



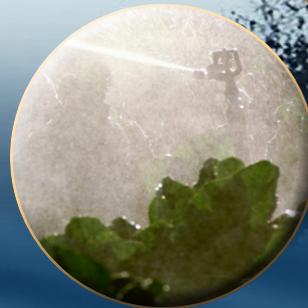
Golden State
Water Company
A Subsidiary of American States Water Company

Final Report

2010 Urban Water Management Plan

Artesia

CORPORATE OFFICE
630 E. FOOTHILL BLVD.
SAN DIMAS CA 91773



September 2011

Kennedy/Jenks Consultants

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Corporate Office

630 E. Foothill Blvd.
San Dimas, CA 91773

September 2011

Kennedy/Jenks Consultants

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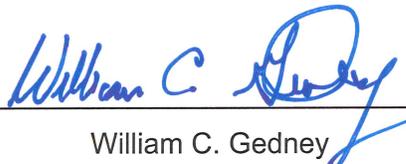
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Notice of Adoption

A meeting to solicit public comments on the 2010 Urban Water Management Plan for the Golden State Water Company Artesia System was held on September 14, 2011 at 6 p.m. at the Artesia Community Center in Artesia, California. Notice of this meeting was published in accordance with Section 6066 of the Government Code in the Long Beach Press Telegram on June 1, 17, and 24, 2011.

Copies of the Urban Water Management Plan were made available to the public at the Golden State Water Company Customer Service Office in Norwalk, California one week prior to the public hearing.

Golden State Water Company, hereby, adopts the 2010 Urban Water Management Plan for the Artesia System.



William C. Gedney
Vice President, Asset Management
Golden State Water Company

September 14, 2011

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Abbreviations

µg/L	micrograms per liter
ac-ft	acre-feet
ac-ft/yr or AFY	acre-feet per year
Act	Urban Water Management Planning Act
AMR	automatic meter reading
APA	allowed pumping allocation
As	arsenic
AWWA	American Water Works Association
BMPs	best management practices
Cal EMA	California Emergency Management Agency
CAL Green Code	California Green Building Standards Code
CBMWD	Central Basin Municipal Water District
CBRWP	Central Basin Recycled Water Project
ccf	hundred cubic feet
CDPH	California Department of Public Health
CII	commercial, industrial, and institutional
CIMIS	California Irrigation Management Information System
COG	Council of Governments
Council or CUWCC	California Urban Water Conservation Council
CPUC	California Public Utilities Commission
CRA	Colorado River Aqueduct
DMM	Demand Management Measure
DOF	Department of Finance
DSC	Discovery Science Center
DWF	dry weather flow

DWR	Department of Water Resources (California)
DWR Guidebook	Guidebook to Assist Water Suppliers in the Preparation of a 2010 Urban Water Management Plan
ERP	Emergency Response Plan
ETo	evapotranspiration
Fe	iron
GIS	Geographic Information System
gpcd	gallons per capita day
gpd	gallons per day
gpm	U.S. gallons per minute
GSWC	Golden State Water Company
HCD	Housing and Community Development
HECW	high efficiency clothes washer
HET	high efficiency toilet
ILI	Infrastructure Leakage Index
IRP	Integrated Resources Plan
LACDPW	Los Angeles County Department of Public Works
LACSD	Sanitation Districts of Los Angeles County
MAF	million acre-feet per year
MCL	maximum contaminant levels
Metropolitan	Metropolitan Water District of Southern California
MF	multi-family
mgd	million gallons per day
Mn	manganese
MOU	memorandum of understanding (regarding urban water conservation in California)
N/A	not available, not applicable
NAICS	North American Industry Classification System
O&M	operation and maintenance

ppb	parts per billion
RHNA	Regional Housing Needs Allocation
RTP	Regional Transportation Plan
RUWMP	Regional Urban Water Management Plan
SBX7-7	Senate Bill X7-7, The Water Conservation Act of 2009
SCAG	Southern California Association of Governments
SD	Science Discover
SDWA	Safe Drinking Water Act
SF	single-family
SMCL	secondary maximum contaminant level
SWP	State Water Project
TAF	thousand acre-feet per year
ULFT	ultra-low-flush-toilet
USEPA	U.S. Environmental Protection Agency
UWMP	Urban Water Management Plan
VOCs	volatile organic compounds
WAP	Water Action Plan
WBIC	weather based irrigation controllers
WBMWD	West Basin Municipal Water District
WLCD	Water Loss Control Department
WRCC	Western Regional Climate Center
WRDSC	Water Replenishment District of Southern California
WRP	water reclamation plant
WSAP	Water Supply Allocation Plan
WSDM Plan	Water Surplus and Drought Management Plan
WSS	WaterSense Specification

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Definitions

Chapter 2, Part 2.6, Division 6 of the California Water Code provides definitions for the construction of the Urban Water Management Plans. Appendix A contains the full text of the Urban Water Management Planning Act.

CHAPTER 2. DEFINITIONS

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

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

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

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

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

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

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

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

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

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Chapter 1: Plan Preparation

1.1 Background

This Urban Water Management Plan (UWMP) has been prepared for the Golden State Water Company (GSWC) Artesia System in compliance with Division 6, Part 2.6, of the California Water Code, Sections 10608 through 10657 as last amended by Senate Bill No. 7 (SBX7-7), and the Water Conservation Act of 2009. The original bill requiring preparation of an UWMP was enacted in 1983. SBX7-7, which became law in November 2009, requires increased emphasis on water demand management and requires the state to achieve a 20 percent reduction in urban per capita water use by December 31, 2020.

Urban water suppliers having more than 3,000 service connections or supplying more than 3,000 acre-feet per year (ac-ft/yr) for retail or wholesale uses are required to submit a UWMP every 5 years to the California Department of Water Resources (DWR). The UWMP typically must be submitted by December 31 of years ending in 0 and 5, however SBX7-7 extended the UWMP deadline to July 1, 2011 to provide for development by DWR of required evaluation methodologies for determining water demand reduction targets. GSWC prepared an UWMP for the Artesia System in 1985, 1990, 1995, 2000, and 2005. This 2010 UWMP is an update to the 2005 plan.

GSWC water use targets for the Artesia System were developed based on Compliance Method 3 and the Minimum Reduction requirement, as described by SBX7-7 and supplemental guidance from DWR.

The portion of the Urban Water Management Planning Act (Act) that describes the purpose and intent of the UWMP states and declares the following:

Section 10610.2.

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

- (1) The waters of the state are a limited and renewable resource subject to ever-increasing demands.*
- (2) The conservation and efficient use of urban water supplies are of statewide concern; however, the planning for that use and the implementation of those plans can best be accomplished at the local level.*
- (3) A long-term, reliable supply of water is essential to protect the productivity of California's businesses and economic climate.*
- (4) As part of its long-range planning activities, every urban water supplier should make every effort to ensure the appropriate level of reliability in its water service sufficient to meet the needs of its various categories of customers during normal, dry, and multiple dry water years.*
- (5) Public health issues have been raised over a number of contaminants that have been identified in certain local and imported water supplies.*
- (6) Implementing effective water management strategies, including groundwater storage projects and recycled water projects, may require specific water quality and salinity targets for meeting groundwater basins water quality objectives and promoting beneficial use of recycled water.*
- (7) Water quality regulations are becoming an increasingly important factor in water agencies' selection of raw water sources, treatment alternatives, and modifications to existing treatment facilities.*
- (8) Changes in drinking water quality standards may also impact the usefulness of water supplies and may ultimately impact supply reliability.*
- (9) The quality of source supplies can have a significant impact on water management strategies and supply reliability.*

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

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

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

1.2 System Overview

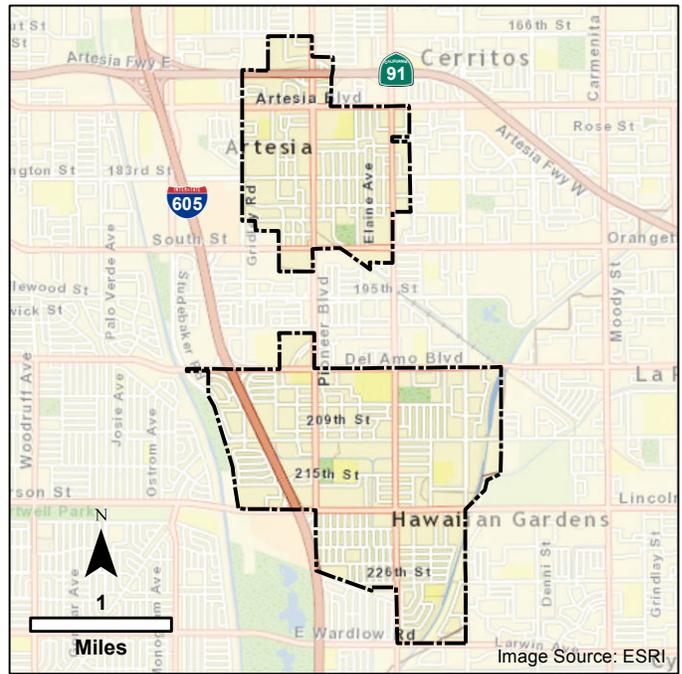
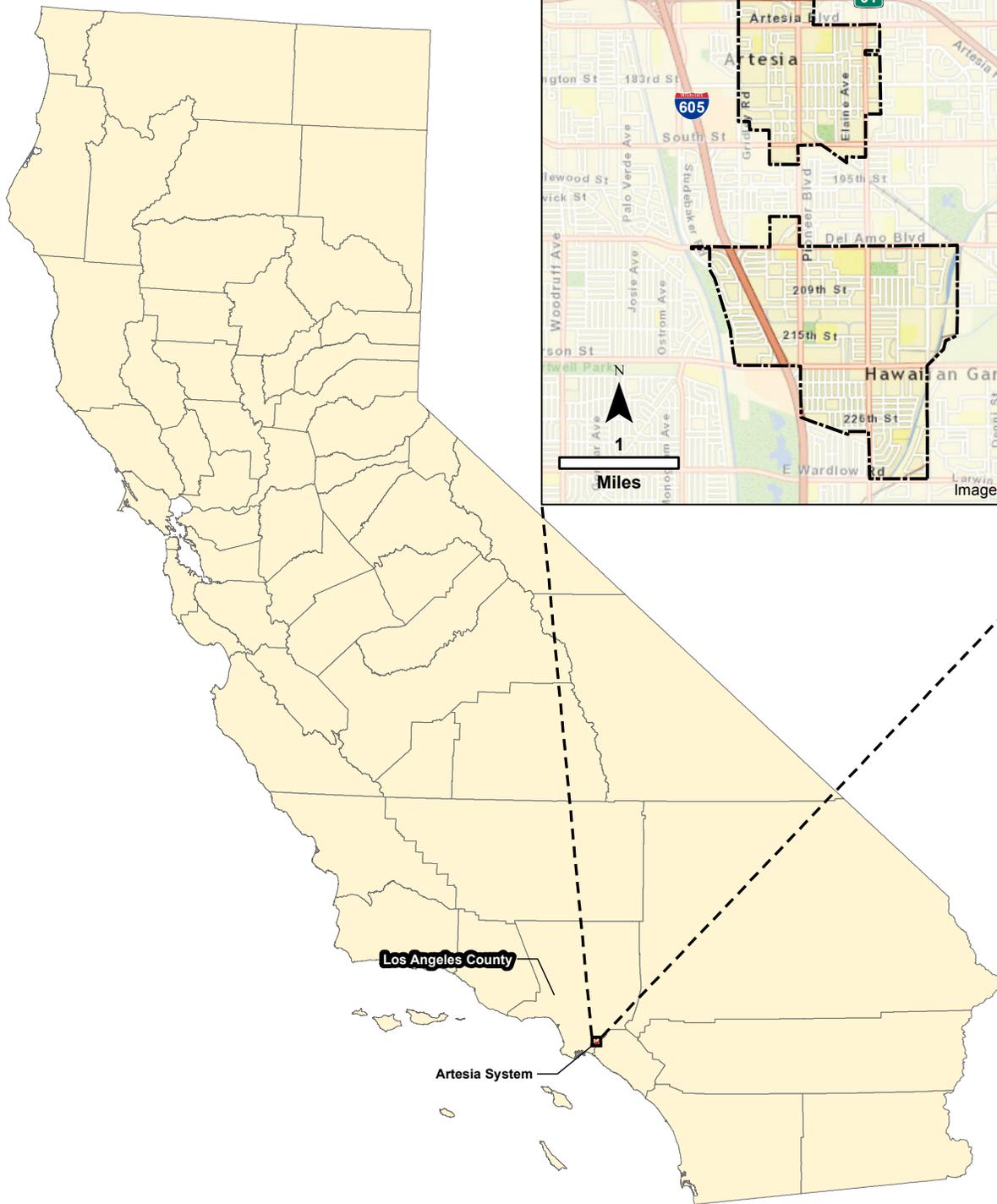
GSWC is an investor-owned public utility company which owns 38 water systems throughout California regulated by the California Public Utilities Commission (CPUC). This UWMP has been prepared for the Artesia System.

