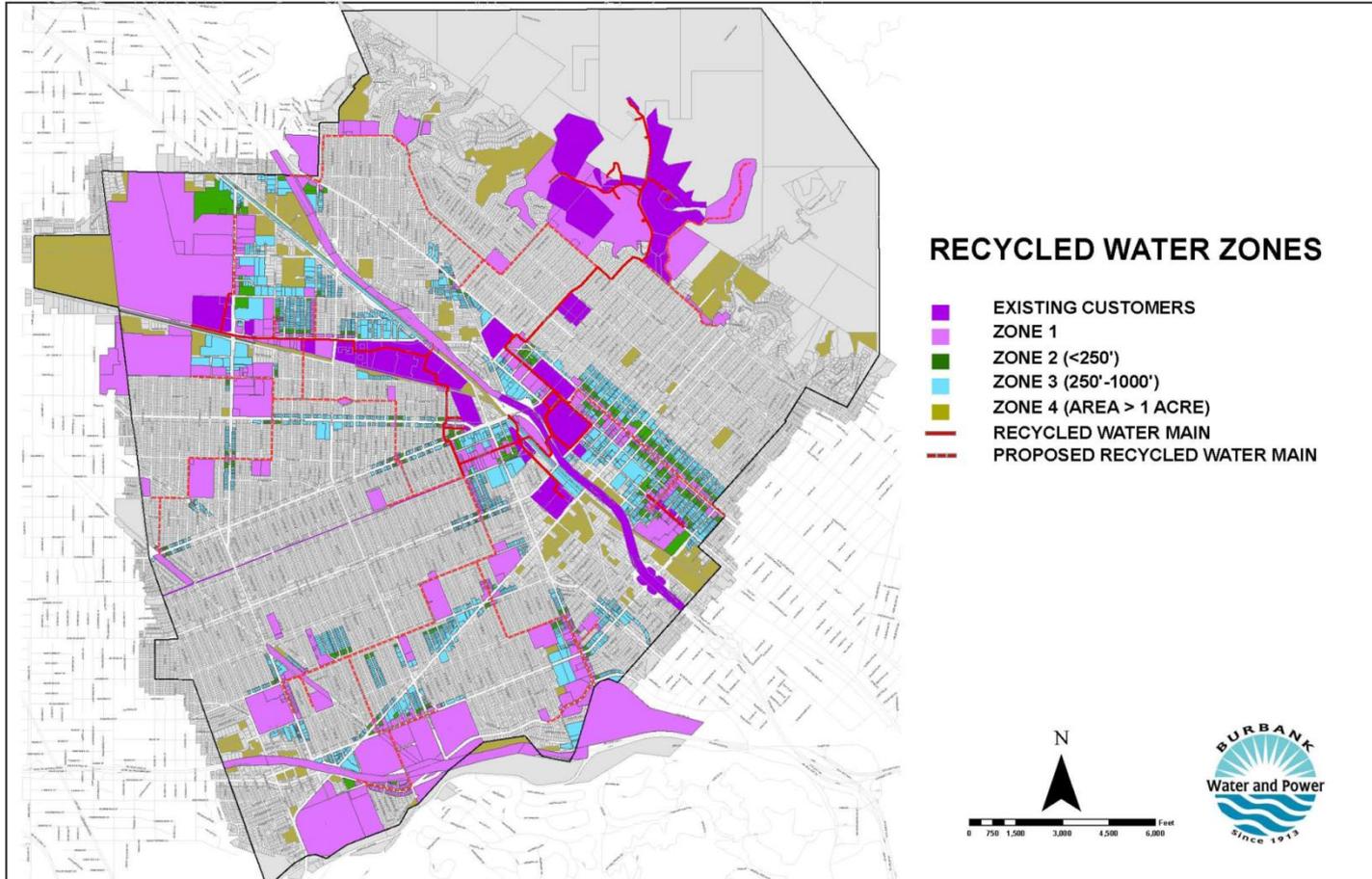


Mandatory Recycled Water Use Policy

- Approved by City Council in December '08
- Identifies parcels where use of Recycled Water is **Practical, Appropriate, and Economical**
- Recycled water use, where required, will be a **condition of potable water service**
- Important element is the identification of recycled water “zones”



Recycled Water Zones



Water Supply Reliability

- MWD Potable Water
- Groundwater
 - Nitrate
 - Emerging Contaminants
 - Chromium-6
- MWD Replenishment Water
- Recycled Water
 - TDS/salts

Demand Management Measures



Conservation Measures

- Business & Multi Family Self Certification (Double Rebates)
- Green Home House Call
- Retrofit on Resale Ordinance
- Business Bucks Program
- Sustainable Water Use Ordinance
- Tiered Water Rates
- California Friendly Landscape Classes

Best Management Practices (BMP's)

- Foundational BMP's
 - 1.1 Conservation Coordinator/Water Waste Provisions
 - 1.2 Water Loss Control / 1.3 Metering
 - 1.4 Retail Conservation Pricing
 - 2.1 Public Outreach & Education
- Programmatic BMP's (new)
 - Compliance demonstrated by achieving water savings goals, i.e. 20% x 2020

Summary

- Plan meets statutory requirements
- 2020 water use target of 156 gpcd
- 2010 water use at 147 gpcd
- Water use sustainable through:
 - Continued water conservation efforts
 - Water system maintenance
 - Maximizing recycled water use

Summary (cont.)

- Water supplies to meet our needs through at least 2035
- Groundwater supplies have some risk but can be replaced by MWD supplies
- Working with LA and Glendale to influence the development of the Salt and Nutrient Management Plan to ensure future viability of recycled water supply

Recommendation

- Staff requests City Council adoption of the 2010 Urban Water Management Plan

RESOLUTION NO. 28,342A RESOLUTION OF THE COUNCIL OF THE CITY OF
BURBANK ADOPTING THE 2010 URBAN WATER
MANAGEMENT PLAN.

THE COUNCIL OF THE CITY OF BURBANK FINDS:

A. The Urban Water Management Planning Act (Water Code Section 10610 et seq.; hereinafter “the Act”) mandates that every supplier providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre feet of water annually, prepare and adopt an Urban Water Management Plan, the primary objectives of which are to evaluate water supplies and demands, including the reliability of supplies, to plan for the conservation and efficient use of water, and to prepare for water shortages.

B. The City of Burbank is an urban supplier of water providing water to a population of over 100,000 and is required to prepare and adopt an Urban Water Management Plan pursuant to the Act.

C. The Act provides that the Plan be reviewed and updated at least once every five years, in years ending in five and zero, and that the City make any changes or amendments to the Plan which are indicated by the review.

D. Any such changes or amendments to the Plan must be adopted by July 1, 2011, after public review and hearing, and filed with the California Department of Water Resources and the California State Library within thirty (30) days of adoption.

E. The City has prepared and circulated for public review a draft 2010 Urban Water Management Plan, which changes or amends the Plan adopted in 2005.

F. A duly noticed public hearing regarding such changes or amendments to the Plan was held by the City Council on June 7, 2011.

THE COUNCIL OF THE CITY OF BURBANK RESOLVES:

1. The 2010 Urban Water Management Plan is hereby adopted and ordered filed with the City Clerk.

2. The General Manager of Burbank Water and Power is hereby authorized and directed to file the 2010 Urban Water Management Plan with the California Department of Water Resources and the California State Library within thirty (30) days after this date.

c: B. Mace, M. Elsner-BWP

3. The City Clerk shall certify to the passage and adoption of this Resolution.

PASSED and ADOPTED this 7th day of June, 2011.

s/Jess A. Talamantes
Jess A. Talamantes
Mayor of the City of Burbank

Attest:

s/Margarita Campos
Margarita Campos, CMC, City Clerk

Approved as to Form and Legal Content:
Dennis A. Barlow, City Attorney

By: s/Richard J. Morillo
Richard J. Morillo
Senior Assistant City Attorney

STATE OF CALIFORNIA)
CITY OF BURBANK) ss.
COUNTY OF LOS ANGELES)

I, Margarita Campos, CMC, City Clerk of the City of Burbank, do hereby certify that the foregoing Resolution was duly and regularly passed and adopted by the Council of the City of Burbank at its regular meeting held on the 7th day of June, 2011 by the following vote:

AYES: Council Members Gabel-Luddy, Golonski, Gordon and Talamantes.

NOES: Council Members None.

ABSENT: Council Member Bric.

s/Margarita Campos
Margarita Campos, CMC, City Clerk

Appendix C

Required Data Tables in DWR Format

Table 1 Coordination with appropriate agencies							
Coordinating Agencies ^{1,2}	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
MWD	x			x			
City of Burbank-CDD							
City of Burbank-Public Works							
ULARA Watermaster							
County of Los Angeles						x	
City of Glendale				x			
General Public						x	

¹ Indicate the specific name of the agency with which coordination or outreach occurred.
² Check at least one box in each row.

Table 2 Population — current and projected							
	2010	2015	2020	2025	2030	2035 - optional	Data source ²
Service area population ¹	108,469	115,986	120,428	124,732	128,888	132,877	MWD RUWMP

¹ Service area population is defined as the population served by the distribution system. See Technical Methodology 2: Service Area Population (2010 UWMP Guidebook, Section M).
² Provide the source of the population data provided.

Table 3 Water deliveries — actual, 2005					
Water use sectors	2005				Total Volume
	Metered		Not metered		
	# of accounts	Volume	# of accounts	Volume	
Single family	18,733	10,216			10,216
Multi-family	3,345	4,970			4,970
Commercial	2,975	3,800			3,800
Industrial	117	858			858
Institutional/governmental	174	772			772
Landscape	187	413	30	1	414
Agriculture					0
Other	758	20			20
Total	26,289	21,049	30	1	21,050

Units (circle one): acre-feet per year million gallons per year cubic feet per year

Table 4
Water deliveries — actual, 2010

Water use sectors	2010				Total Volume
	Metered		Not metered		
	# of accounts	Volume	# of accounts	Volume	
Single family	18,681	8,663			8,663
Multi-family	3,353	4,027			4,027
Commercial	3,018	3,409			3,409
Industrial	110	660			660
Institutional/governmental	165	460			460
Landscape	187	336	30	1	337
Agriculture					0
Other	888	35			35
Total	26,402	17,590	30	1	17,591

Units (circle one): acre-feet per year million gallons per year cubic feet per year

Table 5
Water deliveries — projected, 2015

Water use sectors	2015				Total Volume
	Metered		Not metered		
	# of accounts	Volume	# of accounts	Volume	
Single family		8,479			8,479
Multi-family		3,941			3,941
Commercial		3,337			3,337
Industrial		646			646
Institutional/governmental		450			450
Landscape		329	30	1	330
Agriculture					0
Other		34			34
Total	0	17,216	30	1	17,217

Units (circle one): acre-feet per year million gallons per year cubic feet per year

Table 6
Water deliveries — projected, 2020

Water use sectors	2020				Total Volume
	Metered		Not metered		
	# of accounts	Volume	# of accounts	Volume	
Single family		8,828			8,828
Multi-family		4,104			4,104
Commercial		3,474			3,474
Industrial		673			673
Institutional/governmental		469			469
Landscape		342	30	1	343
Agriculture					0
Other		36			36
Total	0	17,926	30	1	17,927

Units (circle one): acre-feet per year million gallons per year cubic feet per year

Table 7
Water deliveries — projected 2025, 2030, and 2035

Water use sectors	2025		2030		2035 - optional	
	metered		metered		metered	
	# of accounts	Volume	# of accounts	Volume	# of accounts	Volume
Single family		9,144		9,449		9,741
Multi-family		4,251		4,392		4,528
Commercial		3,598		3,718		3,833
Industrial		697		720		742
Institutional/governmental		486		502		517
Landscape		355		366		378
Agriculture		0				
Other		37		38		39
Total	0	18,568	0	19,185	0	19,778

Units (circle one): acre-feet per year million gallons per year cubic feet per year

Table 8
Low-income projected water demands

Low Income Water Demands ¹	2015	2020	2025	2030	2035 - opt
Single-family residential	80	80	85	90	90
Multi-family residential	320	330	340	355	365
Total	400	410	425	445	455

Units (circle one): acre-feet per year million gallons per year cubic feet per year

¹ Provide demands either as directly estimated values or as a percent of demand.

Table 9
Sales to other water agencies

Water distributed	2005	2010	2015	2020	2025	2030	2035 - opt
LADWP, Sale of Recycled Water for Landscape	0	0	500	2,000	2,000	2,000	2,000
name of agency							
name of agency							
Total	0	0	500	2,000	2,000	2,000	2,000

Units (circle one): acre-feet per year million gallons per year cubic feet per year

Table 10

Additional water uses and losses

Water use ¹	2005	2010	2015	2020	2025	2030	2035 -opt
Saline barriers	0	0	0	0	0	0	0
Groundwater recharge	0	2,034	2,100	500	300	200	100
Conjunctive use	0	0	0	0	0	0	0
Raw water							
Recycled water	996	2,010	3,160	3,160	3,160	3,160	3,160
System losses	790	178	534	554	573	594	613
Other (define)							
Total	1,786	4,222	5,794	4,214	4,033	3,954	3,873

Units (circle one): acre-feet per year million gallons per year cubic feet per year

¹Any water accounted for in Tables 3 through 7 are not included in this table.

Table 11

Total water use

Water Use	2005	2010	2015	2020	2025	2030	2035 - opt
Total water deliveries (from Tables 3 to 7)	21,050	17,591	17,217	17,927	18,568	19,185	19,778
Sales to other water agencies (from Table 9)	0	0	500	2,000	2,000	2,000	2,000
Additional water uses and losses (from Table 10)	1,786	4,222	5,794	4,214	4,033	3,954	3,873
Total	22,836	21,813	23,511	24,141	24,601	25,139	25,651

Units (circle one): acre-feet per year million gallons per year cubic feet per year

Table 12

Retail agency demand projections provided to wholesale suppliers

Wholesaler	Contracted Volume ³	2010	2015	2020	2025	2030	2035 -opt
MWD (treated potable)	No	7,852	6,750	7,481	8,141	8,779	9,391
MWD (untreated GW replen)	No	2,034	2,100	500	300	200	100

Table 13
Base period ranges

Base	Parameter	Value	Units
10- to 15-year base period	2008 total water deliveries	23909	see below
	2008 total volume of delivered recycled water	2032	see below
	2008 recycled water as a percent of total deliveries	8.5	percent
	Number of years in base period ¹	10	years
	Year beginning base period range	1996	
	Year ending base period range ²	2005	
5-year base period	Number of years in base period	5	years
	Year beginning base period range	2003	
	Year ending base period range ³	2007	

Units (circle one): acre-feet per year million gallons per year cubic feet per year

¹ If the 2008 recycled water percent is less than 10 percent, then the first base period is a continuous 10-year period. If the amount of recycled water delivered in 2008 is 10 percent or greater, the first base period is a continuous 10- to 15-year period.

² The ending year must be between December 31, 2004 and December 31, 2010.

³ The ending year must be between December 31, 2007 and December 31, 2010.

Table 14
Base daily per capita water use — 10- to 15-year range

Base period year		Distribution System Population	Daily system gross water use (mgd)	Annual daily per capita water use (gpcd)
Sequence Year	Calendar Year			
Year 1	1996	97302	19	191
Year 2	1997	97326	20	201
Year 3	1998	98303	19	188
Year 4	1999	98817	20	198
Year 5	2000	100316	21	205
Year 6	2001	101457	20	196
Year 7	2002	102741	20	196
Year 8	2003	104287	20	194
Year 9	2004	105112	20	194
Year 10	2005	105985	19	184
Year 11				
Year 12				
Year 13				
Year 14				
Year 15				
Base Daily Per Capita Water Use¹				195

¹ Add the values in the column and divide by the number of rows.

Table 15 Base daily per capita water use — 5-year range				
Base period year		Distribution System Population	Daily system gross water use (mgd)	Annual daily per capita water use (gpcd)
Sequence Year	Calendar Year			
Year 1	2003	104287	20	194
Year 2	2004	105112	20	194
Year 3	2005	105985	19	184
Year 4	2006	106475	20	188
Year 5	2007	106886	21	192
Base Daily Per Capita Water Use ¹				190

¹Add the values in the column and divid by the number of rows.

Table 16 Water supplies — current and projected							
Water Supply Sources		2010	2015	2020	2025	2030	2035 - opt
Water purchased from ¹ :		Wholesaler supplied volume (yes/no)					
Metropolitan Water District of S.C. (treated potable)		No	7,852	6,750	7,481	8,141	8,779
Metropolitan Water District of S.C. (untreated GW repln)		No	2,034	2,100	500	300	200
Wholesaler 3 (enter agency name)							
Supplier-produced groundwater ²			9,917	11,000	11,000	11,000	11,000
Supplier-produced surface water							
Transfers in							
Exchanges In							
Recycled Water			2,010	3,660	5,160	5,160	5,160
Desalinated Water							
Other							
Other							
Total			21,813	23,510	24,141	24,601	25,139

Units (circle one): acre-feet per year million gallons per year cubic feet per year

¹ Volumes shown here should be what was purchased in 2010 and what is anticipated to be purchased in the future. If these numbers differ from what is contracted, show the contracted quantities in Table 17.

² Volumes shown here should be consistent with Tables 17 and 18.

Table 17 Wholesale supplies — existing and planned sources of water						
Wholesale sources ^{1,2}	Contracted	2015	2020	2025	2030	2035 - opt
Metropolitan Water District of S.C. (potable)		13,293	12,743	12,074	11,411	10,825
Metropolitan Water District of S.C. (GW repl)		5,200	6,200	6,200	6,200	6,200
(source 3)						

Units (circle one): acre-feet per year million gallons per year cubic feet per year

¹ Water volumes presented here should be accounted for in Table 16.

² If the water supplier is a wholesaler, indicate all

³ Indicate the full amount of water

Table 18
Groundwater — volume pumped

Basin name(s)	Metered or Unmetered ¹	2006	2007	2008	2009	2010
San Fernando	Metered	10,368	9,782	6,999	10,202	9,917
Total groundwater pumped		10,368	9,782	6,999	10,202	9,917
Groundwater as a percent of total water supply		43%	39%	29%	47%	50%

Units (circle one): acre-feet per year million gallons per year cubic feet per year

¹ Indicate whether volume is based on volumetric meter data or another method

Table 19
Groundwater — volume projected to be pumped

Basin name(s)	2015	2020	2025	2030	2035 - opt
San Fernando	11,000	11,000	11,000	11,000	11,000
Total groundwater pumped		11,000	11,000	11,000	11,000
Percent of total water supply					

Units (circle one): acre-feet per year million gallons per year cubic feet per year

Include future planned expansion

Table 20
Transfer and exchange opportunities

Transfer agency	Transfer or exchange	Short term or long term	Proposed Volume
City of Glendale	Exchange	Short term	As-needed
Total			

Units (circle one): acre-feet per year million gallons per year cubic feet per year

Table 21
Recycled water — wastewater collection and treatment

Type of Wastewater	2005	2010	2015	2020	2025	2030	2035 - opt
Wastewater collected & treated in service area			10,080	10,080	10,080	10,080	10,080
Volume that meets recycled water standard							

Units (circle one): acre-feet per year million gallons per year cubic feet per year

Table 22
Recycled water — non-recycled wastewater disposal

Method of disposal	Treatment Level	2010	2015	2020	2025	2030	2035 - opt
Discharge to Surface Water	Tertiary		6,420	4,920	4,920	4,920	4,920
Name of method							
Name of method							
Name of method							
Total		0	6,420	4,920	4,920	4,920	4,920

Units (circle one): acre-feet per year million gallons per year cubic feet per year

Table 23
Recycled water — potential future use

User type	Description	Feasibility ¹	2015	2020	2025	2030	2035 - opt
Agricultural irrigation							
Landscape irrigation ²	x		975	975	975	975	975
Commercial irrigation ³	x		525	525	525	525	525
Golf course irrigation	x		300	300	300	300	300
Wildlife habitat							
Wetlands							
Industrial reuse	x		1,360	1,360	1,360	1,360	1,360
Groundwater recharge							
Seawater barrier							
Getothermal/Energy							
Indirect potable reuse	evaluation required for UWMP						
Other (user type)	Delivery to LADWP		500	2,000	2,000	2,000	2,000
Other (user type)							
Total		0	3,660	5,160	5,160	5,160	5,160

Units (circle one): acre-feet per year million gallons per year cubic feet per year

¹ Technical and economic feasibility.

² Includes parks, schools, cemeteries, churches, residential, or other public facilities) landscaping, toilets, HVAC, etc) and

Table 24
Recycled water — 2005 UWMP use projection compared to 2010 actual

Use type	2010 actual use	2005 Projection for 2010 ¹
Agricultural irrigation		
Landscape irrigation ²	140	650
Commercial irrigation ³	250	150
Golf course irrigation	240	300
Wildlife habitat		
Wetlands		
Industrial reuse	1,380	1,700
Groundwater recharge		
Seawater barrier		
Getothermal/Energy		
Indirect potable reuse		
Other (user type)		
Other (user type)		
Total	2,010	2,800

Units (circle one): acre-feet per year million gallons per year cubic feet per year

¹ From the 2005 UWMP. There has been some modification of use types. Data from the 2005 UWMP can be left in the

² Includes parks, schools, cemeteries, churches, residential, or other public facilities)

³ Includes commercial building use such as landscaping, toilets, HVAC, etc) and commercial uses (car washes, laundries,

Table 25
Methods to encourage recycled water use

Actions	Projected Results					
	2010	2015	2020	2025	2030	2035 - opt
Financial incentives						
Mandatory Recycled Water Use Ordinance	0	50	120	120	120	120
name of action						
Total	0	50	120	120	120	120

Units (circle one): acre-feet per year million gallons per year cubic feet per year

Table 26
Future water supply projects

Project name ¹	Projected start	Projected	Potential project	Normal-year	Single-dry year	Multiple-dry year	Multiple-dry year	Multiple-dry year
Total		0	0	0	0	0	0	0

Units (circle one): acre-feet per year million gallons per year cubic feet per year
¹ Water volumes presented here should be accounted for in Table 16.
² Indicate whether project is likely to happen and what constraints, if any, exist for project implementation.
³ Provide estimated supply benefits, if available.

Table 27
Basis of water year data

Water Year Type	Base Year(s)
Average Water Year	1922-2004
Single-Dry Water Year	1977
Multiple-Dry Water Years	1990-1992

Table 28
Supply reliability — historic conditions

Average / Normal Water Year	Single Dry Water Year	Multiple Dry Water Years			
		Year 1	Year 2	Year 3	Year 4
30,692	30,691	28,832	28,832	28,832	
Percent of Average/Normal Year:	100.0%	93.9%	93.9%	93.9%	

Table 29
Factors resulting in inconsistency of supply

Water supply sources ¹	Specific source name, if any	Limitation quantification	Legal	Environmental	Water quality	Climatic	Additional information
MWD (untreated GW replenishment)						x	Replenishment deliv
Supplier-produced Groundwater					x		Possible change in w

Units (circle one): acre-feet per year million gallons per year cubic feet per year
¹ From Table 16.

Table 30

Water quality — current and projected water supply impacts

Water source	Description of condition	2010	2015	2020	2025	2030	2035 - opt
Supplier-produced Groundwater	Unknown change in quality or regulation	10,000	11,000	11,000	11,000	11,000	11,000

Units (circle one): acre-feet per year million gallons per year cubic feet per year

Table 31
Supply reliability — current water sources

Water supply sources ¹	Average / Normal Water Year Supply ²	Multiple Dry Water Year Supply ²		
		Year 2011	Year 2012	Year 2013
MWD Potable	7,852	6,472	6,472	6,472
MWD untreated GW replenishment	2,034	2,000	2,000	2,000
Supplier-produced groundwater	9,917	10,000	10,000	10,000
Recycled Water	2,010	2,010	2,010	2,010
Percent of normal year:	100.0%	93.9%	93.9%	93.9%

Units (circle one): acre-feet per year million gallons per year cubic feet per year

¹ From Table 16.

² See Table 27 for basis of water type years.

Table 32
Supply and demand comparison — normal year

	2015	2020	2025	2030	2035 - opt
Supply totals (from Table 16)	23,510	24,141	24,601	25,139	25,651
Demand totals (From Table 11)	23,511	24,141	24,601	25,139	25,651
Difference	(1)	0	0	0	0
Difference as % of Supply	0.0%	0.0%	0.0%	0.0%	0.0%
Difference as % of Demand	0.0%	0.0%	0.0%	0.0%	0.0%

Units are in acre-feet per year.

Table 33
Supply and demand comparison — single dry year

	2015	2020	2025	2030	2035 - opt
Supply totals^{1,2}	23,510	24,141	24,601	25,139	25,651
Demand totals^{2,3,4}	23,511	24,141	24,601	25,139	25,651
Difference	(1)	0	0	0	0
Difference as % of Supply	0.0%	0.0%	0.0%	0.0%	0.0%
Difference as % of Demand	0.0%	0.0%	0.0%	0.0%	0.0%

Units are in acre-feet per year.

¹ Provide in the text of the UWMP text that discusses how single-dry-year water supply volumes were determined.

² Consider the same demands as in Table 3. If

⁴ The urban water target determined in this UWMP will be considered when developing the 2020 water demands included in this table.

Table 34 Supply and demand comparison — multiple dry-year events						
		2015	2020	2025	2030	2035 - opt
Multiple-dry year first year supply	Supply totals ^{1,2}	22,086	24,649	24,875	25,420	25,945
	Demand totals ^{2,3,4}	22,086	24,649	24,875	25,420	25,945
	Difference	0	0	0	0	0
	Difference as % of Supply	0.0%	0.0%	0.0%	0.0%	0.0%
	Difference as % of Demand	0.0%	0.0%	0.0%	0.0%	0.0%
Multiple-dry year second year supply	Supply totals ^{1,2}	22,086	24,649	24,875	25,420	25,945
	Demand totals ^{2,3,4}	22,086	24,649	24,875	25,420	25,945
	Difference	0	0	0	0	0
	Difference as % of Supply	0.0%	0.0%	0.0%	0.0%	0.0%
	Difference as % of Demand	0.0%	0.0%	0.0%	0.0%	0.0%
Multiple-dry year third year supply	Supply totals ^{1,2}	22,086	24,649	24,875	25,420	25,945
	Demand totals ^{2,3,4}	22,086	24,649	24,875	25,420	25,945
	Difference	0	0	0	0	0
	Difference as % of Supply	0.0%	0.0%	0.0%	0.0%	0.0%
	Difference as % of Demand	0.0%	0.0%	0.0%	0.0%	0.0%

Units are in acre-feet per year.

¹ Consider the same sources as in Table 16. If

² Provide in the text of the UWMP text that discusses how single-dry-year water supply volumes were determined.

³ Consider the same demands as in Table 3. If

⁴ The urban water target determined in this UWMP will be considered when developing the 2020 water demands included in this table.

Table 35 Water shortage contingency — rationing stages to address water supply shortages		
Stage No.	Water Supply Conditions	% Shortage
I	Always	Always
II	Ordinance does not include percents Stages would be determined	10%
III	as a shortage developed, and would be approved by City Council.	20%
IV	"	30%
V	"	40%
VI	"	50%

¹ One of the stages of action must be designed to

Table 36	
Water shortage contingency — mandatory prohibitions	
Examples of Prohibitions	Stage When
Using potable water for street washing	
Thirteen sustainable water use measures in the Ordinance	I
Watering limited to 15 minutes per day, 3 days per week, April through October, 1 day per week, November through March	II
Watering limited to 15 minutes per day, 2 days per week, April through October	III
Do not use outdoor cooling devices (mistlers)	III
Prohibition on watering between 9 a.m. and 6 p.m. extended to hand watering	III
Use pool and spa covers	III
Watering limited to 15 minutes per day, 1 day per week	IV
Watering limited to deep irrigation of trees and shrubs, 20 minutes, 2 days per month	V
No new or upgraded potable water services permitted, except R-1 and R-2, unless building permit has already been issued	V
Do not water outdoor landscaped areas at any time	VI

Table 37		
Water shortage contingency — consumption reduction methods		
Consumption	Stage When	Projected
Implement Stage II	II	10%
Implement Stage III	III	20%
Implement Stage IV	IV	30%
Implement Stage V	V	40%
Implement Stage VI	VI	50%

Table 38		
Water shortage contingency — penalties and charges		
Penalties or Charges	Stage When	
Penalty for excess use		
Charge for excess use		
One courtesy notice to correct	I-VI	
Administrative citation	I-VI	
Other (name penalties or charges)		
Other (name penalties or charges)		
Other (name penalties or charges)		
Other (name penalties or charges)		

Appendix D

San Fernando Water Rights Judgment

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ORIGINAL FILED

JAN 26 1979

JOHN J. CORCORAN, County Clerk

SUPERIOR COURT OF THE STATE OF CALIFORNIA
FOR THE COUNTY OF LOS ANGELES

THE CITY OF LOS ANGELES,)
)
Plaintiff,)
)
vs.)
)
CITY OF SAN FERNANDO, et al.,)
)
Defendants.)
_____)

No. 650079

JUDGMENT

There follows by consecutive paging a Table of Contents (pages i. to vi.), Recitals (page 1), Definitions and List of Attachments (pages 1 to 6), Designation of Parties (page 6), Declaration re Geology and Hydrology (pages 6 to 12), Declaration of Rights (pages 12 to 21), Injunctions (pages 21 to 23), Continuing Jurisdiction (page 23), Watermaster (pages 23 to 29), Physical Solution (pages 29 to 34), and Miscellaneous Provisions (pages 34 to 35), and Attachments (pages 36 to 46). Each and all of said several parts constitute a single integrated Judgment herein.

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ATTACHMENTS

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1. RECITALS

This matter was originally tried before the Honorable Edmund M. Moor, without jury, commencing on March 1, 1966, and concluding with entry of Findings, Conclusions and Judgment on March 14, 1968, after more than 181 trial days. Los Angeles appealed from said judgment and the California Supreme Court, by unanimous opinion, (14 Cal. 3d 199) reversed and remanded the case; after trial of some remaining issues on remand, and consistent with the opinion of the Supreme Court, and pursuant to stipulations, the Court signed and filed Findings of Fact and Conclusions of Law. Good cause thereby appearing,

IT IS ORDERED, ADJUDGED AND DECREED:

2. DEFINITIONS AND ATTACHMENTS

2.1 Definitions of Terms. As used in this Judgment, the following terms shall have the meanings herein set forth:

[1] Basin or Ground Water Basin -- A subsurface geologic formation with defined boundary conditions, containing a ground water reservoir, which is capable of yielding a significant quantity of ground water.

[2] Burbank -- Defendant City of Burbank.

[3] Crescenta Valley -- Defendant Crescenta Valley County Water District.

[4] Colorado Aqueduct -- The aqueduct facilities and system owned and operated by MWD for the importation of water from the Colorado River to its service area.

[5] Deep Rock -- Defendant Evelyn M. Pendleton, dba Deep Rock Artesian Water Company.

1 [6] Delivered Water -- Water utilized in a water supply
2 distribution system, including reclaimed water.

3 [7] Eagle Rock Basin -- The separate ground water basin
4 underlying the area shown as such on Attachment "A".

5 [8] Extract or Extraction -- To produce ground water,
6 or its production, by pumping or any other means.

7 [9] Fiscal Year -- July 1 through June 30 of the
8 following calendar year.

9 [10] Foremost -- Defendant Foremost Foods Company,
10 successor to defendant Sparkletts Drinking Water Corp.

11 [11] Forest Lawn -- Collectively, defendants Forest
12 Lawn Cemetery Association, Forest Lawn Company, Forest Lawn
13 Memorial-Park Association, and American Security and Fidelity
14 Corporation.

15 [12] Gage F-57 -- The surface stream gaging station
16 operated by Los Angeles County Flood Control District and
17 situated in Los Angeles Narrows immediately upstream from the
18 intersection of the Los Angeles River and Arroyo Seco, at
19 which point the surface outflow from ULARA is measured.

20 [13] Glendale -- Defendant City of Glendale.

21 [14] Ground Water -- Water beneath the surface of the
22 ground and within the zone of saturation.

23 [15] Hersch & Plumb -- Defendants David and Eleanor A.
24 Hersch and Gerald B. and Lucille Plumb, successors to
25 Wellesley and Duckworth defendants.

26 [16] Import Return Water -- Ground water derived from
27 percolation attributable to delivered imported water.

28 [17] Imported Water -- Water used within ULARA, which

1 is derived from sources outside said watershed. Said term
2 does not include inter-basin transfers wholly within ULARA.

3 [18] In Lieu Storage -- The act of accumulating ground
4 water in a basin by intentional reduction of extractions of
5 ground water which a party has a right to extract.

6 [19] Lockheed -- Defendant Lockheed Aircraft Corporation.

7 [20] Los Angeles -- Plaintiff City of Los Angeles,
8 acting by and through its Department of Water and Power.

9 [21] Los Angeles Narrows -- The physiographic area
10 northerly of Gage F-57 bounded on the east by the San Rafael
11 and Repetto Hills and on the west by the Elysian Hills,
12 through which all natural outflow of the San Fernando Basin
13 and the Los Angeles River flow en route to the Pacific Ocean.

14 [22] MWD -- The Metropolitan Water District of Southern
15 California, a public agency of the State of California.

16 [23] Native Safe Yield -- That portion of the safe
17 yield of a basin derived from native waters.

18 [24] Native Waters -- Surface and ground waters derived
19 from precipitation within ULARA.

20 [25] Overdraft -- A condition which exists when the
21 total annual extractions of ground water from a basin exceed
22 its safe yield, and when any temporary surplus has been
23 removed.

24 [26] Owens-Mono Aqueduct -- The aqueduct facilities
25 owned and operated by Los Angeles for importation to ULARA
26 water from the Owens River and Mono Basin watersheds easterly
27 of the Sierra-Nevada in Central California.