Located in Los Angeles County, the Artesia System serves most residents in the Cities of Artesia and Hawaiian Gardens, a portion of the City of Lakewood east of San Gabriel River, and a small portion of the City of Long Beach. The Artesia System is primarily characterized by residential with some commercial and industrial land use. Figure 1-1 illustrates the location of the Artesia System.

1.3 Notice of Document Use

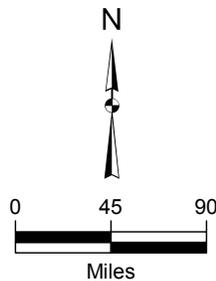
GSWC is committed to implementation of the projects, plans, and discussions provided within this document. However, it is important to note that execution of the plan is contingent upon the regulatory limitations and approval of the CPUC and other state agencies. Additionally, this document merely presents the water supply, reliability, and conservation programs known and in effect at the time of adoption of this plan.

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Legend

 Artesia System Boundary



Kennedy/Jenks Consultants

Golden State Water Company
2010 Urban Water Management Plan

**Artesia System
Location Map**

K/J 1070001*00
September 2011

Figure 1-1

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1.4 Public Utility Commission 2010 Water Action Plan

The CPUC adopted the 2005 Water Action Plan (WAP) in December 2005 and an updated 2010 WAP in October 2010. The WAP is a general policy document, and specific implementation of policies and programs, along with modifications to CPUC ratemaking policies, and other programs including conservation, long-term planning, water quality and drought management programs are ongoing.

The purpose of the 2010 WAP update was to establish renewed focus on the following elements:

1. Maintain the highest standards of water quality;
2. Promote water infrastructure investment;
3. Strengthen water conservation programs to a level comparable to those of energy utilities;
4. Streamline CPUC regulatory decision-making;
5. Set rates that balance investment, conservation, and affordability; and
6. Assist low-income ratepayers.

GSWC has been actively involved with the CPUC in suggesting optimal approaches to the WAP. In particular, the GSWC has suggested specific implementation measures and modifications to certain CPUC rate setting practices so that regulated utilities are able as a practical matter to achieve the policy objectives of the WAP. These efforts are intended to include further investment in local resource optimization, reduced reliance on imported supplies, enhanced conservation, and intensification of company-wide efforts to optimize water resource mix, including planned water supply projects and programs to meet the long-term water supply needs of GSWC's customers.

1.5 Agency Coordination

The 2010 UWMP requirements for agency coordination include specific timetables and requirements as presented in this chapter. The required elements of the Act are as follows:

Section 10620.

- (d) (2) *Each urban water supplier shall coordinate the preparation of its plan with other appropriate agencies in the area, including other water suppliers that share a common source, water management agencies, and relevant public agencies, to the extent practicable.*

Section 10621.

- (b) *Every urban water supplier required to prepare a plan pursuant to this part shall, at least 60 days prior to the public hearing on the plan required by Section 10642, notify any city or county within which the supplier provides water supplies that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan. The urban water supplier may consult with, and obtain comments from, any city or county that receives notice pursuant to this subdivision.*

Section 10635.

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

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

Table 1-1 lists the agencies with which coordination occurred while preparing this 2010 UWMP. The initial coordination included the distribution of letter notification and request for information as indicated in Table 1-1 followed by telephone correspondence as necessary to obtain supporting data for the preparation of the UWMP. Table 1-1 also provides a checklist of agencies that have been provided the notifications and access to the documents.

Table 1-1: Coordination with Agencies							
Agency	Contacted for Assistance	Participated in UWMP Development	Commented on the Draft	Attended Public Meetings	Received Copy of the Draft	Sent Notice of Intent to Adopt	Not Involved/ No Information
Southern California Association of Governments	✓						
City of Cerritos	✓					✓	
City of Hawaiian Gardens	✓					✓	
City of Lakewood	✓					✓	
City of Long Beach	✓					✓	
Central Basin Municipal Water District	✓	✓			✓	✓	
Los Angeles County Sanitation District	✓	✓				✓	

Note:

This table is based on DWR's *Guidebook to Assist Water Suppliers in the Preparation of a 2010 Urban Water Management Plan* (DWR Guidebook) Table 1.

1.6 Plan Adoption and Submittal

Public participation and plan adoption and submittal requirements are detailed in the following sections of the Act:

Section 10621.

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

Section 10642. After the hearing, the plan shall be adopted as prepared or as modified after the hearing.

Section 10644.

(a) An urban water supplier shall submit to the department, 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. Copies of amendments or changes to the plans shall be submitted to the department, the California State Library, and any city or county within which the supplier provides water supplies within 30 days after adoption.

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

A public hearing to review the 2010 Artesia System UWMP was held on August 3, 2011 at the Artesia Community Center in Artesia, California. This public session was held for review and comment on the draft UWMP before approval by GSWC. Legal public notices for the public hearing and availability of the plan for review and comment were published in advance in the local newspapers in accordance with Government Code Section 6066. Notifications were also posted to GSWC's website (www.gswater.com).

In addition, notifications of preparation of the plan were provided to cities and counties within which GSWC provides water at least 60 days in advance of the public hearing as required by the Act. Copies of the draft plan were available to the public for review at GSWC's Customer Service Office and posted on GSWC's website. Appendix B contains the following:

- Copy of the public hearing notice from the local newspaper,
- Screen capture of the website posting of public hearing notice,
- Notifications and follow-up correspondence provided to cities and counties, and
- Meeting minutes from the public hearings pertaining to the UWMP.

The final UWMP, as adopted by GSWC, will be submitted to DWR, the California State Library, and cities and counties within which GSWC provides water within 30 days of adoption. Likewise, copies of any amendments or changes to the plan will be provided to the aforementioned entities within 30 days. This plan includes all information necessary to meet the requirements of California Water Code Division 6, Part 2.6 (Urban Water Management Planning). Adopted copies of this plan will be made available to the public at GSWC's Customer Service Office no later than 30 days after submitting the final UWMP to DWR.

1.7 UWMP Preparation

GSWC prepared this UWMP with the assistance of its consultant, Kennedy/Jenks Consultants, as permitted by the following section of the Act:

Section 10620.

(e) The urban water supplier may prepare the plan with its own staff, by contract, or in cooperation with other governmental agencies.

During the preparation of the UWMP, documents that have been prepared over the years by GSWC and other entities were reviewed and information from those documents incorporated, as applicable, into this UWMP. The list of references is provided in Chapter 9.

The adopted plan is available for public review at GSWC's Customer Service Office as required by Section 10645. Copies of the plan were submitted to DWR, cities and counties within the service area, the State Library, and other applicable institutions within 30 days of adoption as required by Section 10644. Appendix H includes copies of the transmittals included with the adopted plan as supporting documentation.

1.8 UWMP Implementation

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

GSWC is committed to the implementation of this UWMP concurrent with the scheduled activities identified herein as required by Section 10643 of the Act. Each system is managed through GSWC District offices and is afforded staff with appropriate regulatory approval to properly plan and implement responses identified in this document and other key planning efforts to proactively address water supply reliability challenges. Furthermore, each region of GSWC has a conservation coordinator that oversees the implementation of Demand Management Measures (DMMs) through GSWC participation in the California Urban Water Conservation Council's (Council or CUWCC) Memorandum of Understanding (MOU).

1.9 Content of the UWMP

This UWMP addresses all subjects required by Section 10631 of the Act as defined by Section 10630, which permits "levels of water management planning commensurate with the numbers of customers served and the volume of water supplied." All applicable sections of the Act are discussed in this UWMP, with chapters of the UWMP and DWR Guidebook Checklist cross-referenced against the corresponding provision of the Act in Table 1-2. Also, a completed copy of the 2010 Urban Water Management Plan Checklist, organized by subject, is included as Appendix J.

Table 1-2: Summary of UWMP Chapters and Corresponding Provisions of the California Water Code

Chapter	Corresponding Provisions of the Water Code		DWR Guidebook Checklist No.
Chapter 1: Plan Preparation	10642	Public participation	55 and 56
	10643	Plan implementation	58
	10644	Plan filing	59
	10645	Public review availability	60
	10620 (a)–(e)	Coordination with other agencies; document preparation	4
	10621 (a)–(c)	City and county notification; due date; review	6 and 54
	10621 (c)	UWMP adoption	7 and 57
	10620 (f)	Resource optimization	5
Chapter 2: System Description	10631 (a)	Area, demographics, population, and climate	8-12
Chapter 3: Water Use	10608	Urban water use targets	1
	10631 (e), (k)	Water use, data sharing	25 and 34
	10631 (k)	Data to wholesaler	33
Chapter 4: Water Service	10631 (b)–(d), (h), (k)	Water sources, reliability of supply, transfers and exchanges, supply projects, data sharing	13-21, 24, 30, 33
	10631 (i)	Desalination	31
	10633	Recycled water	44-51
Chapter 5: Water Quality	10634	Water quality impacts on reliability	52
Chapter 6: Water Supply Reliability	10631 (c) (1)	Water supply reliability and vulnerability to seasonal or climatic shortage	22
	10631 (c) (2)	Factors resulting in inconsistency of supply	23
	10635 (a)	Reliability during normal, dry, and multiple-dry years	53
Chapter 7: Conservation Program and Demand Management Measures	10631 (f)–(g), (j), 10631.5, 10608.26 (a), 10608.36	Conservation Program, DMMs, and SBX7-7 water use reduction plan	2, 26-29, 32
Chapter 8: Water Shortage Contingency Plan	10632	Water shortage contingency plan	35-43

1.10 Resource Optimization

Section 10620(f) of the Act asks urban water suppliers to evaluate water management tools and options to maximize water resources and minimize the need for imported water from other regions. GSWC understands the limited nature of water supply in California and is committed to optimizing its available water resources. This commitment is demonstrated through GSWC's use of water management tools throughout the company to promote the efficient use of water supplies from local sources, wherever feasible. Additionally, GSWC takes efforts to procure local reliable water supplies wherever feasible and cost effective. GSWC is a regular participant in regional water resources planning efforts, and has developed internal company water resource plans and robust water conservation programs.

GSWC has implemented a robust water conservation program, deployed through each region of the company. In an effort to expand the breadth of offered programs, GSWC partners with wholesale suppliers, energy utilities, and other agencies that support water conservation programs.

Chapter 2: System Description

Chapter 2 summarizes the Artesia System's service area and presents an analysis of available demographics, population growth projections, and climate data to provide the basis for estimating future water requirements.

The water system description requirements are detailed in the following section of the Act:

Section 1063.