28 [27] Private Defendants -- Collectively, all of those

1 defendants who are parties, other than Glendale, Burbank, San
2 Fernando and Crescenta Valley.

3 [28] Reclaimed Water -- Water which, as a result of
4 processing of waste water, is made suitable for and used for
5 a controlled beneficial use.

6 [29] Regulatory Storage Capacity -- The volume of
7 storage capacity of San Fernando Basin which is required to
8 regulate the safe yield of the basin, without significant
9 loss, during any long-term base period of water supply.

10 [30] Rising Water -- The effluent from a ground water
11 basin which appears as surface flow.

12 [31] Rising Water Outflow -- The quantity of rising
13 water which occurs within a ground water basin and does not
14 rejoin the ground water body or is not captured prior to
15 flowing past a point of discharge from the basin.

16 [32] Safe Yield -- The maximum quantity of water which
17 can be extracted annually from a ground water basin under a
18 given set of cultural conditions and extraction patterns,
19 based on the long-term supply, without causing a continuing
20 reduction of water in storage.

21 [33] San Fernando -- Defendant City of San Fernando.

22 [34] San Fernando Basin -- The separate ground water
23 basin underlying the area shown as such on Attachment "A".

24 [35] Sportsman's Lodge -- Defendant Sportsman's Lodge
25 Banquet Association.

26 [36] Stored Water -- Ground water in a basin consisting
27 of either (1) imported or reclaimed water which is inten-
28 tionally spread, or (2) safe yield water which is allowed to

1 accumulate by In Lieu Storage. Said ground waters are dis-
2 tinguished and separately accounted for in a ground water
3 basin, notwithstanding that the same may be physically com-
4 mingled with other waters in the basin.

5 [37] Sylmar Basin -- The separate ground water basin
6 underlying the area indicated as such on Attachment "A".

7 [38] Temporary Surplus -- The amount of ground water
8 which would be required to be removed from a basin in order
9 to avoid waste under safe yield operation.

10 [39] Toluca Lake -- Defendant Toluca Lake Property
11 Owners Association.

12 [40] ULARA or Upper Los Angeles River Area -- The Upper
13 Los Angeles River watershed, being the surface drainage area
14 of the Los Angeles River tributary to Gage F-57.

15 [41] Underlying Pueblo Waters -- Native ground waters
16 in the San Fernando Basin which underlie safe yield and
17 stored waters.

18 [42] Valhalla -- Collectively, Valhalla Properties,
19 Valhalla Memorial Park, Valhalla Mausoleum Park.

20 [43] Van de Kamp -- Defendant Van de Kamp's Holland
21 Dutch Bakers, Inc.

22 [44] Verdugo Basin -- The separate ground water basin
23 underlying the area shown as such on Attachment "A".

24 [45] Water Year -- October 1 through September 30 of
25 the following calendar year.

26 Geographic Names, not herein specifically defined, are used to
27 refer to the places and locations thereof as shown on Attachment "A".

28 2.2 List of Attachments. There are attached hereto the

1 following documents, which are by this reference incorporated in
2 this Judgment and specifically referred to in the text hereof:

3 "A" -- Map entitled "Upper Los Angeles River Area",
4 showing Separate Basins therein.

5 "B" -- List of "Dismissed Parties."

6 "C" -- List of "Defaulted Parties."

7 "D" -- List of "Disclaiming Parties."

8 "E" -- List of "Prior Stipulated Judgments."

9 "F" -- List of "Stipulated Non-Consumptive or Minimal-
10 Consumptive Use Practices."

11 "G" -- Map entitled "Place of Use and Service Area of
12 Private Defendants."

13 "H" -- Map entitled "Public Agency Water Service Areas."
14

15 3. PARTIES

16 3.1 Defaulting and Disclaiming Defendants. Each of the
17 defendants listed on Attachment "C" and Attachment "D" is without
18 any right, title or interest in, or to any claim to extract ground
19 water from ULARA or any of the separate ground water basins therein.

20 3.2 No Rights Other Than as Herein Declared. No party to
21 this action has any rights in or to the waters of ULARA except to
22 the extent declared herein.
23

24 4. DECLARATION RE GEOLOGY AND HYDROLOGY

25 4.1 Geology.

26 4.1.1 ULARA. ULARA (or Upper Los Angeles River Area),
27 is the watershed or surface drainage area tributary to the
28 Los Angeles River at Gage F-57. Said watershed contains a

1 total of 329,000 acres, consisting of approximately 123,000
2 acres of valley fill area and 206,000 acres of hill and
3 mountain area, located primarily in the County of Los Angeles,
4 with a small portion in the County of Ventura. Its boundaries
5 are shown on Attachment "A". The San Gabriel Mountains form
6 the northerly portion of the watershed, and from them two
7 major washes--the Pacoima and the Tujunga--discharge southerly.
8 Tujunga Wash traverses the valley fill in a southerly direc-
9 tion and joins the Los Angeles River, which follows an east-
10 erly course along the base of the Santa Monica Mountains
11 before it turns south through the Los Angeles Narrows. The
12 waters of Pacoima Wash as and when they flow out of Sylmar
13 Basin are tributary to San Fernando Basin. Lesser tributary
14 washes run from the Simi Hills and the Santa Susana Mountains
15 in the westerly portion of the watershed. Other minor washes,
16 including Verdugo Wash, drain the easterly portion of the
17 watershed which consists of the Verdugo Mountains, the Elysian,
18 San Rafael and Repetto Hills. Each of said washes is a non-
19 perennial stream whose flood flows and rising waters are
20 naturally tributary to the Los Angeles River. The Los Angeles
21 River within ULARA and most of said tributary natural washes
22 have been replaced, and in some instances relocated, by
23 concrete-lined flood control channels. There are 85.3 miles
24 of such channels within ULARA, 62% of which have lined con-
25 crete bottoms.

26 4.1.2 San Fernando Basin. San Fernando Basin is the
27 major ground water basin in ULARA. It underlies 112,047 acres
28 and is located in the area shown as such on Attachment "A".

1 Boundary conditions of the San Fernando Basin consist on the
2 east and northeast of alluvial contacts with non-waterbearing
3 series along the San Rafael Hills and Verdugo Mountains and
4 the Santa Susana Mountains and Simi Hills on the northwest and
5 west and the Santa Monica Mountains on the south. Water-
6 bearing material in said basin extends to at least 1000 feet
7 below the surface. Rising water outflow from the San Fernando
8 Basin passes its downstream and southerly boundary in the
9 vicinity of Gage F-57, which is located in Los Angeles Narrows
10 about 300 feet upstream from the Figueroa Street (Dayton
11 Street) Bridge. The San Fernando Basin is separated from the
12 Sylmar Basin on the north by the eroded south limb of the
13 Little Tujunga Syncline which causes a break in the ground
14 water surface of about 40 to 50 feet.

15 4.1.3 Sylmar Basin. Sylmar Basin underlies 5,565 acres
16 and is located in the area shown as such on Attachment "A".
17 Water-bearing material in said basin extends to depths in ex-
18 cess of 12,000 feet below the surface. Boundary conditions of
19 Sylmar Basin consist of the San Gabriel Mountains on the north,
20 a topographic divide in the valley fill between the Mission
21 Hills and San Gabriel Mountains on the west, the Mission Hills
22 on the southwest, Upper Lopez Canyon Saugus Formation on the
23 east, along the east bank of Pacoima Wash, and the eroded
24 south limb of the Little Tujunga Syncline on the south.

25 4.1.4 Verdugo Basin. Verdugo Basin underlies 4,400 acres
26 and is located in the area shown as such on Attachment "A".
27 Boundary conditions of Verdugo Basin consist of the San
28 Gabriel Mountains on the north, the Verdugo Mountains on the

1 south and southwest, the San Rafael Hills on the southeast and
2 the topographic divide on the east between the drainage area
3 that is tributary to the Tujunga Wash to the west and Verdugo
4 Wash to the east, the ground water divide on the west between
5 Monk Hill-Raymond Basin and the Verdugo Basin on the east and
6 a submerged dam constructed at the mouth of Verdugo Canyon on
7 the south.

8 4.1.5 Eagle Rock Basin. Eagle Rock Basin underlies 807
9 acres and is located in the area shown as such on Attachment
10 "A". Boundary conditions of Eagle Rock Basin consist of the
11 San Rafael Hills on the north and west and the Repetto Hills
12 on the east and south with a small alluvial area to the
13 southeast consisting of a topographic divide.

14 4.2 Hydrology.

15 4.2.1 Water Supply. The water supply of ULARA consists
16 of native waters, derived from precipitation on the valley
17 floor and runoff from the hill and mountain areas, and of im-
18 ported water from outside the watershed. The major source of
19 imported water has been from the Owens-Mono Aqueduct, but
20 additional supplies have been and are now being imported
21 through MWD from its Colorado Aqueduct and the State Aqueduct.

22 4.2.2 Ground Water Movement. The major water-bearing
23 formation in ULARA is the valley fill material bounded by
24 hills and mountains which surround it. Topographically, the
25 valley-fill area has a generally uniform grade in a southerly
26 and easterly direction with the slope gradually decreasing
27 from the base of the hills and mountains to the surface
28 drainage outlet at Gage F-57. The valley fill material is a

1 heterogeneous mixture of clays, silts, sand and gravel laid
2 down as alluvium. The valley fill is of greatest permeability
3 along and easterly of Pacoima and Tujunga Washes and generally
4 throughout the eastern portion of the valley fill area,
5 except in the vicinity of Glendale where it is of lesser
6 permeability. Ground water occurs mainly within the valley
7 fill, with only negligible amounts occurring in hill and
8 mountain areas. There is no significant ground water movement
9 from the hill and mountain formations into the valley fill.
10 Available geologic data do not indicate that there are any
11 sources of native ground water other than those derived from
12 precipitation. Ground water movement in the valley fill
13 generally follows the surface topography and drainage except
14 where geologic or man-made impediments occur or where the
15 natural flow has been modified by extensive pumping.

16 4.2.3 Separate Ground Water Basins. The physical and
17 geologic characteristics of each of the ground water basins,
18 Eagle Rock, Sylmar, Verdugo and San Fernando, cause impedi-
19 ments to inter-basin ground water flow whereby there is
20 created separate underground reservoirs. Each of said basins
21 contains a common source of water supply to parties extracting
22 ground water from each of said basins. The amount of under-
23 flow from Sylmar Basin, Verdugo Basin and Eagle Rock Basin to
24 San Fernando Basin is relatively small, and on the average has
25 been approximately 540 acre feet per year from the Sylmar
26 Basin; 80 acre feet per year from Verdugo Basin; and 50 acre
27 feet per year from Eagle Rock Basin. Each has physiographic,
28 geologic and hydrologic differences, one from the other, and

1 each meets the hydrologic definition of "basin." The ex-
2 tractions of water in the respective basins affect the other
3 water users within that basin but do not significantly or
4 materially affect the ground water levels in any of the other
5 basins. The underground reservoirs of Eagle Rock, Verdugo and
6 Sylmar Basins are independent of one another and of the San
7 Fernando Basin.

8 4.2.4 Safe Yield and Native Safe Yield. The safe yield
9 and native safe yield, stated in acre feet, of the three
10 largest basins for the year 1964-65 was as follows:

11 <u>Basin</u>	12 <u>Safe Yield</u>	13 <u>Native Safe Yield</u>
14 San Fernando	90,680	43,660
15 Sylmar	6,210	3,850
16 Verdugo	7,150	3,590

17 The safe yield of Eagle Rock Basin is derived from imported
18 water delivered by Los Angeles. There is no measurable
19 native safe yield.

20 4.2.5 Separate Basins -- Separate Rights. The rights
21 of the parties to extract ground water within ULARA are
22 separate and distinct as within each of the several ground
23 water basins within said watershed.

24 4.2.6 Hydrologic Condition of Basins. The several
25 basins within ULARA are in varying hydrologic conditions,
26 which result in different legal consequences.

27 4.2.6.1 San Fernando Basin. The first full year
28 of overdraft in San Fernando Basin was 1954-55. It
remained in overdraft continuously until 1968, when an
injunction herein became effective. Thereafter, the

1 basin was placed on safe yield operation. There is no
2 surplus ground water available for appropriation or
3 overlying use from San Fernando Basin.

4 4.2.6.2 Sylmar Basin. Sylmar Basin is not in
5 overdraft. There remains safe yield over and above the
6 present reasonable beneficial overlying uses, from which
7 safe yield the appropriative rights of Los Angeles and
8 San Fernando may be and have been exercised.

9 4.2.6.3 Verdugo Basin. Verdugo Basin was in
10 overdraft for more than five consecutive years prior to
11 1968. Said basin is not currently in overdraft, due to
12 decreased extractions by Glendale and Crescenta Valley on
13 account of poor water quality. However, the combined
14 appropriative and prescriptive rights of Glendale and
15 Crescenta Valley are equivalent to the safe yield of the
16 Basin. No private overlying or appropriative rights
17 exist in Verdugo Basin.

18 4.2.6.4 Eagle Rock Basin. The only measurable
19 water supply to Eagle Rock Basin is import return water
20 by reason of importations by Los Angeles. Extractions by
21 Foremost and Deep Rock under the prior stipulated
22 judgments have utilized the safe yield of Eagle Rock
23 Basin, and have maintained hydrologic equilibrium
24 therein.

25 26 5. DECLARATION OF RIGHTS

27 5.1 Right to Native Waters.

28 5.1.1 Los Angeles River and San Fernando Basin.

1 5.1.1.1 Los Angeles' Pueblo Right. Los Angeles,
2 as the successor to all rights, claims and powers of the
3 Spanish Pueblo de Los Angeles in regard to water rights,
4 is the owner of a prior and paramount pueblo right to the
5 surface waters of the Los Angeles River and the native
6 ground waters of San Fernando Basin to meet its reason-
7 able beneficial needs and for its inhabitants.

8 5.1.1.2 Extent of Pueblo Right. Pursuant to said
9 pueblo right, Los Angeles is entitled to satisfy its
10 needs and those of its inhabitants within its boundaries
11 as from time to time modified. Water which is in fact
12 used for pueblo right purposes is and shall be deemed
13 needed for such purposes.

14 5.1.1.3 Pueblo Right -- Nature and Priority of
15 Exercise. The pueblo right of Los Angeles is a prior and
16 paramount right to all of the surface waters of the Los
17 Angeles River, and native ground water in San Fernando
18 Basin, to the extent of the reasonable needs and uses of
19 Los Angeles and its inhabitants throughout the corporate
20 area of Los Angeles, as its boundaries may exist from
21 time to time. To the extent that the Basin contains
22 native waters and imported waters, it is presumed that
23 the first water extracted by Los Angeles in any water
24 year is pursuant to its pueblo right, up to the amount
25 of the native safe yield. The next extractions by Los
26 Angeles in any year are deemed to be from import return
27 water, followed by stored water, to the full extent of
28 Los Angeles' right to such import return water and stored

1 water. In the event of need to meet water requirements
2 of its inhabitants, Los Angeles has the additional right,
3 pursuant to its pueblo right, withdraw temporarily from
4 storage Underlying Pueblo Waters, subject to an obliga-
5 tion to replace such water as soon as practical.

6 5.1.1.4 Rights of Other Parties. No other party
7 to this action has any right in or to the surface waters
8 of the Los Angeles River or the native safe yield of the
9 San Fernando Basin.

10 5.1.2 Sylmar Basin Rights.

11 5.1.2.1 No Pueblo Rights. The pueblo right of
12 Los Angeles does not extend to or include ground waters
13 in Sylmar Basin.

14 5.1.2.2 Overlying Rights. Defendants Moordigian
15 and Hersch & Plumb own lands overlying Sylmar Basin and
16 have a prior correlative right to extract native waters
17 from said Basin for reasonable beneficial uses on their
18 said overlying lands. Said right is appurtenant to said
19 overlying lands and water extracted pursuant thereto may
20 not be exported from said lands nor can said right be
21 transferred or assigned separate and apart from said
22 overlying lands.

23 5.1.2.3 Appropriative Rights of San Fernando
24 and Los Angeles. San Fernando and Los Angeles own
25 appropriative rights, of equal priority, to extract and
26 put to reasonable beneficial use for the needs of said
27 cities and their inhabitants, native waters of the
28 Sylmar Basin in excess of the exercised reasonable

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beneficial needs of overlying users. Said appropriative rights are:

San Fernando	3,580 acre feet
Los Angeles	1,560 acre feet.

5.1.2.4 No Prescription. The Sylmar Basin is not presently in a state of overdraft and no rights by prescription exist in said Basin against any overlying or appropriative water user.

5.1.2.5 Other Parties. No other party to this action owns or possesses any right to extract native ground waters from the Sylmar Basin.

5.1.3 Verdugo Basin Rights.

5.1.3.1 No Pueblo Rights. The pueblo right of Los Angeles does not extend to or include ground water in Verdugo Basin.

5.1.3.2 Prescriptive Rights of Glendale and Crescenta Valley. Glendale and Crescenta Valley own prescriptive rights as against each other and against all private overlying or appropriative parties in the Verdugo Basin to extract, with equal priority, the following quantities of water from the combined safe yield of native and imported waters in Verdugo Basin:

Glendale	3,856 acre feet
Crescenta Valley	3,294 acre feet.