(a) *Describe the service area of the supplier, including current and projected population, climate, and other demographic factors affecting the supplier's water management planning. The projected population estimates shall be based upon data from the state, regional, or local service agency population projections within the service area of the urban water supplier and shall be in five-year increments to 20 years or as far as data is available.*

2.1 Area

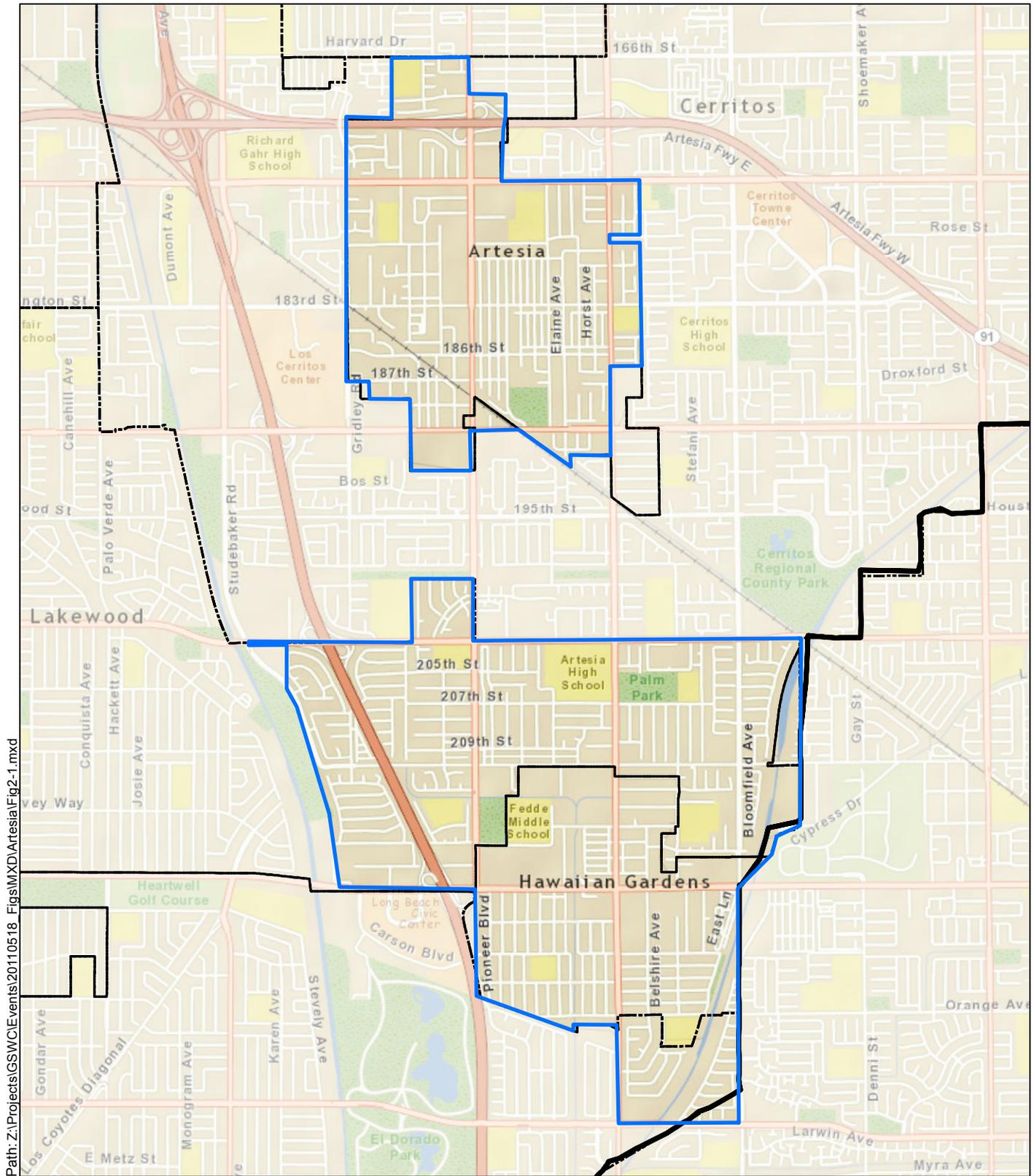
The Artesia System is located in Los Angeles County and serves most of the Cities of Artesia and Hawaiian Gardens, a portion of the City of Lakewood east of San Gabriel River, a small portion of the City of Long Beach and the City of Cerritos. Figure 2-1 illustrates the service area of the Artesia System. The service area consists of north and south portions that are primarily residential with some commercial and industrial land use.

2.2 Demographics

The City of Artesia was chosen as demographically representative of the Artesia System. According to the 2000 U.S. Census Data, the median age of Artesia's residents is 33.9 years. Artesia has an average household size of 3.54 and a median household income of approximately \$44,500 in 1999 dollars or \$58,117 in 2010 dollars.

General Plan or land use information is not available for the Artesia System. Based on the Artesia System map and review of recent satellite imagery, it appears to be near build-out. There are only a few undeveloped individual parcels in the system and any growth occurring will likely be a combination of urban expansion, redevelopment, and in-fill. In a built-out or nearly built-out area, changes are typically minor and difficult to predict.

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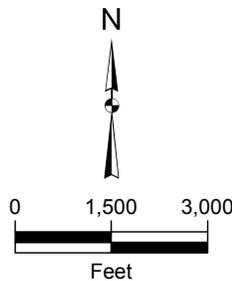


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Image Source: ESRI

Legend

-  Artesia System Boundary
-  City Boundary
-  County Boundary



Kennedy/Jenks Consultants

Golden State Water Company
2010 Urban Water Management Plan

Artesia System Service Area

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September 2011

Figure 2-1

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2.3 Population, Housing and Employment

Population, housing, and employment projections were developed for the Artesia System using the Southern California Association of Governments (SCAG) population, housing and employment data. SCAG recently updated its projections for population, household, and employment growth through the year 2035 using the 2008 “Integrated Growth Forecasting” process used in the 2008 Regional Transportation Plan (2008 RTP). SCAG’s methodology is described below, followed by the derivation of population projections for the Artesia System. Previous and current projections utilize 2000 U.S. Census Data.

SCAG is currently in the process of developing its 2012 *Regional Transportation Plan* (2012 RTP) which will utilize a new population projection model based on a 2010 Census data. In certain cases, growth rates using these preliminary data are significantly reduced from the 2008 model. The population, household, and employment projections in this document use the adopted 2008 RTP data. Future UWMP updates will be able to utilize 2012 RTP projections as well as 2010 Census data.

2.3.1 SCAG Population Projection Development Methodology

Population, housing, and employment data are derived from the 2000 U.S. Census, which forms a baseline for local data projections. SCAG applies a statistical cohort-component model and the headship rate to the 2000 U.S. Census data for regional, county, and household demographic projections. To evaluate the Artesia System, SCAG data was used in census tract form, the smallest geographic division of data that SCAG provides. SCAG projects subcounty and census tract demographic trends using the housing unit method.

The Integrated Growth Forecasting process uses a variety of estimates and projections from the federal and state governments. Sources include the U.S. Department of Labor, Internal Revenue Service (IRS), U.S. Citizenship and Immigration Services, U.S. Department of Health and Human Services, California Department of Finance (DOF), California Employment Development Department, and information received through the Intergovernmental Review process. A detailed explanation of the population projection process can be found in the adopted SCAG *2008 Regional Transportation Plan, Growth Forecast Report*.

2.3.2 Historical and Projected Population

SCAG-derived census-tract projections were used to determine historical and projected population from 1997 to 2035. The Artesia System service area boundaries often contain multiple census tracts, many of which have boundaries that do not coincide exactly with service area boundaries. The population projection analysis consisted of superimposing service area boundaries over census tract boundaries, identifying the applicable overlapping census tracts, and developing a percentage estimate for each overlapping area. For a census tract 100 percent within the service area boundaries, it was assumed that 100 percent of the associated census tract population data was applicable to the Artesia System. For areas where the overlap was not exact, the area of overlap as a percentage was applied to the data to develop an estimate of applicable population. Appendix G, Table G-1, lists the census tracts with a corresponding estimate of the percentage of each tract which lies within the Artesia System. It was typically assumed that the various types of housing and employment within a census tract are distributed uniformly within all parts of that census tract, unless maps indicated non-uniform concentrations. In these cases, population estimates were either increased or

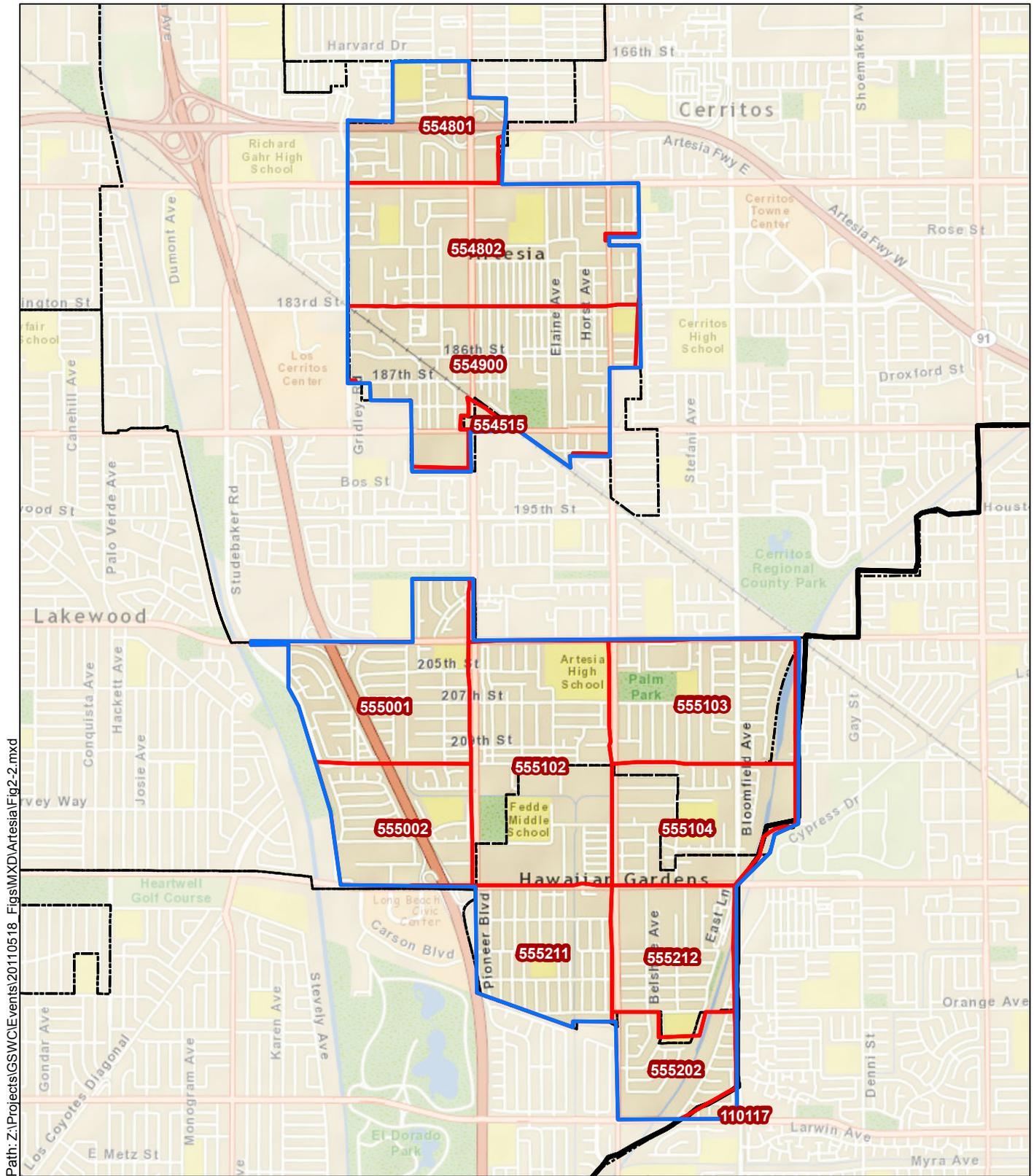
decreased as applicable to match the existing land use. Appendix G, Table G-2 contains SCAG’s historic and projected demographic data for each census tract number from 2005 through 2035. Figure 2-2 details the census tracts within the Artesia System.

Annual estimates of historical population between 1997 and 2010 required for SBX7-7 are provided in Table 2-1. The population estimates were developed following DWR *Technical Methodology 2: Service Area Population* (DWR, 2011). GSWC is considered a Category 2 water supplier because they maintain a Geographic Information System (GIS) of their service area. The per-connection methodology described in Appendix A of *Technical Methodology 2* was used since annual estimates of direct service area population from SCAG or other local government agencies were not available. This method estimates annual population by anchoring the ratio of year 2000 residential connections to the year 2000 U.S. Census population. This ratio was then linearly scaled to active residential connections data to estimate population for the non-census years in which water supply data were available (1997 through 2010). The residential billing category includes traditional single-family residential connections. However since GSWC does not have a specific multi-family billing category that only encompasses apartment complexes and other types of multi-family housing units, the ratio of year 2000 U.S. Census total population per residential connections was used for projecting population growth.