5.1.3.3 Other Parties. No other party to this action owns or possesses any right to extract native ground waters from the Verdugo Basin.

1 5.1.4 Eagle Rock Basin Rights.

2 5.1.4.1 No Pueblo Rights. The pueblo right of
3 Los Angeles does not extend to or include ground water
4 in Eagle Rock Basin.

5 5.1.4.2 No Rights in Native Waters. The Eagle
6 Rock Basin has no significant or measurable native safe
7 yield and no parties have or assert any right or claim
8 to native waters in said Basin.

9 5.2 Rights to Imported Waters.

10 5.2.1 San Fernando Basin Rights.

11 5.2.1.1 Rights to Recapture Import Return Water.
12 Los Angeles, Glendale, Burbank and San Fernando have each
13 caused imported waters to be brought into ULARA and to be
14 delivered to lands overlying the San Fernando Basin, with
15 the result that percolation and return flow of such
16 delivered water has caused imported waters to become a
17 part of the safe yield of San Fernando Basin. Each of
18 said parties has a right to extract from San Fernando
19 Basin that portion of the safe yield of the Basin attri-
20 butable to such import return waters.

21 5.2.1.2 Rights to Store and Recapture Stored
22 Water. Los Angeles has heretofore spread imported water
23 directly in San Fernando Basin. Los Angeles, Glendale,
24 Burbank and San Fernando each have rights to store water
25 in San Fernando Basin by direct spreading or in lieu
26 practices. To the extent of any future spreading or in
27 lieu storage of import water or reclaimed water by Los
28 Angeles, Glendale, Burbank or San Fernando, the party

1 causing said water to be so stored shall have a right to
2 extract an equivalent amount of ground water from San
3 Fernando Basin. The right to extract waters attributable
4 to such storage practices is an undivided right to a
5 quantity of water in San Fernando Basin equal to the
6 amount of such Stored Water to the credit of any party,
7 as reflected in Watermaster records.

8 5.2.1.3 Calculation of Import Return Water and
9 Stored Water Credits. The extraction rights of Los
10 Angeles, Glendale, Burbank and San Fernando in San
11 Fernando Basin in any year, insofar as such rights are
12 based upon import return water, shall only extend to the
13 amount of any accumulated import return water credit of
14 such party by reason of imported water delivered after
15 September 30, 1977. The annual credit for such import
16 return water shall be calculated by Watermaster based
17 upon the amount of delivered water during the preceding
18 water year, as follows:

19	Los Angeles:	20.8% of all delivered water (including reclaimed water) to
20		valley fill lands of San
21		Fernando Basin.
22	San Fernando:	26.3% of all imported and reclaimed water delivered to
23		valley-fill lands of San Fernando Basin.
24	Burbank:	20.0% of all delivered water (including reclaimed water) to
25		San Fernando Basin and its
26		tributary hill and mountain areas.

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Glendale: 20.0% of all delivered water (including reclaimed water) to San Fernando Basin and its tributary hill and mountain areas (i.e., total delivered water, [including reclaimed water], less 105% of total sales by Glendale in Verdugo Basin and its tributary hills).

In calculating Stored Water credit, by reason of direct spreading of imported or reclaimed water, Watermaster shall assume that 100% of such spread water reached the ground water in the year spread.

5.2.1.4 Cummulative Import Return Water Credits.

Any import return water which is not extracted in a given water year shall be carried over, separately accounted for, and maintained as a cummulative credit for purposes of future extractions.

5.2.1.5 Overextractions.

In addition to extractions of stored water, Glendale, Burbank or San Fernando may, in any water year, extract from San Fernando Basin an amount not exceeding 10% of such party's last annual credit for import return water, subject, however, to an obligation to replace such overextraction by reduced extractions during the next succeeding water year. Any such overextraction which is not so replaced shall constitute physical solution water, which shall be deemed to have been extracted in said subsequent water year.

5.2.1.6 Private Defendant.

No private defendant is entitled to extract water from the San Fernando Basin on account of the importation of water thereto by overlying public entities.

1 5.2.2 Sylmar Basin Rights.

2 5.2.2.1 Rights to Recapture Import Return Waters.

3 Los Angeles and San Fernando have caused imported waters
4 to be brought into ULARA and delivered to lands overlying
5 the Sylmar Basin with the result that percolation and re-
6 turn flow of such delivered water has caused imported
7 waters to become a part of the safe yield of Sylmar Basin.
8 Los Angeles and San Fernando are entitled to recover from
9 Sylmar Basin such imported return waters. In calculating
10 the annual entitlement to recapture such import return
11 water, Los Angeles and San Fernando shall be entitled to
12 35.7% of the preceding water year's imported water de-
13 livered by such party to lands overlying Sylmar Basin.
14 Thus, by way of example, in 1976-77, Los Angeles was
15 entitled to extract 2370 acre feet of ground water from
16 Sylmar Basin, based on delivery to lands overlying said
17 Basin of 6640 acre feet during 1975-76. The quantity of
18 San Fernando's imported water to, and the return flow
19 therefrom, in the Sylmar Basin in the past has been of
20 such minimal quantities that it has not been calculated.

21 5.2.2.2 Rights to Store and Recapture Stored
22 Water. Los Angeles and San Fernando each have the right
23 to store water in Sylmar Basin equivalent to their rights
24 in San Fernando Basin under paragraph 5.2.1.2 hereof.

25 5.2.2.3 Carry Over. Said right to recapture
26 stored water, import return water and other safe yield
27 waters to which a party is entitled, if not exercised in
28 a given year, can be carried over for not to exceed five

1 years, if the underflow through Sylmar Notch does not
2 exceed 400 acre feet per year.

3 5.2.2.4 Private Defendants. No private defendant
4 is entitled to extract water from within the Sylmar Basin
5 on account of the importation of water thereto by over-
6 lying public entities.

7 5.2.3 Verdugo Basin Rights.

8 5.2.3.1 Glendale and Crescenta Valley. Glendale
9 and Crescenta Valley own appropriative and prescriptive
10 rights in and to the total safe yield of Verdugo Basin,
11 without regard as to the portions thereof derived from
12 native water and from delivered imported waters, notwith-
13 standing that both of said parties have caused waters to
14 be imported and delivered on lands overlying Verdugo
15 Basin. Said aggregate rights are as declared in Para-
16 graph 5.1.3.2 of these Conclusions.

17 5.2.3.2 Los Angeles. Los Angeles may have a
18 right to recapture its import return waters by reason of
19 delivered import water in the Basin, based upon imports
20 during and after water year 1977-78, upon application to
21 Watermaster not later than the year following such im-
22 port and on subsequent order after hearing by the Court.

23 5.2.3.3 Private Defendants. No private defendant,
24 as such, is entitled to extract water from within the
25 Verdugo Basin on account of the importation of water
26 thereto by overlying public entities.

27 5.2.4 Eagle Rock Basin Rights.

28 5.2.4.1 Los Angeles. Los Angeles has caused

1 imported water to be delivered for use on lands overlying
2 Eagle Rock Basin and return flow from said delivered
3 imported water constitutes the entire safe yield of Eagle
4 Rock Basin. Los Angeles has the right to extract or
5 cause to be extracted the entire safe yield of Eagle Rock
6 Basin.

7 5.2.4.2 Private Defendants. No private defend-
8 ants have a right to extract water from within Eagle Rock
9 Basin, except pursuant to the physical solution herein.

10
11 6. INJUNCTIONS

12 Each of the parties named or referred to in this Part 6, its
13 officers, agents, employees and officials is, and they are, hereby
14 ENJOINED and RESTRAINED from doing or causing to be done any of the
15 acts herein specified:

16 6.1 Each and Every Defendant -- from diverting the surface
17 waters of the Los Angeles River or extracting the native waters of
18 SAN FERNANDO BASIN, or in any manner interfering with the prior and
19 paramount pueblo right of Los Angeles in and to such waters,
20 except pursuant to the physical solution herein decreed.

21 6.2 Each and Every Private Defendant -- from extracting
22 ground water from the SAN FERNANDO, VERDUGO, or EAGLE ROCK BASINS,
23 except pursuant to physical solution provisions hereof.

24 6.3 Defaulting and Disclaiming Parties (listed in Attachments
25 "C" and "D") -- from diverting or extracting water within ULARA,
26 except pursuant to the physical solution herein decreed.

27 6.4 Glendale -- from extracting ground water from SAN
28 FERNANDO BASIN in any water year in quantities exceeding its

1 import return water credit and any stored water credit, except
2 pursuant to the physical solution; and from extracting water from
3 VERDUGO BASIN in excess of its appropriative and prescriptive right
4 declared herein.

5 6.5 Burbank -- from extracting ground water from SAN FERNANDO
6 BASIN in any water year in quantities exceeding its import return
7 water credit and any stored water credit, except pursuant to the
8 physical solution decreed herein.

9 6.6 San Fernando -- from extracting ground water from SAN
10 FERNANDO BASIN in any water year in quantities exceeding its
11 import return water credit and any stored water credit, except
12 pursuant to the physical solution herein decreed.

13 6.7 Crescenta Valley -- from extracting ground water from
14 VERDUGO BASIN in any year in excess of its appropriative and
15 prescriptive right declared herein.

16 6.8 Los Angeles -- from extracting ground water from SAN
17 FERNANDO BASIN in any year in excess of the native safe yield,
18 plus any import return water credit and stored water credit of said
19 city; provided, that where the needs of Los Angeles require the
20 extraction of Underlying Pueblo Waters, Los Angeles may extract
21 such water subject to an obligation to replace such excess as soon
22 as practical; and from extracting ground water from VERDUGO BASIN
23 in excess of any credit for import return water which Los Angeles
24 may acquire by reason of delivery of imported water for use over-
25 lying said basin, as hereinafter confirmed on application to
26 Watermaster and by subsequent order of the Court.

27 6.9 Non-consumptive and Minimal Consumptive Use Parties.
28 The parties listed in Attachment "F" are enjoined from extracting

1 water from San Fernando Basin, except in accordance with practices
2 specified in Attachment "F", or pursuant to the physical solution herein decreed.

3

4

7. CONTINUING JURISDICTION

5 7.1 Jurisdiction Reserved. Full jurisdiction, power and
6 authority are retained by and reserved to the Court for purposes of
7 enabling the Court upon application of any party or of the Water-
8 master by motion and upon at least 30 days' notice thereof, and
9 after hearing thereon, to make such further or supplemental orders
10 or directions as may be necessary or appropriate, for interpreta-
11 tion, enforcement or carrying out of this Judgment, and to modify,
12 amend or amplify any of the provisions of this Judgment or to add
13 to the provisions thereof consistent with the rights herein decreed;
14 provided, however, that no such modification, amendment or ampli-
15 fication shall result in a change in the provisions of Section
16 5.2.1.3 or 9.2.1 hereof.

17

18

8. WATERMASTER

19

8.1 Designation and Appointment.

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8.1.1 Watermaster Qualification and Appointment. A
qualified hydrologist, acceptable to all active public agency
parties hereto, will be appointed by subsequent order of the
Court to assist the Court in its administration and enforce-
ment of the provisions of this Judgment and any subsequent
orders of the Court entered pursuant to the Court's continuing
jurisdiction. Such Watermaster shall serve at the pleasure of
the Court, but may be removed or replaced on motion of any
party after hearing and showing of good cause.

1 8.2 Powers and Duties.

2 8.2.1 Scope. Subject to the continuing supervision and
3 control of the Court, Watermaster shall exercise the express
4 powers, and shall perform the duties, as provided in this
5 Judgment or hereafter ordered or authorized by the Court in
6 the exercise of the Court's continuing jurisdiction.

7 8.2.2 Requirement for Reports, Information and Records.
8 Watermaster may require any party to furnish such reports,
9 information and records as may be reasonably necessary to
10 determine compliance or lack of compliance by any party with
11 the provisions of this Judgment.

12 8.2.3 Requirement of Measuring Devices. Watermaster
13 shall require all parties owning or operating any facilities
14 for extraction of ground water from ULARA to install and
15 maintain at all times in good working order, at such party's
16 own expense, appropriate meters or other measuring devices
17 satisfactory to the Watermaster.

18 8.2.4 Inspection by Watermaster. Watermaster shall make
19 inspections of (a) ground water extraction facilities and
20 measuring devices of any party, and (b) water use practices by
21 any party under physical solution conditions, at such times
22 and as often as may be reasonable under the circumstances to
23 verify reported data and practices of such party. Watermaster
24 shall also identify and report on any new or proposed new
25 ground water extractions by any party or non-party.

26 8.2.5 Policies and Procedures. Watermaster shall, with
27 the advice and consent of the Administrative Committee, adopt
28 and amend from time to time Policies and Procedures as may be

1 reasonably necessary to guide Watermaster in performance of
2 its duties, powers and responsibilities under the provisions
3 of this judgment.

4 8.2.6 Data Collection. Watermaster shall collect and
5 verify data relative to conditions of ULARA and its ground
6 water basins from the parties and one or more other govern-
7 mental agencies. Where necessary, and upon approval of the
8 Administrative Committee, Watermaster may develop supplemental
9 data.

10 8.2.7 Cooperation With Other Agencies. Watermaster may
11 act jointly or cooperate with agencies of the United States
12 and the State of California or any political subdivisions,
13 municipalities or districts (including any party) to secure or
14 exchange data to the end that the purpose of this Judgment,
15 including its physical solution, may be fully and economically
16 carried out.

17 8.2.8 Accounting for Non-consumptive Use. Watermaster
18 shall calculate and report annually the non-consumptive and
19 consumptive uses of extracted ground water by each party
20 listed in Attachment "F."

21 8.2.9 Accounting for Accumulated Import Return Water
22 and Stored Water. Watermaster shall record and verify addi-
23 tions, extractions and losses and maintain an annual and
24 cumulative account of all (a) stored water and (b) import
25 return water in San Fernando Basin. Calculation of losses
26 attributable to Stored Water shall be approved by the Adminis-
27 trative Committee or by subsequent order of the Court. For
28 purposes of such accounting, extractions in any water year by

1 Glendale, Burbank or San Fernando shall be assumed to be first
2 from accumulated import return water, second from stored
3 water, and finally pursuant to physical solution; provided,
4 that any such city may, by written notice of intent to Water-
5 master, alter said priority of extractions as between import
6 return water and stored water.

7 8.2.10 Recalculation of Safe Yield. Upon request of the
8 Administrative Committee, or on motion of any party and sub-
9 sequent Court order, Watermaster shall recalculate safe yield
10 of any basin within ULARA. If there has been a material long-
11 term change in storage over a base period (excluding any
12 effects of stored water) in San Fernando Basin the safe yield
13 shall be adjusted by making a corresponding change in native
14 safe yield of the Basin.

15 8.2.11 Watermaster Report. Watermaster shall prepare
16 annually and (after review and approval by Administrative
17 Committee) cause to be served on all active parties, on or
18 before May 1, a report of hydrologic conditions and Water-
19 master activities within ULARA during the preceding water
20 year. Watermaster's annual report shall contain such infor-
21 mation as may be requested by the Administrative Committee,
22 required by Watermaster Policies and Procedures or specified
23 by subsequent order of this Court.

24 8.2.12 Active Party List. Watermaster shall maintain at
25 all times a current list of active parties and their addresses.

26 8.3 Administrative Committee.

27 8.3.1 Committee to be Formed. An Administrative Commit-
28 tee shall be formed to advise with, request or consent to, and

1 review actions of Watermaster. Said Administrative Committee
2 shall be composed of one representative of each party having
3 a right to extract ground water from ULARA, apart from the
4 physical solution. Any such party not desiring to participate
5 in such committee shall so advise Watermaster in writing.

6 8.3.2 Organization and Voting. The Administrative
7 Committee shall organize and adopt appropriate rules and
8 regulations to be included in Watermaster Policies and Pro-
9 cedures. Action of the Administrative Committee shall be by
10 unanimous vote of its members, or of the members affected in
11 the case of an action which affects one or more basins but
12 less than all of ULARA. In the event of inability of the
13 Committee to reach a unanimous position, the matter may, at
14 the request of Watermaster or any party, be referred to the
15 Court for resolution by subsequent order after notice and
16 hearing.

17 8.3.3 Function and Powers. The Administrative Committee
18 shall be consulted by Watermaster and shall request or approve
19 all discretionary Watermaster determinations. In the event of
20 disagreement between Watermaster and the Administrative
21 Committee, the matter shall be submitted to the Court for
22 review and resolution.

23 8.4 Watermaster Budget and Assessments.

24 8.4.1 Watermaster's Proposed Budget. Watermaster
25 shall, on or before May 1, prepare and submit to the Admin-
26 istrative Committee a budget for the ensuing water year.
27 The budget shall be determined for each basin separately and
28 allocated between the separate ground water basins. The

1 total for each basin shall be allocated between the public
2 agencies in proportion to their use of ground water from such
3 basin during the preceding water year.