Table 2-1: Artesia System Historical Population	
Year	Service Area Population
1997	52,236
1998	52,145
1999	52,021
2000	52,166 ⁽¹⁾
2001	52,182
2002	52,707
2003	52,948
2004	52,867
2005	52,980
2006	53,055
2007	53,071
2008	53,098
2009	53,173
2010	52,974

Note:

1. Population for year 2000 from 2005 UWMP.

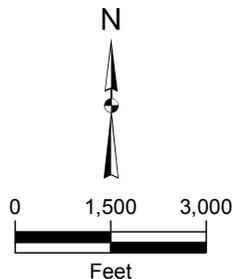


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Image Source: ESRI

Legend

-  Artesia System Boundary
-  Census Tract Boundary within Service Area
-  City Boundary
-  County Boundary



Kennedy/Jenks Consultants

Golden State Water Company
2010 Urban Water Management Plan

**Artesia System
Service Area with
Census Tract Boundary**

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September 2011

Figure 2-2

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As concluded from analysis of SCAG demographic data, the Artesia System had an estimated population of 52,974 people in 2010 and is expected to reach 54,899 in 2035. A summary of historic and projected population, households, and employment within the Artesia System (based on SCAG growth rate data) is presented in Table 2-2 and illustrated in Figure 2-3. To ensure consistency between the historical and projected population data required for this plan, projections for 2015 through 2035 were adjusted relative to the 2010 population benchmark using the appropriate SCAG percentage growth rates in each category. For this reason, SCAG projections after 2000 for the census tracts do not correlate precisely with the estimates included in this plan.

Year	Service Area Population	Service Area Households	Service Area Employment	Data Source
2005	52,980	13,967	9,515	GSWC
2010	52,974	14,214	9,857	GSWC
2015	53,405	14,437	10,126	SCAG
2020	53,812	14,661	10,295	SCAG
2025	54,192	14,800	10,493	SCAG
2030	54,553	14,955	10,707	SCAG
2035	54,899	15,067	10,911	SCAG

Notes:

1. This table is based on the DWR Guidebook Table 2.
2. Dashed line represents division between historic and projected data.
3. Growth rates for population, household and employment are based on SCAG projections.

In summary, from 2005 to 2010 the Artesia System population decreased by .01 percent. By 2035, population is expected to increase by a total of 3.6 percent, from 52,974 in 2010 to 54,899 in 2035, which is equivalent to a 0.15 percent annual growth rate. The number of households is expected to grow 6 percent during the same period, which equates to an annual household growth rate of 0.2 percent. Employment is expected to grow 10.7 percent during the same period, which equates to an annual employment growth rate of 0.4 percent. Areas with the highest projected growth increases are also the areas that will see the largest increase in water use. SCAG’s demographic analysis does not project any planned residential developments for future years. Based on Artesia’s System map there is not much land area available for future growth.

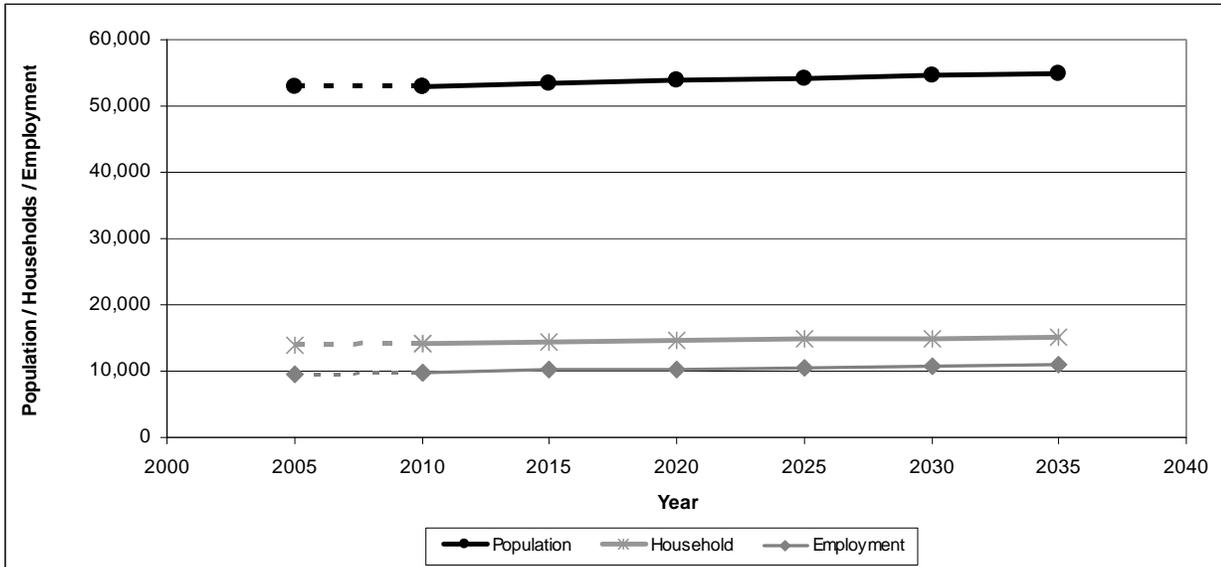


Figure 2-3: Historical and Projected Population, Household and Employment Growth within the Artesia System

2.4 Climate

The Artesia System has cool, humid winters and warm, dry summers. The Western Regional Climate Center (WRCC) maintains historic climate data for selected cities throughout the West. WRCC does not have a climate station at the City of Artesia, but maintains 50 years of climate records for the Long Beach station, located 16 miles away. Data obtained from the WRCC website (www.wrcc.dri.edu) for the Long Beach station was utilized for the climate data analysis, summarized in Table 2-3, below.

In the winter, the lowest average monthly temperature is approximately 45 degrees Fahrenheit. The highest average monthly temperature reaches approximately 84 degrees in the summer. Figure 2-4 presents the monthly average precipitation based on 50-year historical data. The rainy season is typically from November to March. Monthly precipitation during the winter months ranges from 2 to 3 inches. Low humidity occurs in the summer months from June to August. The warm and dry weather during the summer months typically results in moderately high water demand.

Similar to the WRCC in the Artesia area, the California Irrigation Management Information System (CIMIS) website (<http://www.cimis.water.ca.gov>) tracks and maintains records of evapotranspiration (ET_o) for selected cities. ET_o statistics used for this system also come from Long Beach station, the closest station to the Artesia System. ET_o is a standard measurement of environmental parameters that affect the water use of plants. ET_o is given in inches per day, month, or year and is an estimate of the evapotranspiration from a large field of well-watered, cool-season grass that is 4- to 7-inches tall. The monthly average ET_o is presented in Table 2-3. As the table indicates, a greater quantity of water is evaporated during July and August in correlation to high temperatures and low humidity, which may result in high water demand.

Table 2-3: Monthly Average Climate Data Summary for Artesia System⁽¹⁾

Month	Standard Monthly Average ETo ⁽²⁾ (inches)	Average Total Rainfall (inches)	Average Temperature (degrees Fahrenheit)	
			Max	Min
January	1.8	2.60	66.9	45.6
February	2.0	2.94	67.2	47.3
March	3.4	1.85	68.3	49.7
April	4.2	0.70	71.7	52.3
May	4.5	0.19	73.6	56.9
June	4.5	0.06	77.1	60.3
July	5.4	0.02	82.4	63.8
August	5.0	0.07	83.9	64.9
September	3.9	0.20	82.3	62.9
October	3.0	0.39	78.0	57.9
November	1.9	1.22	72.2	50.6
December	1.6	1.65	67.2	45.3

Notes:

1. Data presented are from the Long Beach Station, approx 16 miles from Artesia.
2. Evapotranspiration (ETo) from <http://www.cimis.water.ca.gov/cimis/welcom.jsp>.

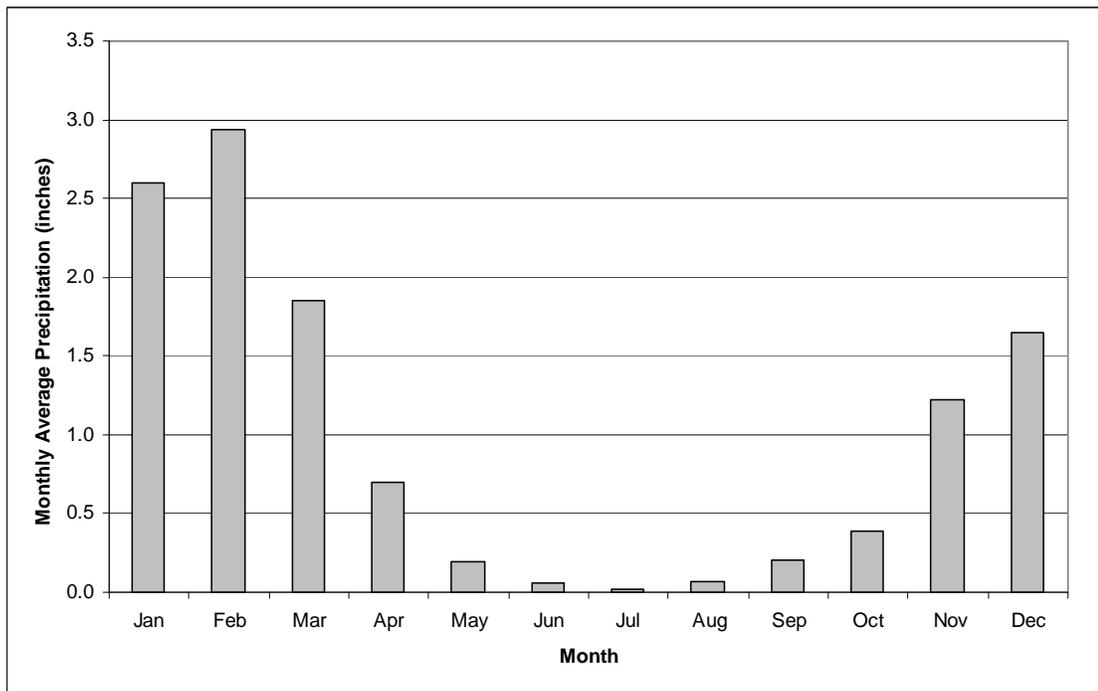


Figure 2-4: Monthly Average Precipitation at Long Beach Station Based on 50-Year Historical Data

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Chapter 3: Water Use

Section 10631(e) of the Act requires that an evaluation of water use be performed for the Artesia System. The Act states the following:

Section 10631.

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

In addition, Section 10631(k) directs urban water suppliers to provide existing and projected water-use information to wholesale agencies from which water deliveries are obtained. The Act states the following:

Section 10631.

- (k) *Urban water suppliers that rely upon a wholesale agency for a source of water, shall provide the wholesale agency with water-use projections from that agency for that source of water in five-year increments to 20 years or as far as data is available. The wholesale agency shall provide information to the urban water supplier for inclusion in the urban water supplier's plan that identifies and quantifies, to the extent practicable, the existing and planned sources of water as required by subdivision (b), available from the wholesale agency to the urban water supplier over the same five-year increments, and during various water-year types in accordance with subdivision (c). An urban water supplier may rely upon water supply information provided by the wholesale agency in fulfilling the plan informational requirements of subdivisions (b) and (c).*

In conjunction with projecting total water demand, each urban water retail supplier must develop urban water use targets and an interim urban water use target in accordance with SBX7-7. This bill amends the Act requiring statewide water savings of 20 percent by the year 2020. The bill sets specific methods for calculating both the baseline water usage and water use targets in gallons per capita day (gpcd).

Section 10608.20(e) states the following:

Section 10608.20.

(e) *An urban retail water supplier shall include in its urban water management plan required pursuant to Part 2.6 (commencing with Section 10610) due in 2010 the 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.*

This chapter presents an analysis of water use data with the resulting projections for future water needs and water use targets in accordance with SBX7-7 for the Artesia System.

3.1 Historical Water Use

Historical water use data from 1994 to 2010 were analyzed in order to provide an overview of historical water usage for the Artesia System. Figure 3-1 shows the historical number of metered service connections and volume of water used for the Artesia System from 1994 through 2010.

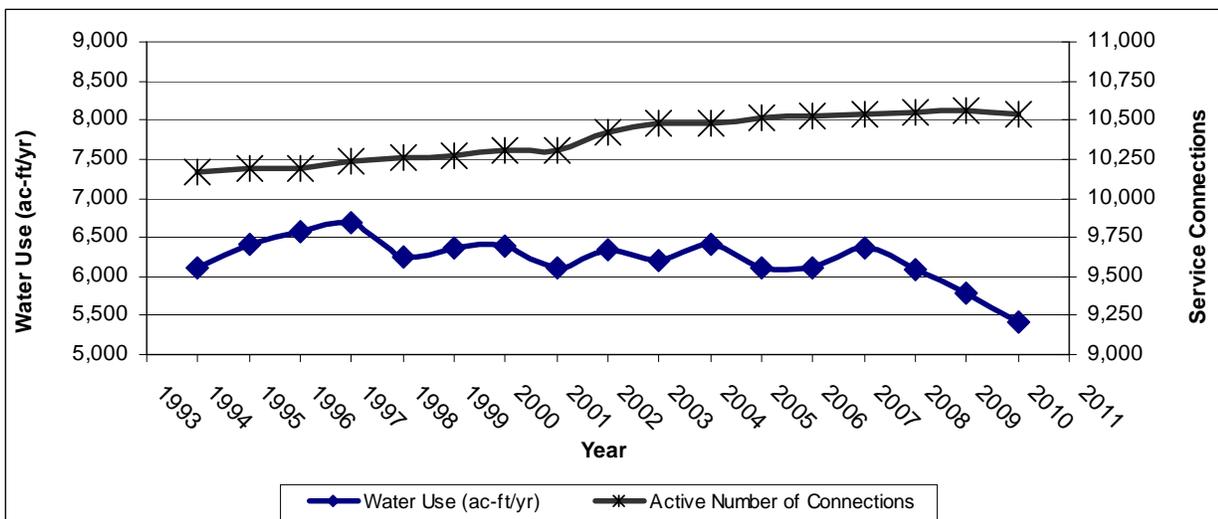


Figure 3-1: Historical Number of Metered Service Connections and Water Use

Figure 3-1 shows a decline in water use beginning in 2007 with an approximate 12 percent decline from 2008 to 2010. Review of similar data from other systems suggests the decline in water use has been widespread and is not isolated to the Artesia System. The decline in water use from 2008 to 2010 is not yet fully understood, but may be a result of several factors including: several years of cool summers, a statewide drought that forced mandatory water reductions and conservation in many areas, and an economic downturn that has caused many businesses to close and increased housing vacancies.

The customer billing data for the system consists of annual water sales data. The water sales data was sorted by customer type using the assigned North American Industry Classification System (NAICS) codes. Then, the sorted water sales data were further grouped into the following eight categories: single-family, multi-family, industrial, commercial,

institutional/government, landscape, recycled, and other. Table 3-1 shows the historical water use by customer type.

Table 3-1: Historical Water Use (ac-ft/yr) by Customer Type									
YEAR	Single-Family	Multi-Family	Commercial	Industrial	Institutional/ Government	Landscape	Recycled	Other	Total
1994	3,659	1,059	674	191	331	97	102	0	6,113
1995	3,679	1,270	792	144	317	118	85	0	6,405
1996	3,700	1,337	806	180	343	96	103	1	6,566
1997	3,692	1,400	833	191	377	101	104	0	6,698
1998	3,402	1,439	744	199	297	83	79	0	6,243
1999	3,434	1,465	733	228	330	95	85	0	6,370
2000	3,464	1,550	608	249	332	102	85	0	6,390
2001	3,321	1,487	634	197	298	97	72	1	6,107
2002	3,402	1,507	644	228	337	106	113	1	6,338
2003	3,360	1,473	661	238	290	103	79	0	6,204
2004	3,407	1,461	744	258	321	117	105	1	6,414
2005	3,202	1,348	781	238	346	111	80	3	6,109
2006	3,212	1,289	799	228	345	128	108	4	6,113
2007	3,268	1,330	851	264	407	144	98	6	6,368
2008	3,117	1,293	777	253	396	139	103	5	6,083
2009	2,949	1,275	755	241	339	132	100	3	5,794
2010	2,742	1,227	710	239	319	116	56	4	5,413

3.2 Water Use Targets

This section includes documentation of the water use targets commensurate with enactment of SBX7-7. The 2010 UWMP update is the first in which the documentation of such targets has been required. The projected water use for each urban retail water supplier is required to be reduced by a total of up to 20 percent by the year 2020 from a calculated baseline gpcd as required by SBX7-7. The steps described throughout this section follow the guideline methodologies developed by DWR over the past year, as documented in Section D of the *Guidebook to Assist Urban Water Suppliers to Prepare a 2010 Urban Water Management Plan*

(DWR Guidebook) issued March 2011. The three overall steps to determine the 2020 water use target are as follows:

- Step 1 – Calculate the baseline per capita water use, using the required methodologies.
- Step 2 – Calculate the per capita reduction using at least one of the four methodologies (including the minimum reduction target, a provision included to ensure all agencies achieve a minimum level of water savings).
- Step 3 – Select the target reduction methodology and set interim (2015) and compliance (2020) water use targets. The chosen methodology is an option of the water supplier and may be changed in 2015.

The Act now stipulates that the state shall review the progress made towards reaching the statewide water savings targets as reported in the 2015 UWMP updates. Currently, no single urban water supplier is required to conserve more than 20 percent; however there are provisions in the law that could require additional conservation after 2015 if it is found that the program is not on track to reach 20 percent statewide water savings by 2020.

3.2.1 Baseline Per Capita Water Use

The first step in the process of determining the water use target is calculation of the baseline per capita water use (baseline gpcd). In order to calculate the baseline gpcd, the service area population within the Artesia System was estimated and compared to actual water use records. The following three baseline gpcd calculations identified in SBX7-7 were evaluated for the Artesia System:

- Baseline Method 1 – Average water use over a continuous 10-year period ending no earlier than December 31, 2004 and no later than December 31, 2010.
- Baseline Method 2 – For retailers with at least 10 percent of 2008 demand served by recycled water (either retail-or wholesale-provided), this calculation may be extended to include an additional 5 years ending no earlier than December 31, 2004 and no later than December 31, 2010.
- Baseline Method 3 – Estimate of average gross water use reported in gpcd and calculated over a continuous 5-year period ending no earlier than December 31, 2007 and no later than December 31, 2010.

The Baseline Methods 1 and 3 were evaluated using water supply data for the years ending December 31, 1997 through December 31, 2010. The base water use was calculated for each year commencing with 1997 as this was the first year with production data records available. The Artesia system does not currently receive more than 10 percent recycled water; therefore Baseline Method 2 is not applicable. Table 3-2 below presents the base period ranges, total water deliveries and the volume of recycled water delivered in 2008; these data are used to determine the number of years that can be included in the base period range. Also shown are the actual start and end years for the selected base period range.

Table 3-2: Base Period Ranges			
Base	Parameter	Value	Units
10-year base period	2008 total water deliveries	6,495	Ac-ft
	2008 total volume of delivered recycled water	104	Ac-ft
	2008 recycled water as a percent of total deliveries	1.60	Percent
	Number of years in base period	10	Years
	Year beginning base period range	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:
Table format based on DWR Guidebook Table 13.

The average annual daily per capita water use in gpcd from 1997 through 2010 is provided in Table 3-3. The gallons per day calculation includes potable water entering the distribution system and does not include recycled water consumption within the service area boundary, if any.

Table 3-3: 1997-2010 Base Daily Use Calculation			
Calendar Year	Distribution System Population	Gallons/Day	Daily per Capita Water Use, gpcd
1997	52,236	6,116,341	117
1998	52,145	5,730,869	110
1999	52,021	5,793,176	111
2000	52,166	5,883,967	113
2001	52,182	5,560,587	107
2002	52,707	5,955,021	113
2003	52,948	5,985,682	113
2004	52,867	6,173,285	117
2005	52,980	6,159,675	116
2006	53,055	5,843,743	110
2007	53,071	5,993,841	113

Table 3-3: 1997-2010 Base Daily Use Calculation			
Calendar Year	Distribution System Population	Gallons/Day	Daily per Capita Water Use, gpcd
2008	53,098	5,706,012	107
2009	53,173	5,359,785	101
2010	52,974	4,960,595	94

Note:

Table format based on DWR Guidebook Tables 14 and 15.

The 10-year averages available for GSWC to select are presented in Table 3-4; and the 5-year averages are shown in Table 3-5. The 1996-2005 10-year and 2003-2007 5-year average base daily usages of 113 and 114 gpcd, respectively, were selected.

Table 3-4: 10-Year Average Base Daily Per Capita Water Use	
10-Year Period	Average Base Daily Per Capita Water Use (gpcd)
1995-2004	113
1996-2005	113
1997-2006	113
1998-2007	112
1999-2008	112
2000-2009	111
2001-2010	109

Table 3-5: 5-Year Average Base Daily Per Capita Water Use	
5-Year Period	Average Base Daily Per Capita Water Use (gpcd)
2003-2007	114
2004-2008	113
2005-2009	110
2006-2010	105

3.2.2 Urban Water Use Targets

Retail suppliers must identify their urban water use targets by utilizing one of four compliance methods identified in SBX7-7. The four urban water use target development methods are as follows:

- Compliance Method 1 – 80 percent of baseline gpcd water use.
- Compliance Method 2 – The sum of the following performance standards:
 - indoor residential use (provisional standard set at 55 gpcd); plus
 - landscape use, including dedicated and residential meters or connections equivalent to the State Model Landscape Ordinance (70 percent of reference ETo); plus
 - 10 percent reduction in baseline commercial, industrial, and institutional (CII) water use by 2020.
- Compliance Method 3 – 95 percent of the applicable state hydrologic region target as identified in the 2020 Conservation Plan (DWR, 2010).
- Compliance Method 4 – A provisional method identified and developed by DWR through a public process released February 16, 2011, which aims to achieve a cumulative statewide 20 percent reduction. This method assumes water savings will be obtained through metering of unmetered water connections, and achieving water conservation measures in three water use categories: (1) indoor residential, (2) landscape, water loss and other water uses and (3) CII.

GSWC elected to evaluate compliance Methods 1 and 3 for selecting urban water use targets for the 2010 plan. The following section provides an explanation of the target calculations and a summary of the interim and compliance water use targets.

Compliance Method 1 Calculation Summary

The Compliance Method 1 2020 water use target was calculated by multiplying the base daily gpcd by 80 percent. A 20 percent reduction in baseline water use would require a reduction of 23 gpcd by 2020 as shown in Table 3-6. The 2015 interim target would be 102 gpcd with a 2020 water use target of 90 gpcd by 2020.

Table 3-6: 2020 Water Use Target Method 1 Calculation Summary			
Description	Baseline	2015 Interim Target	2020 Compliance Target
Per Capita Water Use (gpcd)	113	102	90
Percent Reduction	N/A	10%	20%

Compliance Method 3 Calculation Summary

The Compliance Method 3 2020 water use target was calculated by multiplying the respective hydrologic region target by 95 percent. The Artesia System is located in the South Coast region (Region 4), which has a hydrologic region target of 149 gpcd and a baseline water use of 180 gpcd. Ninety-five (95) percent of the Region 4 hydrologic region target results in a 2020 water use target of 142 gpcd. Since the baseline of 113 gpcd is less than 95 percent of the hydrologic regional target of 142 gpcd, a review of the minimum reduction target was triggered per the DWR methodologies to ensure minimum water conservation targets are established for the Artesia System.