4 8.4.2 Objections and Review. Any party who objects to
5 the proposed budget, or to such party's allocable share there-
6 of, may apply to the Court within thirty (30) days of receipt
7 of the proposed budget from Watermaster for review and modifi-
8 cation. Any such objection shall be duly noticed to all in-
9 terested parties and heard within thirty (30) days of notice.

10 8.4.3 Notice of Assessment. After thirty (30) days from
11 delivery of Watermaster's proposed budget, or after the order
12 of Court settling any objections thereto, Watermaster shall
13 serve notice on all parties to be assessed of the amount of
14 assessment and the required payment schedule.

15 8.4.4 Payment. All assessments for Watermaster expenses
16 shall be payable on the dates designated in the notice of
17 assessment.

18 8.5 Review of Watermaster Activities.

19 8.5.1 Review Procedures. All actions of Watermaster
20 (other than budget and assessment matters, which are provided
21 for in Paragraph 8.4.2) shall be subject to review by the
22 Court on its own motion or on motion by any party, as follows:

23 8.5.1.1 Noticed Motion. Any party may, by a
24 regularly noticed motion, apply to the Court for review
25 of any Watermaster's action. Notice of such motion shall
26 be served personally or mailed to Watermaster and to all
27 active parties.

28 8.5.1.2 De Novo Nature of Proceedings. Upon the

1 filing of any such motion, the Court shall require the
2 moving party to notify the active parties of a date for
3 taking evidence and argument, and on the date so desig-
4 nated shall review de novo the question at issue. Water-
5 master's findings or decision, if any, may be received
6 in evidence at said hearing, but shall not constitute
7 presumptive or prima facie proof of any fact in issue.

8 8.5.1.3 Decision. The decision of the Court in
9 such proceeding shall be an appealable supplemental order
10 in this case. When the same is final, it shall be
11 binding upon the Watermaster and all parties.

12 9. PHYSICAL SOLUTION

13 9.1 Circumstances Indicating Need for Physical Solution.

14 During the period between 1913 and 1955, when there existed tempor-
15 ary surplus waters in the San Fernando Basin, overlying cities and
16 private overlying landowners undertook to install and operate water
17 extraction, storage and transmission facilities to utilize such
18 temporary surplus waters. If the injunction against interference
19 with the prior and paramount rights of Los Angeles to the waters of
20 the San Fernando and Eagle Rock Basins were strictly enforced, the
21 value and utility of those water systems and facilities would be
22 lost or impaired. It is appropriate to allow continued limited
23 extraction from the San Fernando and Eagle Rock Basins by parties
24 other than Los Angeles, subject to assurance that Los Angeles will
25 be compensated for any cost, expense or loss incurred as a result
26 thereof.
27

28 9.2 Prior Stipulated Judgments. Several defendants

1 heretofore entered into separate stipulated judgments herein,
2 during the period June, 1958 to November, 1965, each of which
3 judgments was subject to the Court's continuing jurisdiction.
4 Without modification of the substantive terms of said prior judg-
5 ments, the same are categorized and merged into this judgment and
6 superseded hereby in the exercise of the Court's continuing juris-
7 diction, as follows:

8 9.2.1 Eagle Rock Basin Parties. Stipulating defendants
9 Foremost and Deep Rock have extracted water from Eagle Rock
10 Basin, whose entire safe yield consist of import return
11 waters of Los Angeles. Said parties may continue to extract
12 water from Eagle Rock Basin to supply their bottled drinking
13 water requirements upon filing all required reports on said
14 extraction with Watermaster and Los Angeles and paying Los
15 Angeles annually an amount equal to \$21.78 per acre foot for
16 the first 200 acre feet, and \$39.20 per acre foot for any
17 additional water extracted in any water year.

18 9.2.2 Non-consumptive or Minimal-consumptive Operations.
19 Certain stipulating defendants extract water from San Fernando
20 Basin for uses which are either non-consumptive or have a
21 minimal consumptive impact. Each of said defendants who have
22 a minimal consumptive impact has a connection to the City of
23 Los Angeles water system and purchases annually an amount of
24 water at least equivalent to the consumptive loss of extracted
25 ground water. Said defendants are:

26 Non-Consumptive
27 Walt Disney Productions
28 Sears, Roebuck & Co.

1 9.3.1 Private Defendants and Appropriate Cities. Said
2 private defendants and the cities to which their said extrac-
3 tions shall be charged and to which physical solution payment
4 shall be made are:

		<u>Annual Quantities</u> <u>(acre feet)</u>
5		
6	Los Angeles - Toluca Lake	100
7	Sportsman's Lodge	25
8	Van de Kamp	120
9	Glendale - Forest Lawn	400
10	Southern Service Co.	75
11	Burbank - Valhalla	300
12	Lockheed	25

13 Provided that said private defendants shall not develop,
14 install or operate new wells or other facilities which will
15 increase existing extraction capacities.

16 9.3.2 Reports and Accounting. All extractions pursuant
17 to this physical solution shall be subject to such reasonable
18 reports and inspections as may be required by Watermaster.

19 9.3.3 Payment. Water extracted pursuant hereto shall
20 be compensated for by annual payment to Los Angeles, and as
21 agreed upon pursuant to paragraph 9.3.3.2 to Glendale and
22 Burbank, thirty days from day of notice by Watermaster, on
23 the following basis:

24 9.3.3.1 Los Angeles. An amount equal to what
25 such party would have paid had water been delivered from
26 the distribution system of Los Angeles, less the average
27 energy cost of extraction of ground water by Los Angeles
28 from San Fernando.

 9.3.3.2 Glendale or Burbank. An amount equal to

1 the sum of the amount payable to Los Angeles under para-
2 graph 9.4 hereof and any additional charges or conditions
3 agreed upon by either such city and any private defendant.

4 9.4 Glendale and Burbank. Glendale and Burbank have each
5 installed, during said years of temporary surplus, substantial
6 facilities to extract and utilize waters of the San Fernando Basin.
7 In addition to the use of such facilities to recover import return
8 water, the distribution facilities of such cities can be most
9 efficiently utilized by relying upon the San Fernando Basin for
10 peaking supplies in order to reduce the need for extensive new
11 surface storage. Glendale and Burbank may extract annual quanti-
12 ties of ground water from the San Fernando Basin, in addition to
13 their rights to import return water or stored water, as heretofore
14 declared, in quantities up to:

15	Glendale	5,500 acre feet
16	Burbank	4,200 acre feet;

17 provided, that said cities shall compensate Los Angeles annually
18 for any such excess extractions over and above their declared
19 rights at a rate per acre foot equal to the average MWD price for
20 municipal and industrial water delivered to Los Angeles during the
21 fiscal year, less the average energy cost of extraction of ground
22 water by Los Angeles from San Fernando Basin during the preceding
23 fiscal year. Provided, further, that ground water extracted by
24 Forest Lawn and Southern Service Co. shall be included in the
25 amount taken by Glendale, and the amount extracted by Valhalla and
26 Lockheed shall be included in the amount taken by Burbank. All
27 water taken by Glendale or Burbank pursuant hereto shall be charged
28 against Los Angeles' rights in the year of such extractions.

1 notice on a form to be provided by Watermaster. Thereafter such
2 party shall be removed from the Active Party list. For purposes of
3 service on any party or active party by the Watermaster, by any
4 other party, or by the Court, of any item required to be served
5 upon or delivered to such party or active party under or pursuant
6 to the Judgment, such service shall be made personally or by de-
7 posit in the United States mail, first class, postage prepaid,
8 addressed to the designee and at the address in the latest desig-
9 nation filed by such party or active party.

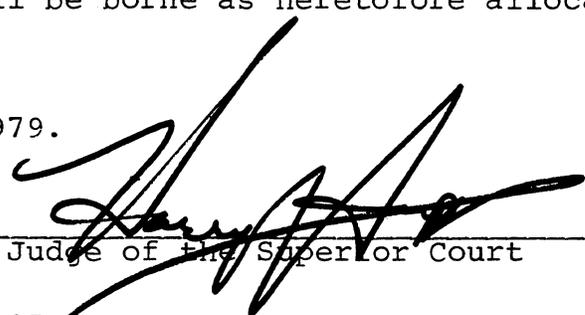
10 10.2 Notice of Change in Hydrologic Condition -- Sylmar Basin.

11 If Sylmar Basin shall hereafter be in a condition of overdraft due
12 to increased or concurrent appropriations by Los Angeles and San
13 Fernando, Watermaster shall so notify the Court and parties concern-
14 ed, and notice of such overdraft and the adverse effect thereof on
15 private overlying rights shall be given by said cities as prescribed
16 by subsequent order of the Court, after notice and hearing.

17 10.3 Judgment Binding on Successors. This Judgment and all
18 provisions thereof are applicable to and binding upon not only the
19 parties to this action, but also upon their respective heirs,
20 executors, administrators, successors, assigns, lessees and licen-
21 sees and upon the agents, employees and attorneys in fact of all
22 such persons.

23 10.4 Costs. Ordinary court costs shall be borne by each
24 party, and reference costs shall be borne as heretofore allocated
25 and paid.

26 DATED: Jan 26, 1979.

27
28 

Judge of the Superior Court

ATTACHMENT "B"
LIST OF DISMISSED PARTIES

Adams, Catherine	Fitz-Patrick, Ada H.
Adair, Leo W.	Fitz-Patrick, C. C.
Anderson, Jesse E.	Frank X. Enderle, Inc., Ltd.
Anderson, Elizabeth A.	George, Florence H.
Anderson, Leland H.	George, Elton
Anderson, Bessie E.	Ghiglia, Frank P.
Bank of America, N.T. & S.A., (Trustee)	Givan, Amelia (Deceased)
Becker, Barbara	Glendale Junior College District of Los Angeles County
Beatrice Foods Company	Glendale Unified School District
Becker, Bert	Glenhaven Memorial Park, Inc.
Bishop, Elfreda M.	Griffith, Howard Barton
Bishop, William E.	Handorf, August V., Heirs of
Block, Leonard W.	Hanna, George
Block, Margery J.	Hicks, Forrest W., Executor of Estate of (California Bank)
Burbank C. U. School District	Houston-Fearless Corp., The
Busk, Rodney E.	Industrial Fuel Supply Co.
California, State of	Intervalley Savings & Loan Association
California Trust Company, (Trustee)	Julius, Adenia C.
California Trust Company, Trustee for First National Bank of Glendale	Julius, Louis A.
Citizens N.T.S. Bank of L.A., Trustee of M. M. Crenshaw	Kaesemeyer, Edna M.
Citizens National Trust & Savings Bank of Los Angeles	Karagozian, Charles
Citizens National Trust & Savings Bank of Los Angeles, Trustee, Deed of Trust 3724	Kates, Nathan as Co-Executor, Estate of Duckworth
Color Corporation of America	Kelley, June
Corporation of America	Kelley, Victor H.
Corporation of America, Trustee for Bank of America 32	Kiener, Harry, Deceased, Heirs of
Doe Corporation, 10-50	Knupp, Guy, Trustee
Doe 18-500	Landes, Clara Bartlett
Duckworth, John W., (Estate of)	Lentz, Richard
Equitable Life Assurance Society of the United States	Los Angeles County Flood Control District
Fidelity Federal Savings & Loan Association	Los Angeles Land and Water Company
	Los Angeles Trust and Savings Deposit Company (Safe)

Los Angeles Safe Deposit Company, Trustee for Security First National Bank of Los Angeles

Los Angeles Trust and Safe Deposit Company, Trustee for H. Kiener

Lytle, Lydia L.

Massachusetts Mutual Life Insurance Company

Mahannah, E. E.

Mahannah, Hazel E.

M.C.A., Inc.

Mangan, Blanche M.

Mangan, Nicholas

McDougal, Murray

McDougal, Marian Y.

Mellenthin, Helen Louise

Mellenthin, William

Metropolitan Life Insurance Company

Morgan, Kenneth H.

Morgan, Anne

Mulholland Orchard Company

Mutual Life Insurance Company of New York

Northwestern Mutual Life Insurance Company

Oakmont Club

Oakwood Cemetery Association

Pasadena Savings & Loan Association

Pagliai, Bruno

Pacific Lighting Corporation

Pierce Brothers Mortuary

Premier Laundry Company, Inc.

Pur-o-Spring Water Company

Renfrow, Mary Mildred

Renfrow, Pleasant Thomas

Reinert, H. C.

Reinert, Lauletta

Richardson, Helen I.

Richardson, William L.

Security First National Bank of Los Angeles, Trustee

Security First National Bank of Los Angeles, Trustee for L. Schwaiger, etc.

Smith, T. A.

Smith, Sidney, Estate of, F. Small, Administrator

Southern California Service Corp., Trustee for Verdugo Savings and Loan Association

Sylmar Properties Inc.

Title Insurance and Trust Co., Trustee for Metropolitan Life Insurance Company, I. 1570

Title Insurance and Trust Co., Trustee for Western Mortgage Company

Title Guarantee & Trustee Company, Trustee

Title Insurance & Trust Company, Trustee for C. Fitz-Patrick

Title Insurance & Trust Company, Trustee for Intervalley Savings and Loan Association, 1114

Title Insurance & Trust Company, for Fidelity Savings & Loan Association

Title Insurance & Trust Company for Equitable Life Assurance Society, U.S.

Union Bank & Trust Company of Los Angeles Trustee for B. Becker, et al.

Valliant, Grace C.

Verdugo Savings & Loan Association

Warner Brothers Pictures, Inc.

Warner Ranch Company, Inc.

Walleck, Henry L., as Executor of the Estate of A. Givan

Western Mortgage Company

Wheeland, H. W.

Wilcox, Ray C.

Wise, Constance Julia

Wise, Robert Taylor

Young, Donald M.

Young, Marcia S.

ATTACHMENT "C"
LIST OF DEFAULTED PARTIES

Aetna Life Insurance Company	Corporation of America, Trustee for Bank of America, I. 54
American Savings & Loan Association	Desco Corp.
Babikian, Helen	Diller, Michael
Bank of America, N.T. & S.A., Trustee	Erratchuo, Richard
Bannan, B. A.	Glendale Towel and Linen Supply Company
Bannan, Clotilde R.	Guyer, Irene W.
Berkemeyer, Henry W.	Herrmann, Emily Louise by Louis T. Herrmann, Successor In Interest
Berkemeyer, Hildur M.	
Bell, William M.	Hicks, Forrest W., Executor of Estate of (California Bank)
Bell, Sallie C.	
Borgia, Andrea, Estate of	Hidden Hills Corporation
Borgia, Frances	Holmgrin, Neva Bartlett
Brown, Stella M.	Hope, Lester Townes
Burns, George A.	Hope, Dolores Defina
Burns, Louise J.	Huston Homes (Doe Corporation 8)
California Bank, Trustee re Hollywood State Bank	Johnson, William Arthur, Sr. (Doe 11)
California Bank, Trustee	Johnson, Grace Luvena (Doe 12)
Citizens National Bank & Savings Bank of Los Angeles, Trust for W. Stavert	Jessup, Marguerite R., Trustee (for 6)
Citizens National Trust & Savings Bank of Los Angeles, Mort. I. 164	Jessup, Marguerite Rice
Citizens National Trust & Savings Bank of Los Angeles Trustee	Jessup, Roger
Citizens National Trust & Savings Bank of Los Angeles, Co-Trustee for Estate of A. V. Handorf	La Maida, James V. (Doe 10)
Clauson, Emma S.	La Marda, Tony (La Maida)
Continental Auxillary Company (Doe Corporation 1)	Lancaster, Paul E.
Cowlin, Josephine McC.	Lancaster, William
Cowlin, Donald G.	Land Title Insurance Company, as Trustee
Cowlin, Dorothy N.	Land Title Insurance Company
	Los Angeles Pet Cemetary
	Metropolitan Savings & Loan Association of Los Angeles
	Monteria Lake Association

Mosher, Eloise V.	Title Insurance and Trust Co., Trustee for J. McC. Cowlin
Mosher, W. E.	
Murray, Marie	Title Insurance and Trust Co., Trustee for P. E. Lancaster
Pacific Lighting and Gas Supply Co.	Title Insurance and Trust Co., Trustee T. I., Deed of Trust I. 829
Plemmons, Florence S.	
Plemmons, John R.	Title Insurance and Trust Co., Trustee for C. R. Bannan, et al.
Polar Water Company	
Pryor, Charles	Wheeland, Henry R.
Rauch, Phil	Wheeland, Elizabeth A.
Roger Jessup Farms	Woodward, E. C., Co-Trustee of the Estate of A. V. Handorf
Rushworth, Helen	Wright, Alice M.
Rushworth, Lester	Wright, J. Marion
Schwaiger, Cecil A.	Wright, Irene Evelyn
Schwaiger, Lester R.	Wright, Ralph Carver
Sealand Investment Corporation, Trustee for Metropolitan Savings & Loan Association	
Sealand Investment Corporation	
Smith, Florence S. (Plemmons)	
Southern Service Company, Ltd.	
Stavert, Walter W.	
Sun Valley National Bank of Los Angeles	
Title Insurance and Trust Co., Trustee T. I. Deed of Trust, I. 31, 32	
Title Insurance and Trust Co., Trustee for Intervalley Savings & Loan Association I. 2509	
Title Insurance & Trust Co., Trustee for Massachusetts Mutual Life Insurance Co.	
Title Insurance and Trust Co.	
Title Insurance and Trust Co., Trustee A.	
Title Insurance and Trust Co., Trustee for Sun Valley National Bank of Los Angeles	