Table 3-7 presents the results of the Method 3 calculation:

Table 3-7: 2020 Water Use Target Method 3 Calculation Summary			
Description	Baseline	2015 Interim Target	2020 Compliance Target
Per Capita Water Use (gpcd)	113	127	142
Percent Reduction	n/a	n/a	n/a

Minimum Compliance Reduction Target

Systems with a 5-year baseline per capita water use of greater than 100 gpcd must calculate a minimum water use reduction, which the 2020 water use target cannot exceed. The minimum water use reduction compliance target is 95 percent of the 5-year rolling average base daily per capita water use (ending no earlier than December 31, 2007, and no later than December 31, 2010). By this method, the minimum 2020 water use target for the Artesia System is 108 gpcd, as presented in Table 3-8 below:

Table 3-8: Minimum 2020 Reduction			
Description	5-Yr Average	2015 Interim Target	2020 Compliance Target
Minimum Allowable 2020 Target (gpcd)	114	111	108

3.2.3 Interim and Compliance Water Use Targets

The interim and compliance water use targets are provided per Section 10608.20(e) of the Act. Compliance Method 3 was selected by GSWC for the Artesia System, which in turn triggered the minimum reduction target since the Method 3 hydrologic region target (142 gpcd) is greater than the minimum 108 gpcd. As a result, Table 3-9 shows the 2020 SBX7-7 compliance target for the Artesia System is 108 gpcd and the 2015 interim water use target is 111 gpcd. The implementation plan for achieving these targets is described in Section 4.8, Recycled Water and Chapter 7, Demand Management Measures.

Table 3-9: SBX7-7 Water Use Reduction Targets (gpcd)		
Baseline	2015 Interim Target	2020 Compliance Target
113	111	108

3.3 Projected Water Use

Growth projections for the number of service connections and volume of water use were calculated for the year 2015 through 2035, in 5-year increments. Future water demands were estimated using two different methods, a population-based approach and a historical-trend approach, in order to present a projection range reflecting the inherent uncertainty in growth trends. Additionally, demand projections are provided showing a scenario where the Artesia System fully meets water use target reductions by 2020 for comparison to current per capita water use trends. Detailed descriptions of how the population-based and historical-trend projections were calculated are provided below.

The range established between these two approaches is intended as supplemental information; all connection and demand estimates use the population-based growth rate projections which are higher and provide a more conservative estimate of future water use. The historical-trend projections are provided as ancillary information only.

Figure 3-2 shows the historical and projected number of metered service connections for the Artesia System from 1994 through 2035. Figure 3-3 shows the historical and projected water use for the Artesia System from 1994 to 2035.

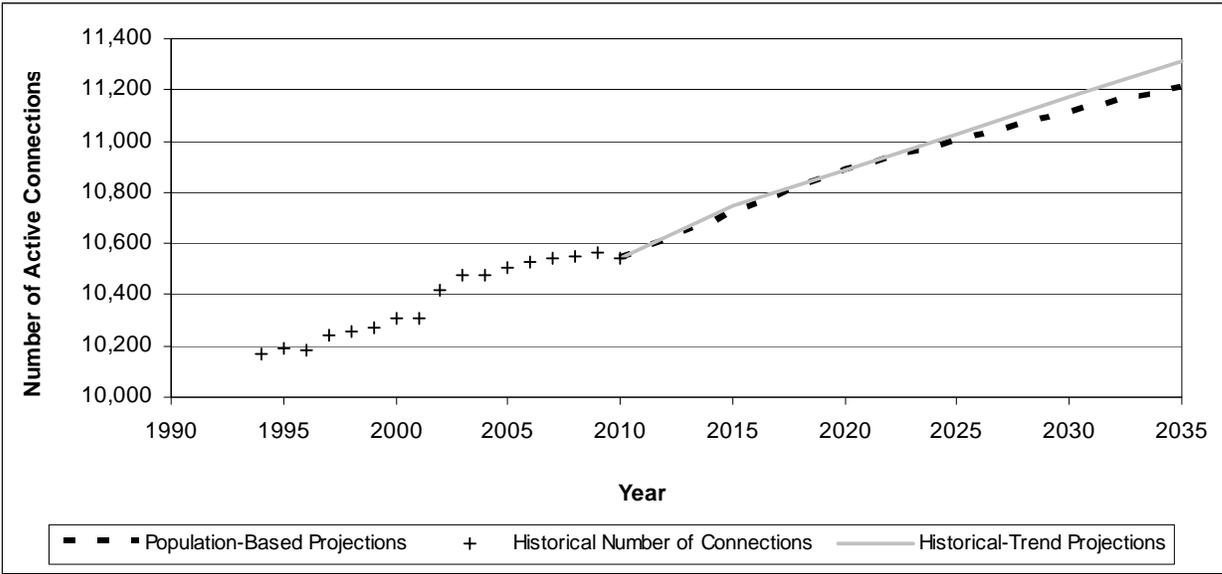


Figure 3-2: Historical and Projected Number of Metered Service Connections

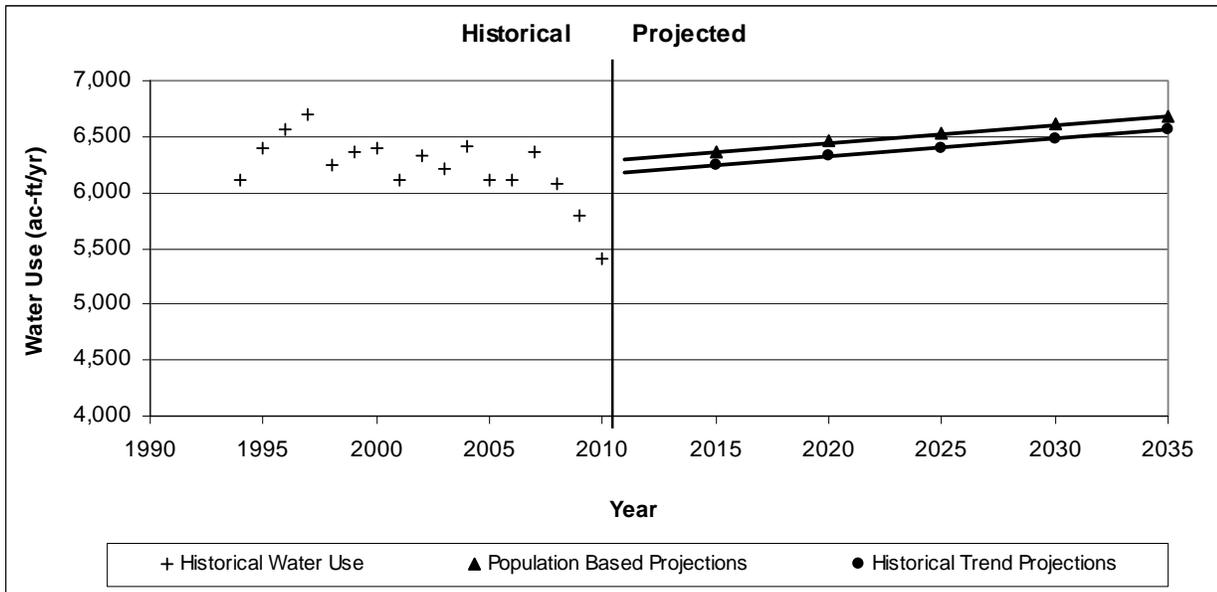


Figure 3-3: Historical Water Use and Future Water Use Projections

Historical water use records from 2000 through 2010 were analyzed to generate estimates of future water demands. Water use factors were then developed for the projection of future water use. A water use factor was calculated for each category in order to quantify the average water used per metered connection. For a given customer type, the unit water use factor is calculated as the total water sales for the category divided by the number of active service connections for that category. The unit water use factors for each customer type were averaged over the data range from 2000 through 2010 in order to obtain a representative water use factor for determining water demand projections by customer type. Table 3-10 presents the water use factors calculated for each customer category.

	Account Category							
	Single-Family	Multi-Family	Commercial	Industrial	Institutional/Government	Landscape	Recycled	Other ⁽²⁾
Water Use Factor ⁽¹⁾	0.35	2.28	1.89	4.80	3.93	1.57	22.68	0.31

Notes:

1. Based on customer water use data for calendar years 2000-2010.
2. Other accounts for any service connections not included in any other category, including idle or inactive connections.

The population-based water use projections are based on the population and housing growth rates described in Chapter 2. SCAG household projections were used to determine the growth in single-family and multi-family service connections for the years 2015, 2020, 2025, 2030, and 2035. For example, the percent growth rate in households from the year 2010 to year 2015 was multiplied by the number of residential service connections in 2010 to obtain a projection of the number of connections for the year 2015. Similarly, employment growth projections were used to determine the growth for commercial, industrial, institutional/government, landscape, and recycled service connections. The population-based projected water use was then calculated by multiplying the number of projected active service connections for each customer category by the corresponding customer average water use factor calculated above.

The historical-trend water use projections are based on a linear projection of the historical number of metered service connections. The average growth rate established by this historical trend was applied to the number of connections in each customer category to project the future number of service connections. The historical-trend projected water use was then calculated by multiplying the number of projected active service connections for each customer category with the corresponding customer average water use factor calculated above.

Figure 3-4 shows the population based water use projections by customer type. The population-based projections of the number of service connections, and the resulting water demand, are provided in Table 3-11.

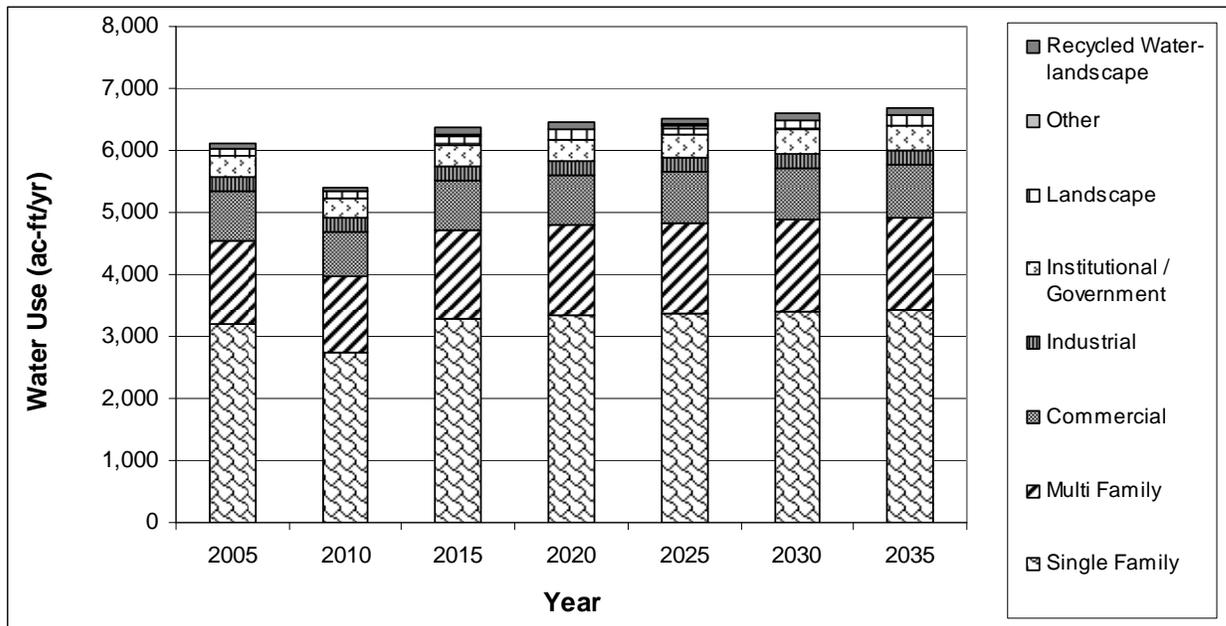


Figure 3-4: Projected Water Use by Customer Type

Table 3-11: Projections of the Number of Metered Service Connections and Water Use for the Artesia System

Year	Projection Type	Accounts by Type								
		Single-Family	Multi-Family	Commercial	Industrial	Institutional/ Government	Landscape	Recycled	Other ⁽³⁾	Total
2005 ⁽²⁾	No. of Accounts	9,286	609	387	51	86	76	4	10	10,509
	Water Use (ac-ft)	3,202	1,348	781	238	346	111	80	3	6,109
2010	No. of Accounts	9,273	621	405	45	88	94	4	11	10,541
	Water Use (ac-ft)	2,742	1,227	710	239	319	116	56	4	5,413
2015	No. of Accounts	9,419	631	417	47	91	97	5	12	10,719
	Water Use (ac-ft)	3,278	1,439	787	226	358	153	113	4	6,358
2020	No. of Accounts	9,565	641	424	48	92	99	5	12	10,886
	Water Use (ac-ft)	3,328	1,462	800	231	362	156	113	4	6,456
2025	No. of Accounts	9,656	647	432	48	94	101	5	12	10,995
	Water Use (ac-ft)	3,361	1,476	815	231	369	159	113	4	6,528
2030	No. of Accounts	9,757	654	440	49	96	103	5	12	11,116
	Water Use (ac-ft)	3,397	1,492	830	235	377	162	113	4	6,610
2035	No. of Accounts	9,830	659	449	50	98	105	5	13	11,209
	Water Use (ac-ft)	3,423	1,503	847	240	385	165	113	4	6,680

Notes:

1. This table is based on the DWR Guidebook Tables 3 through 7.
2. Based on calendar year.
3. Other accounts for any service connections not included in any other category, including idle or inactive connections.
4. All connections are metered.

3.4 Sales to Other Agencies

There are no anticipated sales to other agencies for the Artesia System; therefore, Table 3-12 has intentionally been left blank.

Table 3-12: Sales to Other Agencies in ac-ft/yr							
Water Distributed	2005 ⁽²⁾	2010	2015	2020	2025	2030	2035
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Notes:

1. This table is based on the DWR Guidebook Table 9.
2. Based on calendar year.

3.5 Other Water Uses and System Losses

In order to estimate total water demand, other water uses, as well as any water lost during conveyance, must be added to the customer demand. California regulation requires water suppliers to quantify any additional water uses not included as a part of water use by customer type. There are no other water uses in addition to those already reported in the Artesia System.

System losses must be incorporated when projecting total water demand. System losses (also known as non-revenue water) are defined as the difference between annual water production and annual sales. Included are system losses due to leaks, reservoir overflows, or inaccurate meters, and other water used in operations such as system flushing and filter backwashing. GSWC does not tabulate system losses separately from other water uses; such as operations. In the Artesia System, from 2000 through 2010, system water losses have averaged approximately 7.0 percent of the total production; therefore, this rate was incorporated into water demand projections. Table 3-13 provides a summary of projected system losses in the Artesia System.

Table 3-13: Additional Water Uses and Losses in ac-ft/yr							
Water-Use Type	2005 ⁽²⁾	2010	2015	2020	2025	2030	2035
Other Water Uses	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Unaccounted-for System Losses ⁽³⁾	871	200	422	429	434	439	444
Total	871	200	422	429	434	439	444

Notes:

1. This table is based on the DWR Guidebook Table 10.
2. Based on calendar year.
3. Includes system losses due to leaks, reservoir overflows, and inaccurate meters, as well as water used in operations.

3.6 Total Water Demand

As described above, other water uses, as well as any water lost during conveyance, must be added to the customer demand in order to project total water demand for the Artesia System. Although there are no other water uses contributing to the total water demand in the Artesia System, other water uses and system water losses must be incorporated into the total water demand. Table 3-14 summarizes the projections of water sales, other water uses and system losses, and total water demand through the year 2035.

The projected water sales and system losses were added to estimate the total baseline water demand shown in Table 3-14. The baseline demand projections below do not include water use reductions due to additional implementation of future DMMs or other conservation activities. Baseline demands are used for supply reliability evaluation purposes throughout this UWMP for estimates of water supplies that may be required to meet system demands for the next 25 years. Figure 3-5 shows the projected total water demand through 2035.

Projected water demands assuming full compliance with the SBX7-7 interim and 2020 water use reduction targets are also provided in Table 3-14 and Figure 3-5 for reference purposes. SBX7-7 compliance water demands were calculated by multiplying the projected population by the applicable water use target. Future water use that is exempt from SBX7-7, such as industrial process water or direct reuse recycled water is not included in this projection.

Table 3-14: Projected Total Water Demand and SBX7-7 Compliance Projections in ac-ft/yr

Year	Projected Water Sales	Other Water Uses and System Losses	Total Baseline Water Demand	SBX7-7 Compliance Projections	
				Water Savings	Total Water Demand with Savings
2005 ⁽²⁾	6,109	871	6,980	0	N/A
2010	5,413	200	5,613	0	N/A
2015	6,358	422	6,780	140	6,640
2020	6,456	429	6,885	375	6,510
2025	6,528	434	6,962	406	6,556
2030	6,610	439	7,049	449	6,600
2035	6,680	444	7,124	483	6,641

Notes:

1. This table is based on the DWR Guidebook Table 11.
2. Based on calendar year.

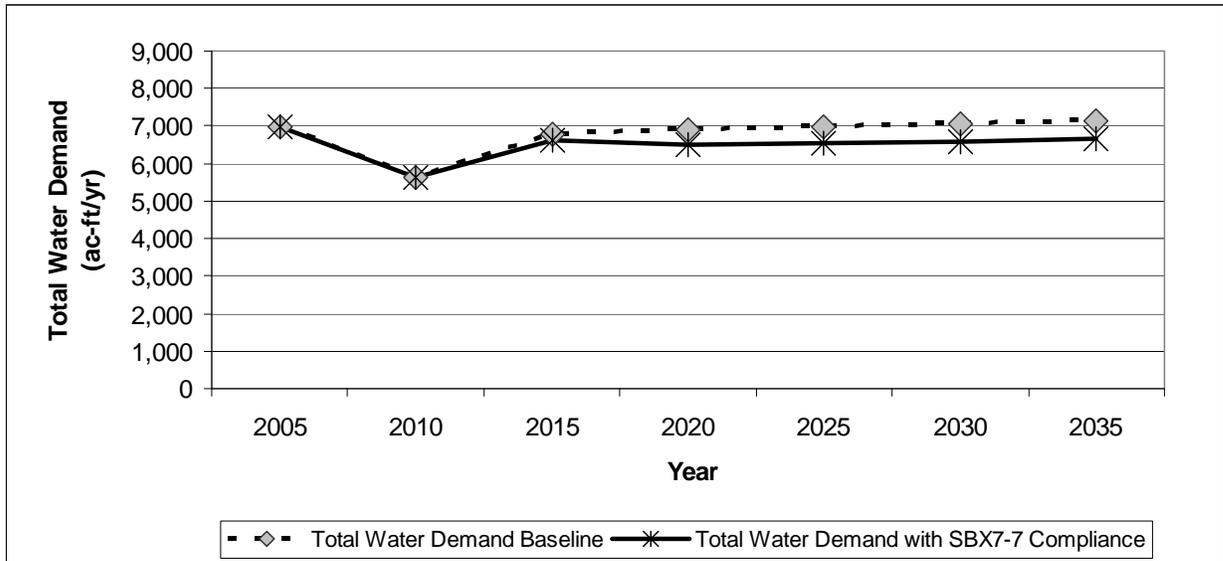


Figure 3-5: Total Water Demand

3.7 Data Provided to Wholesale Agency

GSWC provided preliminary projected water use data in late 2010 to the Central Basin Municipal Water District (CBMWD) and the City of Cerritos, the wholesale water suppliers for the Artesia System, as summarized in Table 3-15. Since the preliminary projections were submitted in 2010; GSWC has refined projections by integrating actual 2010 water use and supply data. As a result, the projections shown in Table 3-15 below do not agree with the demands presented in other chapters of this UWMP. As required per Section 10631(k) the supporting documentation providing the water use projections to the wholesale agency is included in Appendix I.

Wholesaler	Contracted Volume	2010	2015	2020	2025	2030	2035
CBMWD (Recycled Water)	N/A	100	100	100	100	100	100
City of Cerritos	N/A	1,810	1,941	2,055	2,137	2,232	2,304

Note:

This table is based on the DWR Guidebook Table 12.

3.8 Disadvantaged Community Water Use Projections

Section 10631.1.

(a) *Include projected water use for single-family and multi-family 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.*

Senate Bill 1087 requires that water use projections of a UWMP include the projected water use for single-family and multi-family residential housing 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.

Housing elements rely on the Regional Housing Needs Allocation (RHNA) generated by the State Department of Housing and Community Development (HCD) to allocate the regional need for housing to the regional Council of Governments (COG) (or a HCD for cities and counties not covered by a COG) for incorporation into housing element updates. Before the housing element is due, the HCD determines the total regional housing need for the next planning period for each region in the state and allocates that need. The COGs then allocate to each local jurisdiction its “fair share” of the RHNA, broken down by income categories; very low, low, moderate, and above moderate, over the housing element’s planning period.

The County of Los Angeles last updated its housing element in 2006. A lower income house is defined as 80 percent median income, adjusted for family size. The County’s housing element identifies the target number of low-income households in the County from 2006 to 2013 as 15.7 percent and very low-income households as 24.7 percent. However, it is unknown what percentage of the low-income and very low-income households are within GSWC’s Artesia service area. For this reason, it is not possible to reliably project water use for lower income households separately from overall residential demand. However, to remain consistent with the intent of the SB-1087 legislation and to comply with the UWMP Act, an effort has been made to identify those water use projections for future single and multi-family households based on the aggregate percentage of both the low-income and very low-income categories. Forty (40) percent was used to estimate the lower income demand projections as shown in Table 3-16 below.

	2015	2020	2025	2030	2035
Single-Family Residence	217	237	250	264	274
Multi-Family Residence	86	95	101	107	112
Total	302	332	351	371	386

Note:

This table is based on the DWR Guidebook Table 8.

GSWC will not deny or conditionally approve water services or reduce the amount of services applied for by a proposed development that includes housing units affordable to lower income households unless one of the following occurs:

- GSWC specifically finds that it does not have sufficient water supply.
- GSWC is subject to a compliance order issued by the State Department of Public Health that prohibits new water connections.
- The applicant has failed to agree to reasonable terms and conditions relating to the provision of services.

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Chapter 4: Water Supply

A detailed evaluation of water supply is required by the Act. Sections 10631 (b) through (d) and (h) of the Act state the following:

Section 10631.

- (b) *Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five-year increments described in subdivision (a). If groundwater is identified as an existing or planned source of water available to the supplier, all of the following information shall be included in the plan:*
- (1) *A copy of any groundwater management plan adopted by the urban water supplier, including plans adopted pursuant to Part 2.75 (commencing with Section 10750), or any other specific authorization for groundwater management.*
 - (2) *A description of any groundwater basin or basins from which the urban water supplier pumps groundwater. For those basins for which a court or the board has adjudicated the rights to pump groundwater, a copy of the order or decree adopted by the court or the board and a description of the amount of groundwater the urban water supplier has the legal right to pump under the order or decree. For basins that have not been adjudicated, information as to whether the department has identified the basin or basins as overdrafted or has projected that the basin will become overdrafted if present management conditions continue, in the most current official departmental bulletin that characterizes the condition of the groundwater basin, and a detailed description of the efforts being undertaken by the urban water supplier to eliminate the long-term overdraft condition.*
 - (3) *A detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.*
 - (4) *A detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the urban water supplier. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.*
- (c) (1) *Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage, to the extent practicable, and provide data for each of the following:*
- (A) *An average water year.*
 - (B) *A single dry water year.*
 - (C) *Multiple dry water years.*
- (2) *For any water source that may not be available at a consistent level of use, given specific legal, environmental, water quality, or climatic factors, describe plans to supplement or replace that source with alternative sources or water demand management measures, to the extent practicable.*
- (d) *Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.*
- (h) *Include a description of all water supply projects and water supply programs that may be undertaken by the urban water supplier to meet the total projected water use as established pursuant to subdivision (a) of Section 10635. The urban water supplier shall include a detailed description of expected future projects and programs, other than the demand management programs identified pursuant to paragraph (1) of subdivision (f), that the urban water supplier may implement to increase the amount of the water supply available to the urban water supplier in average, single dry, and multiple dry water years. The description shall identify specific projects and include a description of the increase in water supply that is expected to be available from each project. The description shall include an estimate with regard to the implementation timeline for each project or program.*

This chapter addresses the water supply sources of the Artesia System. The following chapter provides details in response to those requirements of this portion of the Act.

4.1 Water Sources

The Golden State Water Company (GSWC) currently obtains its water supply for the Artesia System from three primary sources: imported water, recycled water, and GSWC operated groundwater wells. Imported water is purchased from the City of Cerritos, which obtains its water primarily from groundwater and secondarily from Central Basin Municipal Water District (CBMWD). CBMWD obtains their imported water supplies from the Metropolitan Water District of Southern California (Metropolitan). Recycled water is also supplied by CBMWD. GSWC operates several groundwater wells within the Artesia System, and has adjudicated allowed groundwater pumping allocations in the Central Basin. In addition to adjudicated groundwater pumping rights, GSWC also has the ability to lease groundwater rights when they are available. The Artesia Systems also has a connection with GSWC's own Orange County System, which also relies on both local groundwater and imported water obtained from Metropolitan.