ATTACHMENT "D"

DISCLAIMING PARTIES

Andrew Jergens Company, The	Mulholland, Perry
Boyar, Mark	Mulholland, Thomas
Chace, William M. (dba V.P.L.C.)	Mureau, Charles
DeMille, Cecil B., Estate of	Nathan, Julia N., Trustee
Drewry Photocolor Corp.	Oakmont Country Club
Hayes, Hay B. (Hal)	Platt, George E. Company
Houston Color Film Laboratories, Inc.	Richfield Oil Corporation
Krown, Samuel P.	Riverwood Ranch Mutual Water Company
La Canada Irrigation District	Smith, Benjamin B.
Lakeside Golf Club (of Hollywood)	Southern California Edison Company
Lakewood Water & Power Company	Spinks Realty Company
Mack, Lucille	Sportsman's Lodge Banquet Corporation
Mollin Investment Co.	Stetson, G. Henry
Mulholland, P. & R., Trustees for R. Wood	Technicolor Corporation
Mulholland, Rose	Valley Lawn Memorial Park

ATTACHMENT "E"

LIST OF PRIOR STIPULATED JUDGMENTS

<u>PARTY</u>	<u>DATE JUDGMENT FILED</u>
Akmadzich, Mary L.	July 24, 1959
Akmadzich, Peter J.	July 24, 1959
California Materials Company	July 24, 1959
Carnation Company	Nov. 20, 1958
Consolidated Rock Products Co.	July 24, 1959
Hidden Hills Mutual Water Company	March 11, 1965
Knickerbocker Plastic Company, Inc.	Feb. 15, 1960
Livingston Rock & Gravel Co., Inc.	July 24, 1959
Pacific Fruit Express Company	March 11, 1965
Pendleton, Evelyn M., dba Deep Rock Artesian Water Company	Nov. 1, 1965
Sears, Roebuck and Company	June 9, 1958
Southern Pacific Company	March 11, 1965
Sparkletts Drinking Water Corporation	Nov. 1, 1965
Valley Park Corporation	July 24, 1959
Walt Disney Productions	May 15, 1961
White, Constance Ray	Feb. 15, 1960
White, Leo L.	Feb. 15, 1960

1 ATTACHMENT "F"

2 STIPULATED

3 NON-CONSUMPTIVE OR MINIMAL-CONSUMPTIVE USE

4 PRACTICES

5 Non-Consumptive Uses

6
7 Disney -- extracted ground water is used for air conditioning
8 cooling water in a closed system, which discharges to the
9 channel of the Los Angeles River and is subsequently spread
10 and recharges San Fernando Basin, without measurable diminu-
11 tion or loss.

12 Sears, Lockheed and Carnation -- extracted ground water, or a
13 portion thereof, is used for air conditioning cooling in a
14 closed system, which discharges to San Fernando Basin through
15 an injection well.

16 Toluca Lake -- that portion of extracted ground water which is not
17 consumptively used, by evaporation or otherwise, is circu-
18 lated and passed through the lake to the channel of the Los
19 Angeles River immediately upstream from Los Angeles' spread-
20 ing grounds, where such water is percolated into the ground
21 water of the Basin without measurable diminution or loss.

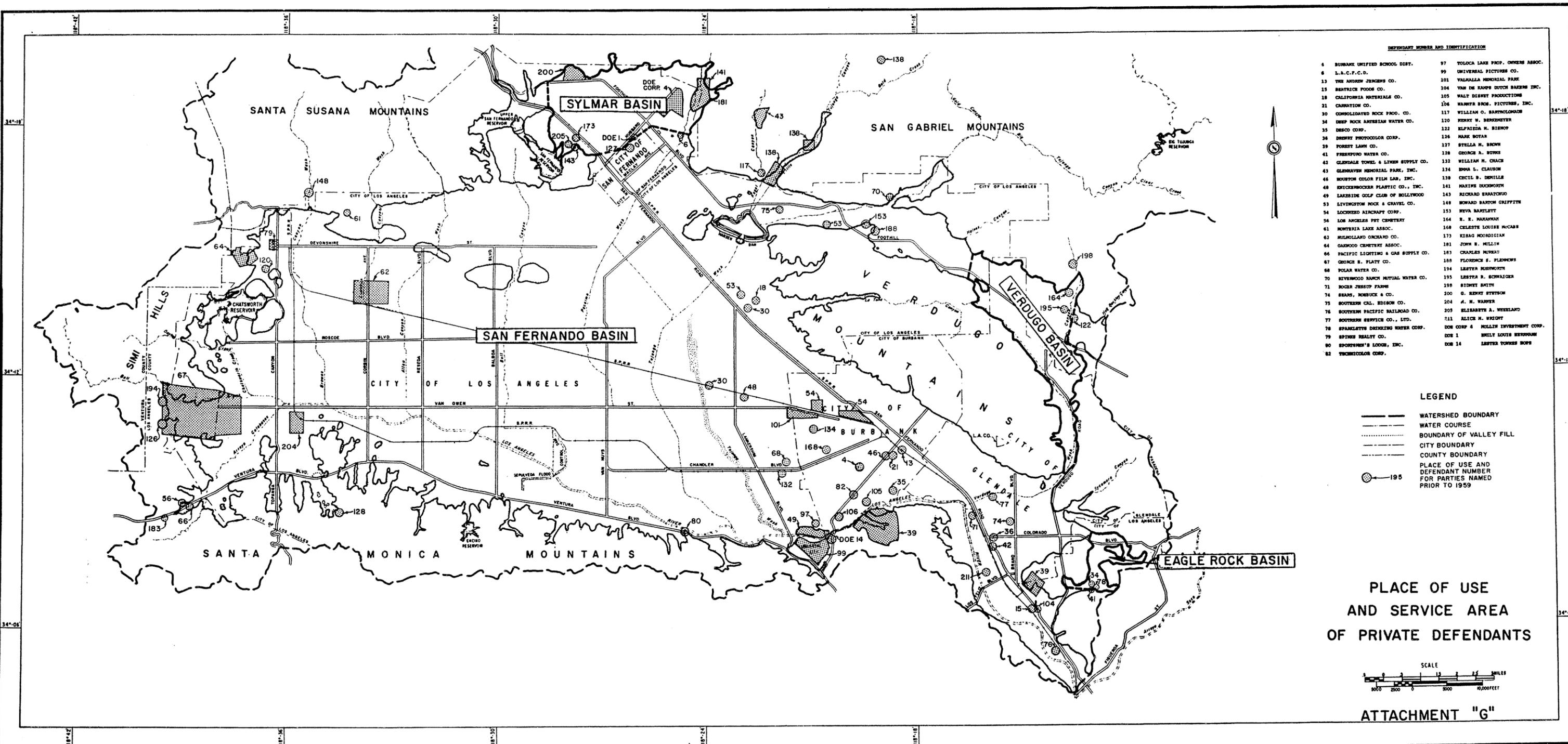
22 Sportsman's Lodge -- that portion of extracted ground water which
23 is not consumptively used, by evaporation or otherwise, is
24 circulated and passed through fish ponds and returned to
25 channels tributary to Los Angeles River upstream from Los
26 Angeles' spreading grounds, where such water is percolated
27 into the ground water of the Basin without measurable loss.

28 - - - - -

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MINIMAL-CONSUMPTIVE USES

Conrock -- extracted ground water is used in rock, sand and
&
Livingston gravel, and ready-mix concrete operations with net
consumptive use of 10%, with the remaining 90%
returning to the ground water. Each party purchases
surface water from Los Angeles in amounts at least
equivalent to such consumptive losses.



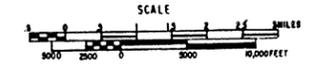
DEFENDANT NUMBER AND IDENTIFICATION

4	BURBANK UNIFIED SCHOOL DIST.	97	TOLOCA LAKE PROP. OWNERS ASSOC.
6	L.A.C.F.C.D.	99	UNIVERSAL PICTURES CO.
13	THE ANDREW ZENKENS CO.	101	VALHALLA MEMORIAL PARK
15	BEATRICE FOODS CO.	104	VAN DE KAMPS DUTCH BAKERS INC.
18	CALIFORNIA MATERIALS CO.	105	WALT DISNEY PRODUCTIONS, INC.
21	CANAVATION CO.	106	WARNER BROS. PICTURES, INC.
30	CONSOLIDATED ROCK PROD. CO.	107	WILLIAM O. BARTHOLOMAEW
34	DEEP ROCK ANTESIAN WATER CO.	110	KENNY W. BERNHARTER
35	DESCO CORP.	112	ELPAIEDA H. BISHOP
38	DEWEY PHOTOCOLOR CORP.	116	MARK BOYAR
39	FOREST LAWN CO.	117	STELLA H. BROWN
41	FRESNOVO WATER CO.	118	GEORGE A. BURNS
42	GLENDALE TOWEL & LINEN SUPPLY CO.	122	WILLIAM H. CHACH
43	GLENNDAVEN MEMORIAL PARK, INC.	134	EMMA L. CLAYTON
44	HOUSTON COLOR FILM LAB, INC.	138	CECIL B. DEWILLE
48	HICKSBOCKER PLASTIC CO., INC.	141	MAXINE DUCHOORTH
49	LAKEVIEW GOLF CLUB OF HOLLYWOOD	143	RICHARD BRANTON
53	LIVINGSTON ROCK & GRAVEL CO.	148	HOWARD BARTON GRIFFITH
54	LOCKWOOD AIRCRAFT CORP.	153	REVA MARSHLET
56	LOS ANGELES PET CEMENTRY	164	E. E. HANAWAY
61	MONTENIA LAKE ASSOC.	168	CELESTE LOUISE MCCAB
62	MULHOLLAND ORCHARD CO.	173	KIRAG MOODIGIAN
64	ORANWOOD CEMENTRY ASSOC.	181	JOHN E. MULLIN
66	PACIFIC LIGHTING & GAS SUPPLY CO.	183	CHARLES MURRAY
67	GEORGE S. PLATT CO.	188	FLORENCE S. FLEMING
68	POLAR WATER CO.	194	LESTER KURNOWTH
70	SEVENWOOD RANCH MUTUAL WATER CO.	195	LESTER R. SCHWALGER
71	ROGER JESSUP FARMS	198	BIDWY BATHY
74	SHARS, ROEBUCK & CO.	200	G. RENEY STEVEN
75	SOUTHERN CAL. EDISON CO.	204	A. H. WARNER
76	SOUTHERN PACIFIC RAILROAD CO.	205	ELIZABETH A. WEEKLAND
77	SOUTHERN SERVICE CO., LTD.	211	ALICE M. WRIGHT
78	SPARKLETS DRINKING WATER CORP.	DOE CORP 4	MOLLIN INVESTMENT CORP.
79	SPRINE HEALTH CO.	DOE 1	BILLY LOUIS BERROGAN
80	SPORTSMEN'S LODGE, INC.	DOE 14	LESTER TORRES BOYS
82	TECHNICOLOR CORP.		

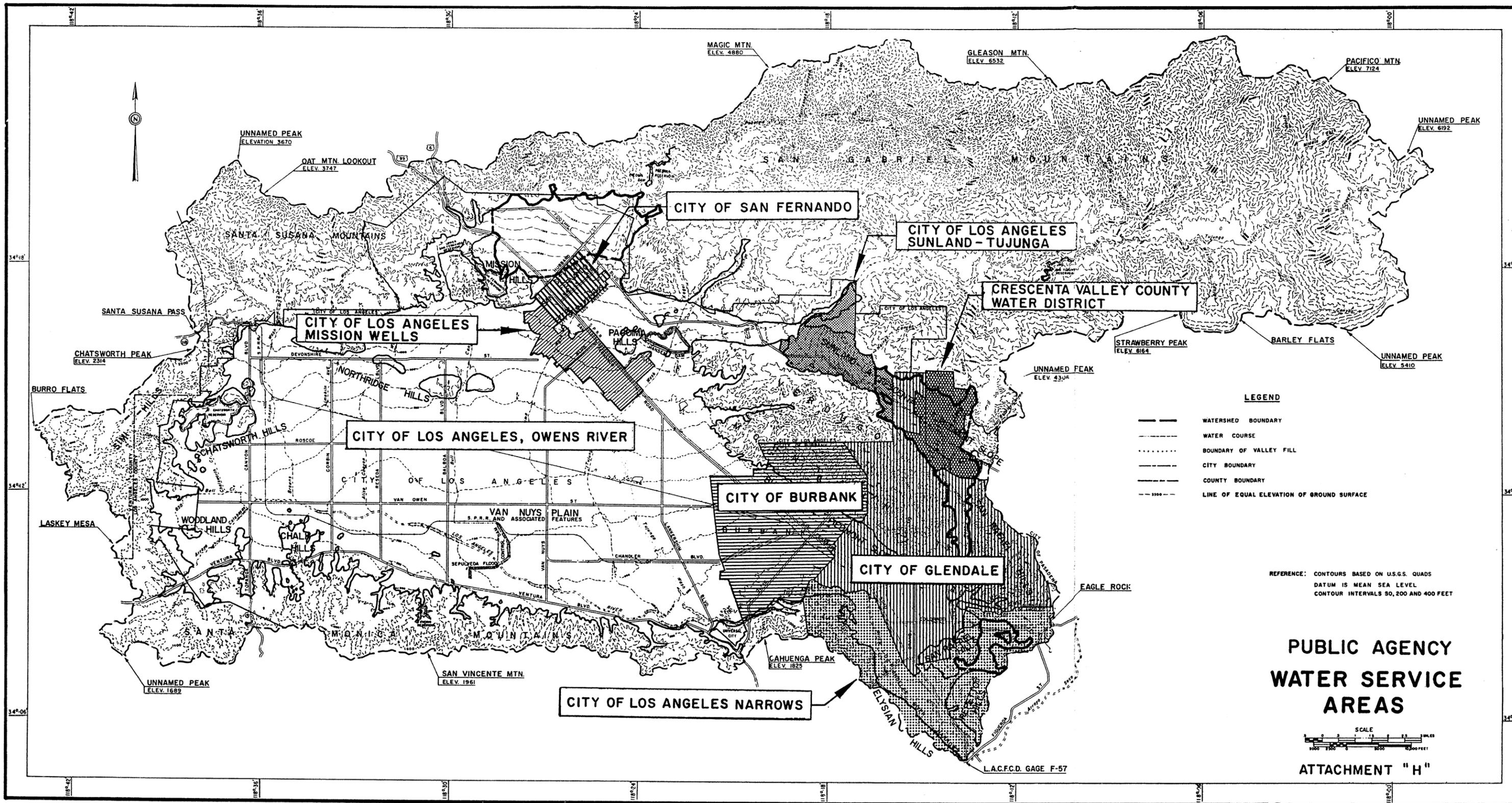
LEGEND

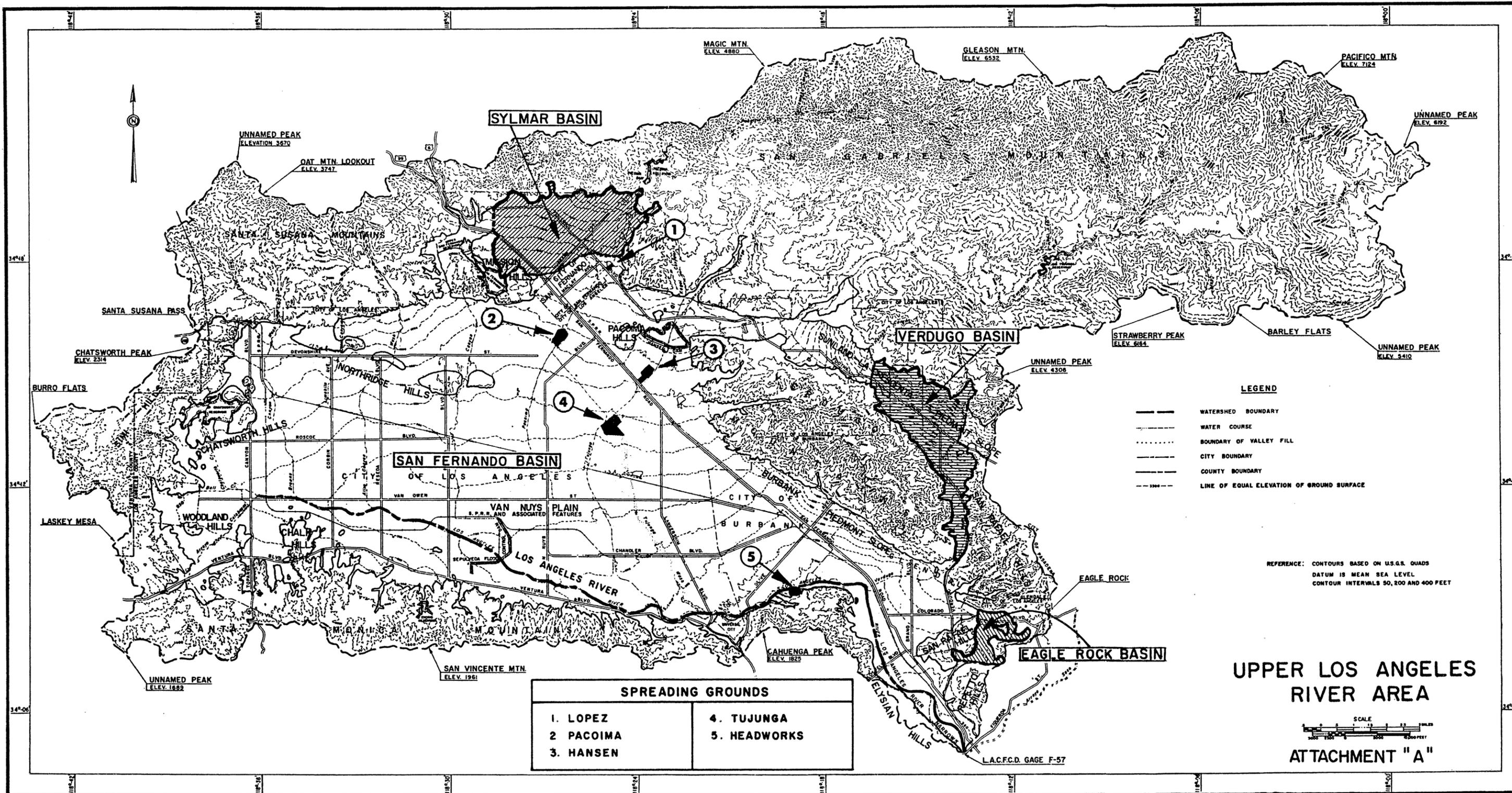
- WATERSHED BOUNDARY
- WATER COURSE
- BOUNDARY OF VALLEY FILL
- CITY BOUNDARY
- COUNTY BOUNDARY
- 195 PLACE OF USE AND DEFENDANT NUMBER FOR PARTIES NAMED PRIOR TO 1959

PLACE OF USE AND SERVICE AREA OF PRIVATE DEFENDANTS



ATTACHMENT "G"





Appendix E

CUWCC Best Management Practices (BMP) Forms

The fields in red are required.

Agency name:

Primary contact:

First name:

You must enter the reporting unit number that we have on record for your agency. Click here to open a table to obtain this number.

Reporting unit name
(District name)

Last name:

Reporting unit number:

Email:



Base Year Data

[Link to FAQs](#)

Reporting Unit **Base Year**

What is your reporting period?

Base Year

BMP 1.3 Metering

Number of unmetered accounts in Base Year

BMP 3.1 & BMP 3.2 & BMP 3.3 Residential Programs

Number of Single Family Customers in Base Year

Number of Multi Family Units in Base Year

BMP 3.4 WaterSense Specification (WSS) Toilets

Number of Single Family Housing Units constructed prior to 1992

Number of Multi Family Units prior to 1992

Average number of toilets per single family household

Average number of toilets per multi family household

Five year average resale rate of single family households

Five-year average resale rate of multi family households

Average number of persons per single family household

Average number of persons per multi family household

BMP 4.0 & BMP 5.0 CII & Landscape

Total water use (in Acre Feet) by CII accounts

Number of accounts with dedicated irrigation meters

Number of CII accounts without meters or with Mixed Use Meters

Number of CII accounts

Comments:



California Urban Water Conservation Council

TARGETS / COMPLIANCE (CUWCC MOU)

Baseline / Initial GPCD (Use option buttons to select)

GPCD in 2006 183.7
 Baseline GPCD (1997 to 2006) 193.3

GPCD in 2010 162.1
 GPCD Target for 2018 158.5

Potable Water GPCD for each Year in the Baseline Period

Year	GPCD
2006	183.7
2005	181.8
2004	199.6
2003	188.4
2002	198.3
2001	199.2
2000	204.0
1999	192.6
1998	186.1
1997	199.6

Biennial GPCD Compliance Table

Year	Report	Target		Highest Acceptable Bound	
		% Base	GPCD	% Base	GPCD
2010	1	96.4%	186.4	100%	193.3
2012	2	92.8%	179.4	96.4%	186.4
2014	3	89.2%	172.5	92.8%	179.4
2016	4	85.6%	165.5	89.2%	172.5
2018	5	82.0%	158.5	82.0%	158.5

Monthly GPCD Data for Weather Normalization

Fiscal Year Ending	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
2010	207.7	206.9	194.3	173.3	161.3	136.3	128.7	107.1	135.0	139.4	170.5	184.1
Baseline avg*	244.2	250.3	224.4	205.6	171.2	162.8	156.5	142.2	162.3	175.6	206.8	218.2

* The average for each month is based on the baseline period 1997 to 2006

The fields in red are required.

Agency name:

Primary contact:

First name:

Division name
(Reporting unit)

Last name:

Reporting unit number:

Email:



WATER SOURCES

Service Area Population:

Potable Water

Own Supply Source Name	AF/YEAR	Water Supply Type	Water Supply Description
------------------------	---------	-------------------	--------------------------

Imported Supply Source Name	AF/YEAR	Water Supply Type	Water Supply Description
-----------------------------	---------	-------------------	--------------------------

AF/YEAR

Exported Water Name	AF/YEAR	Where Exported?
---------------------	---------	-----------------

2009

The fields in red are required.

Agency name:

Primary contact:

First name:

Division name
(Reporting unit)

Last name:

Reporting unit number:

Email:



2009

Service Area Population:

Non- Potable Water

If you select Other for type, enter

Own Supply Source Name	AF/YEAR	Water Supply Type	Water Supply Description
------------------------	---------	-------------------	--------------------------

Imported Supply Source Name	AF/YEAR	Water Supply Type	Water Supply Description
-----------------------------	---------	-------------------	--------------------------

AF/YEAR

Exported Water Name	AF/YEAR	Where Exported? such as groundwater recharge, retail, etc.
---------------------	---------	--

The fields in red are required.

Agency name:

Primary contact:

First name:



Division name
(Reporting unit)

Last name:

Reporting unit number:

Email:

Water Uses 2009

Non-Potable Billed

Customer Type	Meter Accounts	Metered Water Delivered	Un-metered Accounts	Un-metered Water Delivered	Description

Non-Potable Un-Billed

Customer Type	Meter Accounts	Metered Water Delivered	Un-metered Accounts	Un-metered Water Delivered	Description

The fields in red are required.



Agency name:

Reporting unit name
(District name)

Reporting unit number:

Primary contact:

First name:

Last name:

Email:

You must enter the reporting unit number that we have on record for your agency. Click here to open a table to obtain this number.

[Link to FAQs](#)

[See the complete MOU:](#) [View MOU](#)

[See the coverage requirements for this BMP:](#)

2009

BMP 1.1 Operations Practices

Comments:

Conservation Coordinator

Conservation Coordinator Yes No

Contact Information

First Name

Last Name

Title

Phone

Email

Note that the contact information may be the same as the primary contact information at the top of the page. If this is your case, excuse the inconvenience but please enter the information again.

Water Waste Prevention

Water Agency shall do one or more of the following:

- a. Enact and enforce an ordinance or establish terms of service that prohibit water waste
- b. Enact and enforce an ordinance or establish terms of service for water efficient design in new development
- c. Support legislation or regulations that prohibit water waste
- d. Enact an ordinance or establish terms of service to facilitate implementation of water shortage response measures
- e. Support local ordinances that prohibit water waste
- f. Support local ordinances that establish permits requirements for water efficient design in new

To document this BMP, provide the following:

- a. A description of, or electronic link to, any ordinances or terms of service
- b. A description of, or electronic link to, any ordinances or requirements adopted by local jurisdictions or regulatory agencies with the water agency's service area.
- c. A description of any water agency efforts to cooperate with other entities in the adoption or enforcement of local requirement
- d. description of agency support positions with respect to adoption of legislation or regulations

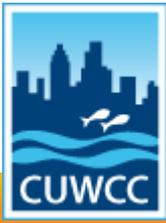
You can show your documentation by providing files, links (web addresses), and/or entering a description.

File name(s): Email files to natalie@cuwcc.org

Web address(s) URL: comma-separated list

Enter a description:

The fields in red are required.



Agency name:
Reporting unit name
(District name)
Reporting unit number:

Primary contact:
First name:
Last name:
Email:

You must enter the reporting unit number that we have on record for your agency. Click here to open a table to obtain this number.

[Link to FAQs](#)

[View MOU](#)



2009 BMP 1.2 Water Loss Control

Did your agency complete a pre-screening system audit in 2009? **Yes** **No**

If yes, answer the following:

Determine metered sales in AF:

Definition: other accountable uses not included in metered sales, such as unbilled water use, fire suppression, etc.



Determine system verifiable uses AF:

Determine total supply into the system in AF:

Does your agency keep necessary data on file to verify the answers above? **Yes** **No**

Did your agency complete a full-scale system water audit during 2009? **Yes** **No**

Does your agency maintain in-house records of audit results or the completed AWWA worksheet for the completed audit which could be forwarded to CUWCC? **Yes** **No**

Did your agency operate a system leak detection program? **Yes** **No**

Comments:

The fields in red are required.

Agency name:
Reporting unit name
(District name)
Reporting unit number:

Primary contact:
First name:
Last name:
Email:

You must enter the reporting unit number that we have on record for your agency. Click here to open a table to obtain this number.



BMP 1.3 Metering with Commodity

[Link to FAQs](#)

See the complete MOU: [View MOU](#)

See the coverage requirements for this BMP:

Implementation

- Does your agency have any unmetered service connections? Yes No
- If YES, has your agency completed a meter retrofit plan? Yes No
- Enter the number of previously unmetered accounts fitted with meters during reporting year:
- Are all new service connections being metered? Yes No
- Are all new service connections being billed volumetrically? Yes No
- Has your agency completed and submitted electronically to the Council a written plan, policy or program to test, repair and replace meters? Yes No

Please Fill Out The Following Matrix

Account Type	# Metered Accounts	# Metered Accounts Read	# Metered Accounts Billed by Volume	Billed by	Billing Frequency Per Year	# of estimated bills/yr
--------------	--------------------	-------------------------	-------------------------------------	-----------	----------------------------	-------------------------

Number of CII Accounts with Mixed-use Meters

Number of CII Accounts with Mixed-use Meters Retrofitted with Dedicated Irrigation Meters during Reporting Period

Feasibility Study

Has your agency conducted a feasibility study to assess the merits of a program to provide incentives to switch mixed-use accounts to dedicated landscape meters? Yes No

If YES, please fill in the following information:

- A. When was the Feasibility Study conducted
- B. Email or provide a link to the feasibility study (or description of):

File name(s): Email files to natalie@cuwcc.org

Web address(s) URL: comma-separated list

General Comments about BMP 1.3:

The fields in red are required.

Agency name:

Reporting unit name
(District name)

Reporting unit number:

Primary contact:

First name:

Last name:

Email:

You must enter the reporting unit number that we have on record for your agency. Click here to open a table to obtain this number.



2009

BMP 1.4 Retail Conservation Pricing

[Link to FAQs](#)

[View MOU](#)

If you are reporting more rate structures than this form allows, add the structures to a spreadsheet and send the file to natalie@cuwcc.org.

Implementation (Water Rate Structure)

Enter the Water Rate Structures that are assigned to the majority of your customers, by customer class

Rate Structure	Customer Class	Total Revenue Commodity Charges	Total Revenue Customer Meter/Service (Fixed Charges)

Implementation Option (Conservation Pricing Option)

Use Annual Revenue As Reported
Use Canadian Water & Wastewater Association Rate Design Model

If CWWA is select, enter the file name and email the spreadsheet to natalie@cuwcc.org

Retail Waste Water (Sewer) Rate Structure by Customer Class

Agency Provide Sewer Service Yes No

Select the Retail Waste Water(Sewer) Rate Structure assigned to the majority of your customers within a specific customer class.

Rate Structure	Customer Class	Total Revenue Commodity Charges	Total Revenue Customer Meter/Service (Fixed Charges)

Comments:

The fields in red are required.



Agency name:

Reporting unit name
(District name)

Reporting unit number:

Primary contact:

First name:

Last name:

Email:

Click here to open a table that displays your agency name reporting unit name and reporting unit number. Please ensure that you enter the correct information.

[Link to FAQs](#)

[View MOU](#)

2009

BMP 2.1 Public Outreach - Retail Reporting

Is a Wholesale Agency Performing Public Outreach?

Are there one or more wholesale agencies performing public outreach which can be counted to help your agency comply with the BMP?

Yes No

Enter the name(s) of the wholesale agency (comma delimited)

Is your agency performing public outreach?

Report a minimum of 4 water conservation related contacts your agency had with the public during the year.

Public Information Programs List

Did at least one contact take place during each quarter of the reporting year?

Number of Public Contacts	Public Information Programs

Contact with the Media

Are there one or more wholesale agencies performing media outreach which can be counted to help your agency comply with the BMP?

Yes No

Enter the name(s) of the wholesale agency (comma delimited)

OR Retail Agency (Contacts with the Media)

Did at least one contact take place during each quarter of the reporting year?

Media Contacts List

Number of Media Contacts	Did at least one contact take place during each quarter of the reporting year?	Media Contact Types

Is a Wholesale Agency Performing Website Updates?

Did one or more CUWCC wholesale agencies agree to assume your agency's responsibility for meeting the requirements of and for CUWCC reporting of this BMP? Yes No

Enter the name(s) of the wholesale agency (comma delimited)

Is Your Agency Performing Website Updates?

Enter your agency's URL (website address):

Describe a minimum of four water conservation related updates to your agency's website that took place during the year:

Did at least one Website Update take place during each quarter of the reporting year? Yes No

Public Outreach Annual Budget

Enter budget for public outreach programs. You may enter total budget in a single line or brake the budget into discrete categories by entering many rows. Please indicate if personnel costs are included in the entry.

Category	Amount		Personnel Costs Included? <i>If yes, check the box.</i>	Comments	

Comments:

The fields in red are required.



Agency name:

Reporting unit name
(District name)

Reporting unit number:

Primary contact:

First name:

Last name:

Email:

Click here to open a table that displays your agency name reporting unit name and reporting unit number. Please ensure that you enter the correct information.

[Link to FAQs](#)

2009

BMP 2.1 Public Outreach Cont'd

[View MOU](#)

Public Outreach Expenses

Enter expenses for public outreach programs. Please include the same kind of expenses you included in the question related to your budget (Section 2.1.7, above). For example, if you included personnel costs in the budget entered above, be sure to include them here as well.

Expense Category	Expense Amount	Personnel Costs Included?	
If yes, check the check box.			

Additional Public Information Program

Please report additional public information contacts. List these additional contacts in order of how your agency views their importance / effectiveness with respect to conserving water, with the most important/ effective listed first (where 1 = most important).

Were there additional Public Outreach efforts?

Yes No

Public Outreach Additional Information

Public Information Programs	Importance	

Social Marketing Programs

Branding

Does your agency have a water conservation "brand," "theme" or mascot? Yes No

Describe the brand, theme or mascot.

Market Research

Have you sponsored or participated in market research to refine your message? Yes No

Market Research Topic

Brand Message

Brand Mission Statement

Community Committees

Do you have a community conservation committee? Yes No

Enter the names of the community committees:

Training

Training Type	# of Trainings	# of Attendees	Description of Other	

Social Marketing Expenditures

Public Outreach Social Marketing Expenses

Expense Category	Expense Amount	Description	

Partnering Programs - Partners

Name Type of Program

CLCA?

Green Building Programs?

Master Gardeners?

Cooperative Extension?

Local Colleges?

Other

Retail and wholesale outlet; name(s) and type(s) of programs:

Partnering Programs - Newsletters

Number of newsletters per year

Number of customers per year

Partnering with Other Utilities

Describe other utilities your agency partners with, including electrical utilities

Conservation Gardens

Describe water conservation gardens at your agency or other high traffic areas or new

Landscape contests or awards

Describe water wise landscape contest or awards program conducted by your agency

Comments:

The fields in red are required.



Agency name:

Reporting unit name
(District name)

Reporting unit number:

Primary contact:

First name:

Last name:

Email:

Click here to open a table that displays your agency name reporting unit name and reporting unit number. Please ensure that you enter the correct information.

[Link to FAQs](#)

JJK ACI

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School Programs

=g'nci f'U[YbVh]a d'Ya Ybh]b['gWcc`dfc[fUa g:k \jW' Wb'VY
Vti bhYX'rc \Y'd'Ubch.Yf'U[YbVh]Vta d'mk]h' h.]g' 6A D3

Mg Bc

9bhYf'K \c'YgUYf'BUa Ygž'gYdUfUHfX'VmVta a Ug

A UHf]Ug'a YH'gUH'YXi W]h]cb ZUa Yk cf_ 'fYei]fYa Ybhg3

8YgW]d]cb'cZ'A UHf]Ug

A UHf]Ug'X]gf]Vi hYX'rc'?!* 'Gh XYbhg3

8YgW]d]cb'cZ'a UHf]Ug'X]gf]Vi hYX'rc'?!*
Gh XYbhg

Bi a VYf'cZ'gh XYbhg'fYUWYX

A UHf]Ug'X]gf]Vi hYX'rc'+!%&'Gh XYbhg3

8YgW]d]cb'cZ'a UHf]Ug'X]gf]Vi hYX'rc'+!%&
Gh XYbhg

Bi a VYf'cZ'8]gf]Vi h]cb

5bbi U'Vi X[YhZcf'gWcc`YXi W]h]cb'dfc[fUa

8YgW]d]cb'cZ'U`ch.Yf'k UHf'g' dd'Yf'YXi W]h]cb
dfc[fUa g

School Program Activities

Classroom presentations:

Bi a VYf'cZ
dfYgYbU]h]cbg

Bi a VYf'cZ
UHf]bXYg'''

Large group assemblies:

Bi a VYf'cZ dfYgYbU]h]cbg

Bi a VYf'cZ UHf]bXYg'''

Children's water festivals or other events:

Bi a VYf'cZ dfYgYbU]h]cbg

Bi a VYf'cZ UHf]bXYg'''

Cooperative efforts with existing science/water education programs (various workshops, science fair awards or judging) and follow-up:

Bi a VYf'cZ dfYgYbU]h]cbg

Bi a VYf'cZ UHf]bXYg'''

Other methods of disseminating information (i.e. themed age-appropriate classroom loaner kits):

8YgWjd]cb

Bi a VYf`X]g]f]Vi hYX

Staffing children's booths at events & festivals:

Bi a VYf`cZVcch]g

Bi a VYf`cZ UH]bXYYg`''

Water conservation contests such as poster and photo:

8YgWjd]cb

Bi a VYf`X]g]f]Vi hYX

Offer monetary awards/funding or scholarships to students:

Bi a VYf`CZYfYX

HcHJ` : i bX]b[`''

Teacher training workshops:

Bi a VYf`cZdfYgYbH]cbg

Bi a VYf`cZ UH]bXYYg`''

Fund and/or staff student field trips to treatment facilities, recycling facilities, water conservation gardens, etc.:

Bi a VYf`cZ hci fg`cf`Z]YX
hf]dg

Bi a VYf`cZ dUf]V]dU]b]g`''

College internships in water conservation offered:

Bi a VYf`cZ]bH]fbg\]dg

HcHJ` Z bX]b[`''

Career fairs/workshops:

Bi a VYf`cZdfYgYbH]cbg

Bi a VYf`cZ UH]bXYYg`''

Additional program(s) supported by agency but not mentioned above:

8YgWjd]cb

Bi a VYf`cZYj Yb]g`f]Z
Udd`]WV`Yk

Bi a VYf`cZ dUf]V]dU]b]g`''

Total reporting period budget expenditures for school education programs (include all agency costs):

Comments

The fields in red are required.

Agency name:

Primary contact:

First name:

Division name
(Reporting unit)

Last name:

Reporting unit number:

Email:



WATER SOURCES

Service Area Population:

Potable Water

Own Supply Source Name	AF/YEAR	Water Supply Type	Water Supply Description
------------------------	---------	-------------------	--------------------------

Imported Supply Source Name	AF/YEAR	Water Supply Type	Water Supply Description
-----------------------------	---------	-------------------	--------------------------

AF/YEAR

Exported Water Name	AF/YEAR	Where Exported?
---------------------	---------	-----------------

2010

The fields in red are required.

Agency name:

Primary contact:

First name:



Division name
(Reporting unit)

Last name:

Reporting unit number:

Email:

Service Area Population:

Non- Potable Water

If you select Other for type, enter

Own Supply Source Name	AF/YEAR	Water Supply Type	Water Supply Description
------------------------	---------	-------------------	--------------------------

Imported Supply Source Name	AF/YEAR	Water Supply Type	Water Supply Description
-----------------------------	---------	-------------------	--------------------------

AF/YEAR

Exported Water Name	AF/YEAR	Where Exported? such as groundwater recharge, retail, etc.
---------------------	---------	--

2010

The fields in red are required.

Agency name:

Primary contact:

First name:

Division name
(Reporting unit)

Last name:

Reporting unit number:

Email:



Make sure to enter numbers in AF/Year.



Water Uses 2010

Potable Water Billed

Customer Type	Meter Accounts	Metered Water Delivered	Un-metered Accounts	Un-metered Water Delivered	Description

Potable Water Un-Billed

Customer Type	Meter Accounts	Metered Water Delivered	Un-metered Accounts	Un-metered Water Delivered	Description

The fields in red are required.

Agency name:

Primary contact:

First name:



Division name
(Reporting unit)

Last name:

Reporting unit number:

Email:

Water Uses

2010

Non-Potable Billed

Customer Type	Meter Accounts	Metered Water Delivered	Un-metered Accounts	Un-metered Water Delivered	Description

Non-Potable Un-Billed

Customer Type	Meter Accounts	Metered Water Delivered	Un-metered Accounts	Un-metered Water Delivered	Description

The fields in red are required.



Agency name:

Reporting unit name
(District name)

Reporting unit number:

Primary contact:

First name:

Last name:

Email:

You must enter the reporting unit number that we have on record for your agency. Click here to open a table to obtain this number.

[Link to FAQs](#)

[See the complete MOU:](#) [View MOU](#)

[See the coverage requirements for this BMP:](#)

2010

BMP 1.1 Operations Practices

Comments:

Conservation Coordinator

Conservation Coordinator Yes No

Contact Information

First Name

Last Name

Title

Phone

Email

Note that the contact information may be the same as the primary contact information at the top of the page. If this is your case, excuse the inconvenience but please enter the information again.

Water Waste Prevention

Water Agency shall do one or more of the following:

- a. Enact and enforce an ordinance or establish terms of service that prohibit water waste
- b. Enact and enforce an ordinance or establish terms of service for water efficient design in new development
- c. Support legislation or regulations that prohibit water waste
- d. Enact an ordinance or establish terms of service to facilitate implementation of water shortage response measures
- e. Support local ordinances that prohibit water waste
- f. Support local ordinances that establish permits requirements for water efficient design in new

To document this BMP, provide the following:

- a. A description of, or electronic link to, any ordinances or terms of service
- b. A description of, or electronic link to, any ordinances or requirements adopted by local jurisdictions or regulatory agencies with the water agency's service area.
- c. A description of any water agency efforts to cooperate with other entities in the adoption or enforcement of local requirement
- d. description of agency support positions with respect to adoption of legislation or regulations

You can show your documentation by providing files, links (web addresses), and/or entering a description.

File name(s): Email files to natalie@cuwcc.org

Web address(s) URL: comma-separated list

Enter a description:

The fields in red are required.



Agency name:

Reporting unit name
(District name)

Reporting unit number:

Primary contact:

First name:

Last name:

Email:

You must enter the reporting unit number that we have on record for your agency. Click here to open a table to obtain this number.

[Link to FAQs](#)

2010 BMP 1.2 Water Loss Control

[View MOU](#)



AWWA Water Audit

Agency to complete a Water Audit & Balance Using The AWWA Software Yes No
Email to natalie@cuwcc.org - Worksheets (AWWA Water Audit). Enter the name of the file below:

Water Audit Validity Score from AWWA spreadsheet



Agency Completed Training In The AWWA Water Audit Method

Yes

No



Agency Completed Training In The Component Analysis Process

Yes

No

Completed/Updated the Component Analysis (at least every 4 years)?

Yes

No



Component Analysis Completed/Updated Date

Water Loss Performance

Agency Repaired All Reported Leaks & Breaks To The Extent Cost Effective

Yes

No

Recording Keeping Requirements:

Date/Time Leak Reported

Leak Location

Type of Leaking Pipe Segment or Fitting

Leak Running Time From Report to Repair

Leak Volume Estimate

Cost of Repair

Agency Located and Repaired Unreported Leaks to the Extent Cost Effective

Yes

No

Type of Program Activities Used to Detect Unreported Leaks

Annual Summary Information

Complete the following table with annual summary information (required for reporting years 2-5 only)

Total Leaks Repaired	Economic Value Of Real Loss	Economic Value Of AppUFYbhLoss	Miles Of System Surveyed For Leaks	Pressure Reduction Undertaken for loss reduction	Cost Of Interventions	Water Saved (AF/Year)

Comments:

The fields in red are required.

Agency name:
Reporting unit name
(District name)

Reporting unit number:

Primary contact:

First name:

Last name:

Email:

You must enter the reporting unit number that we have on record for your agency. Click here to open a table to obtain this number.



BMP 1.3 Metering with Commodity 2010

[Link to FAQs](#)

See the complete MOU: [View MOU](#)

See the coverage requirements for this BMP:

Implementation

Does your agency have any unmetered service connections? Yes No

If YES, has your agency completed a meter retrofit plan? Yes No

Enter the number of previously unmetered accounts fitted with meters during reporting year:

Are all new service connections being metered? Yes No

Are all new service connections being billed volumetrically? Yes No

Has your agency completed and submitted electronically to the Council a written plan, policy or program to test, repair and replace meters? Yes No

Please Fill Out The Following Matrix

Account Type	# Metered Accounts	# Metered Accounts Read	# Metered Accounts Billed by Volume	Billing Frequency Per Year	# of estimated bills/yr
--------------	--------------------	-------------------------	-------------------------------------	----------------------------	-------------------------

Number of CII Accounts with Mixed-use Meters

Number of CII Accounts with Mixed-use Meters Retrofitted with Dedicated Irrigation Meters during Reporting Period

Feasibility Study

Has your agency conducted a feasibility study to assess the merits of a program to provide incentives to switch mixed-use accounts to dedicated landscape meters? Yes No

If YES, please fill in the following information:

A. When was the Feasibility Study conducted

B. Describe, upload or provide an electronic link to the Feasibility Study Upload File

File name(s): Email files to natalie@cuwcc.org

Web address(s) URL: comma-separated list

Comments:

The fields in red are required.

Agency name:

Reporting unit name
(District name)

Reporting unit number:

Primary contact:

First name:

Last name:

Email:

You must enter the reporting unit number that we have on record for your agency. Click here to open a table to obtain this number.



2010

BMP 1.4 Retail Conservation Pricing

[Link to FAQs](#)

[View MOU](#)

If you are reporting more rate structures than this form allows, add the structures to a spreadsheet and send the file to natalie@cuwcc.org.

Implementation (Water Rate Structure)

Enter the Water Rate Structures that are assigned to the majority of your customers, by customer class

Rate Structure	Customer Class	Total Revenue Commodity Charges	Total Revenue Customer Meter/Service (Fixed Charges)

Implementation Option (Conservation Pricing Option)

Use Annual Revenue As Reported
Use Canadian Water & Wastewater Association Rate Design Model

If CWWA is select, enter the file name and email the spreadsheet to natalie@cuwcc.org

Retail Waste Water (Sewer) Rate Structure by Customer Class

Agency Provide Sewer Service Yes No

Select the Retail Waste Water(Sewer) Rate Structure assigned to the majority of your customers within a specific customer class.

Rate Structure	Customer Class	Total Revenue Commodity Charges	Total Revenue Customer Meter/Service (Fixed Charges)

Comments:

The fields in red are required.

Agency name:

Reporting unit name
(District name)

Reporting unit number:

Primary contact:

First name:

Last name:

Email:

Click here to open a table that displays your agency name reporting unit name and reporting unit number. Please ensure that you enter the correct information.



[Link to FAQs](#)

[View MOU](#)

2010

BMP 2.1 Public Outreach

Is your agency performing Public Outreach for your Retailers?

Are there one or more retail agencies that count on your agency to help them comply with this BMP?

Yes No

Enter the name(s) of the retail agency
(comma delimited)

Is your agency performing public outreach?

Report a minimum of 4 water conservation related contacts your agency had with the public during the year.

Public Information Programs List

Did at least one contact take place during each quarter of the reporting year?

Number of Public Contacts	Public Information Programs

Contact with the Media

Are there one or more retail agencies that count on your agency to help them comply with this BMP?

Yes No

Enter the name(s) of the retail agency
(comma delimited)

OR Wholesale Agency (Contacts with the Media)

Did at least one contact take place during each quarter of the reporting year?

Media Contacts List

Number of Media Contacts	Did at least one contact take place during each quarter of the reporting year?	Media Contact Types

Is a Wholesale Agency Performing Website Updates?

Did one or more retail agencies rely on your agency's responsibility for meeting the requirements of and for CUWCC reporting of this BMP? Yes No

Enter the name(s) of the retail agency (comma delimited)

Is Your Agency Performing Website Updates?

Enter your agency's URL (website address):

Describe a minimum of four water conservation related updates to your agency's website that took place during the year:

Did at least one Website Update take place during each quarter of the reporting year? Yes No

Public Outreach Annual Budget

Enter budget for public outreach programs. You may enter total budget in a single line or break the budget into discrete categories by entering many rows. Please indicate if personnel costs are included in the entry.

Category	Amount		Personnel Costs Included? <i>If yes, check the box.</i>	Comments	

Comments:

The fields in red are required.



Agency name:

Reporting unit name
(District name)

Reporting unit number:

Primary contact:

First name:

Last name:

Email:

Click here to open a table that displays your agency name reporting unit name and reporting unit number. Please ensure that you enter the correct information.

[Link to FAQs](#)

2010

BMP 2.1 Public Outreach Cont'd

[View MOU](#)

Public Outreach Expenses

Enter expenses for public outreach programs. Please include the same kind of expenses you included in the question related to your budget (Section 2.1.7, above). For example, if you included personnel costs in the budget entered above, be sure to include them here as well.

Expense Category	Expense Amount	Personnel Costs Included?	
If yes, check the check box.			

Additional Public Information Program

Please report additional public information contacts. List these additional contacts in order of how your agency views their importance / effectiveness with respect to conserving water, with the most important/ effective listed first (where 1 = most important).

Were there additional Public Outreach efforts? Yes No

Public Outreach Additional Information

Public Information Programs	Importance	

Social Marketing Programs

Branding

Does your agency have a water conservation "brand," "theme" or mascot? Yes No

Describe the brand, theme or mascot.

Market Research

Have you sponsored or participated in market research to refine your message? Yes No

Market Research Topic

Brand Message

Brand Mission Statement

Community Committees

Do you have a community conservation committee? Yes No

Enter the names of the community committees:

Training

Training Type	# of Trainings	# of Attendees	Description of Other	

Social Marketing Expenditures

Public Outreach Social Marketing Expenses

Expense Category	Expense Amount	Description	

Partnering Programs - Partners

Name Type of Program

CLCA?

Green Building Programs?

Master Gardeners?

Cooperative Extension?

Local Colleges?

Other

Retail and wholesale outlet; name(s) and type(s) of programs:

Partnering Programs - Newsletters

Number of newsletters per year

Number of customers per year

Partnering with Other Utilities

Describe other utilities your agency partners with, including electrical utilities

Conservation Gardens

Describe water conservation gardens at your agency or other high traffic areas or new

Landscape contests or awards

Describe water wise landscape contest or awards program conducted by your agency

Comments:

The fields in red are required.



Agency name:

Reporting unit name
(District name)

Reporting unit number:

Primary contact:

First name:

Last name:

Email:

Click here to open a table that displays your agency name reporting unit name and reporting unit number. Please ensure that you enter the correct information.

[Link to FAQs](#)

[View MOU](#)

2010

BMP 2.2 School Education Programs

School Programs

Is your agency implementing school programs which can be counted to help another agency comply with this BMP?

Yes No

Enter retailer names, separated by commas:

Materials meet state education framework requirements?

Description of Materials

Materials distributed to K-6 Students?

Description of materials distributed to K-6 Students

Number of students reached

Materials distributed to 7-12 Students?

Description of materials distributed to 7-12 Students

Number of Distribution

Annual budget for school education program

Description of all other water supplier education programs

School Program Activities

Classroom presentations:

Number of presentations

Number of attendees

Large group assemblies:

Number of presentations

Number of attendees

Children's water festivals or other events:

Number of presentations

Number of attendees

Cooperative efforts with existing science/water education programs (various workshops, science fair awards or judging) and follow-up:

Number of presentations

Number of attendees

Other methods of disseminating information (i.e. themed age-appropriate classroom loaner kits):

Description

Number distributed

Staffing children's booths at events & festivals:

Number of booths

Number of attendees

Water conservation contests such as poster and photo:

Description

Number distributed

Offer monetary awards/funding or scholarships to students:

Number Offered

Total Funding

Teacher training workshops:

Number of presentations

Number of attendees

Fund and/or staff student field trips to treatment facilities, recycling facilities, water conservation gardens, etc.:

Number of tours or field trips

Number of participants

College internships in water conservation offered:

Number of internships

Total funding

Career fairs/workshops:

Number of presentations

Number of attendees

Additional program(s) supported by agency but not mentioned above:

Description

Number of events (if applicable)

Number of participants

Total reporting period budget expenditures for school education programs (include all agency costs):

Comments