Table 4-1 below, summarizes the approximate amount of water supplied by each source in acre-feet per year. The availability of water from each source is estimated through the year 2035, in accordance with GSWC's long-term water supply planning projections and those of its wholesale suppliers. GSWC's water supply is projected to increase by about 27 percent from 2010 to 2035 to meet projected water demands which will be met by groundwater, the expected implementation of conjunctive use groundwater storage programs, and by imported water. Leased groundwater quantities are determined annually for all GSWC systems that obtain groundwater from the basins. Therefore, quantifiable estimates of planned groundwater leases which would reduce the need to purchase water from City of Cerritos are not provided. Water demand projections are documented in Chapter 3.

Source	2010	2015	2020	2025	2030	2035
Imported water from the City of Cerritos ⁽¹⁾	391	1,680	1,785	1,862	1,949	2,024
Groundwater ^(1,2)	5,166	5,000	5,000	5,000	5,000	5,000
Recycled water	56	100	100	100	100	100
Total	5,613	6,780	6,885	6,962	7,049	7,124

Notes:

1. Based on projected use in the Coastal Plain of Los Angeles County Groundwater Basin.
2. Projected supplies only include GSWC-owned groundwater rights. GSWC may lease additional groundwater rights to extract additional groundwater within the basin as available.
3. Table format based on DWR Guidebook Table 16.

For 2010, imported water made up approximately 7 percent of the available supply, whereas about 92 percent of the supply is from GSWC groundwater pumping and 1 percent is provided by recycled water sources. In future years, the imported water supply may be as great as 28 percent or higher depending on groundwater allocations, the availability to lease additional groundwater rights, and groundwater quality considerations. Therefore, the future water supply may be highly dependent on the amount of available water supplied by the City of Cerritos. This water supply summary was developed based on information provided by CBMWD for imported water and recycled water, the City of Cerritos for imported water, and by GSWC for the groundwater analysis.

The sources and the reliability of each source are discussed in greater detail in the following sections. A brief description of the components of each source is provided below.

Imported water: Includes water sales from Metropolitan through CBMWD and the City of Cerritos and potential transfer water from other sources for use in the Central Basin.

Recycled water: The recycled water source is based on the current and planned availability of recycled water within the Artesia System. Opportunities to increase the use of recycled water are discussed in more detail in Chapter 4.8.

Groundwater: GSWC is currently allowed to pump groundwater based on an adjudicated allowable pumping allocation in the Central Basin. GSWC is allowed to pump additional groundwater beyond the pumping allocation in the Central Basin through the use of leased water rights. In the future, GSWC plans on continuing to lease additional groundwater pumping rights in the Central Basin to meet projected demands.

4.2 Imported Water

CBMWD is a large purveyor of water in southern California which provides water to several agencies, including GSWC. GSWC obtains water from CBMWD for several systems, including the Artesia System. Water is delivered to the Artesia System through the following connections:

- Two connections with the City of Cerritos, each with a capacity of 1,500 gallons per minute (gpm).
- GSWC Bloomfield 226th Street connection with a capacity of 2,000 gpm.

These connections have a combined active design capacity of 5,000 gpm (8,065 ac-ft/yr). It should be noted that the connection capacity to deliver imported water to GSWC is significantly higher than the projected imported water supply required to meet normal year demands. In addition, GSWC has one emergency connection with the City of Cerritos, with a capacity between 900 gpm and 1,200 gpm and another emergency connection with the City of Lakewood.

The Artesia System currently receives a small amount of recycled water from CBMWD. Treated water from the Los Angeles County Sanitation District is sent to CBMWD's Central Basin Recycled Water Project (CBRWP), which then distributes the water to CBMWD's customers. Recycled water is discussed in detail in Chapter 4.8.

GSWC's water supply is projected to increase by about 21 percent from 2010 to 2035 to meet the associated projected water demands. The increased demand will be met by groundwater, imported water, and the implementation of conjunctive use storage programs that are expected to be developed in the Central Basin. Water demand projections are documented in Chapter 3. Details of the groundwater supply are presented in the following section followed by a discussion of the reliability of all sources of water supply.

4.2.1 Recycled Water

The Artesia System currently receives approximately an average of 90 ac-ft/yr of recycled water from CBMWD. Treated water from the Sanitation District of Los Angeles County (LACSD) is sent to CBMWD's Central Basin Recycled Water Project (CBRWP). CBMWD then distributes

this water to its customers. The 2000 CBMWD Water Recycling Program Master Plan identified potential recycled water customers within the service area of the Artesia System. It is anticipated that additional customers will be served with recycled water for irrigation and industrial use within the next 20 years. Recycled water projects are discussed in detail in Chapter 4.8.

4.3 Central Basin Groundwater

The Artesia System is supplied by five active wells in the Central Basin of the Coastal Plain of Los Angeles County Groundwater Basin. These wells have a current total active normal year capacity of 4,880 gpm (7,872 ac-ft/yr).

The adjudicated Central Basin Watermaster Service Area overlies about 227 square miles of the Central Basin in the southeastern part of the Los Angeles Coastal Plain in Los Angeles County. The Watermaster Service Area is bounded by the Newport-Inglewood Uplift on the southwest, the Los Angeles-Orange County line on the southeast, and an irregular line that approximately follows Stocker Street, Martin Luther King Boulevard, Alameda Street, Olympic Boulevard, the boundary between the City of Los Angeles and unincorporated East Los Angeles, and the foot of the Merced and Puente Hills on the north. Twenty-three incorporated cities and several unincorporated areas are found within the Watermaster Service Area. Groundwater in the Central Basin provides a substantial portion of the water supply needed by the residents and industries in the overlying area (DWR, 2009).

The Central Basin is subdivided into four areas: The Los Angeles Forebay, the Montebello Forebay, the Whittier area, and the Central Basin Pressure Area. The Los Angeles Forebay is located in the northern part of the Central Basin where the Los Angeles River enters the Basin through the Los Angeles Narrows. The Montebello Forebay extends southward from where the San Gabriel River enters the Central Basin through the Whittier Narrows. The Montebello Forebay is considered the most important area of recharge in the Central Basin (DWR, 2003). Both forebay areas have unconfined groundwater conditions and aquifers that extend up to 1,600 feet deep to provide recharge to the aquifer systems of the Central Basin (DWR, 1961). The Whittier area extends south and southwest from the Puente Hills to the axis of the Santa Fe Springs-Coyote Hills uplift. The Whittier area contains up to 1,000 feet of freshwater-bearing sediments (DWR, 2003). The Central Basin pressure area contains many aquifers of permeable sands and gravels separated by semi-permeable to low permeability sandy-clay to clay. Those aquifers in the Central Basin pressure area extend approximately 2,200 feet below the surface (DWR, 1961). The aquifers in the Whittier area and Central Basin pressure area are generally confined, but areas with semi-permeable aquitards allow some interaction between aquifers (DWR, 2003).

The main freshwater-bearing aquifers are contained within the Holocene alluvium and the Pleistocene Lakewood and San Pedro Formations. The main productive aquifers within the Basin are the Gardena and Gage aquifers in the Lakewood Formation and the Silverado, Lynwood, and Sunnyside aquifers in the San Pedro Formation (DWR, 1961). The Gardena and Gage aquifers are primarily comprised of sand and gravel and have a total maximum thickness of 280 feet (DWR, 2003). Aquifers within the San Pedro Formation are comprised of coarse sand, gravel, and sandy gravel and have a combined maximum thickness of 800 feet (DWR, 2003).

Recharge occurs from percolation of precipitation, stream flow, and return flow of applied waters (e.g. irrigation), from artificial recharge activities at spreading grounds, and from injection of

imported water into the Alamitos Barrier Project (a seawater intrusion barrier located in the southeastern part of the Basin). Recharge of the Basin occurs in the forebay areas due to the presence of permeable sediments, whereas the pressure area is overlain by less permeable silt and clay units that preclude significant recharge in these areas. Purchased water from Metropolitan and recycled water from the Whittier and San Jose Treatment Plants are used for recharge in the spreading grounds in the Montebello Forebay area. The total groundwater storage capacity of the Central Basin is about 13,800,000 ac-ft (DWR, 1961). Groundwater flow is predominantly from the foothills northeast of the Central Basin towards the ocean to the southwest.

4.3.1 Central Basin Adjudication

In 1965, the Central Basin was adjudicated in the case *Central and West Basin Water Replenishment District vs. Charles E. Adams, et al* (Superior Court, County of Los Angeles, Case No. 786656). The Central Basin Judgment (Appendix F) limits the amount of groundwater each party can extract annually from the Basin. This limit is referred to as the “Allowed Pumping Allocation” or APA, which is a fraction of each party’s water rights, and is monitored by a court-appointed Watermaster. The Watermaster administers and enforces the terms of the Judgment and reports annually to the Court on significant groundwater-related events that occur in the Basin. The Court also retained jurisdiction to monitor ongoing management of the Basin, including the conjunctive use of Basin storage space, to assure the Basin will be capable of supplying sufficient water to meet local needs, including future growth and development.

The Central Basin adjudication limit (total of the allowed pumping allocations of each party) for groundwater extraction across the entire basin is 217,367 ac-ft/yr. GSWC maintains an APA of 16,439 ac-ft/yr. GSWC’s APA is shared between all of their systems that extract groundwater from the Central Basin: Norwalk, Florence-Graham, Hollydale, Willowbrook, Artesia, Bell/Bell Gardens, and portions of the Southwest system as shown in Table 4-2. GSWC reports total groundwater extractions (on a per-well basis) to the Watermaster.

Three agencies work with the water producers to ensure that the APA is available to the pumpers in the Central Basin. These agencies include the Los Angeles County Department of Public Works (LACDPW), the Water Replenishment District of Southern California (WRDSC), and CBMWD. LACDPW operates and maintains the Rio Hondo and San Gabriel spreading grounds in the Montebello Forebay. LACDPW diverts and recharges storm flows from the Rio Hondo and San Gabriel Rivers, highly treated wastewater from the Los Angeles County Sanitation Districts (Whittier and San Jose Wastewater Reclamation Plants), and imported water from Metropolitan (including both State Water Project water and Colorado River water). LACDPW, in conjunction with Orange County Water District, operates and maintains the Alamitos Barrier Project to recharge imported water into this injection barrier, which is designed to prevent seawater intrusion into the Central Basin. WRDSC collects a replenishment assessment from all groundwater producers in the Basin to pay for water supplies to replenish the Basin. Annually, by statute, WRDSC is required to determine replenishment requirements. WRDSC pays CBMWD for imported and recycled water for recharge into the Central Basin.

Table 4-2: Groundwater Pumping Rights

Basin Name	Pumping Rights (ac-ft/yr) ⁽¹⁾
Central Basin	16,439

Notes:

- Value is the allowed pumping allocation (80% of GSWC's adjudicated water right) for all seven systems GSWC owns and operates in the Central Basin. These systems are Artesia, Florence-Graham, Hollydale, Willowbrook, Bell-Bell Gardens, Norwalk, and portions of the Southwest system.
- Groundwater pumping rights in the Central Basin are referred to as "Allowed Pumping Allocation."

Table 4-3 shows the wells and current well capacities for the Artesia System. GSWC's Artesia System has a total active normal year well capacity of 4,880 gpm (7,872 ac-ft/yr).

Table 4-3: Well Name and Capacity		
Well Name	Current Well Capacity (gpm) ⁽¹⁾	Current Well Capacity (ac-ft/yr)
Centralia No. 3	0	0
Centralia No. 4	0	0
Centralia No. 6	2,000	3,226
Hawaiian No. 1	600	968
Juan No. 4	0	0
Massinger No. 1	580	936
Roseton No. 1	750	1,210
Roseton No. 2	950	1,532
Total Capacity	4,880	7,872

Note:

- Estimated annual average current well production capacity is provided; actual and design instantaneous pumping capacity may be greater for each well.

Table 4-4 shows the pumping history for the Artesia System from calendar years 2005 through 2010. The total groundwater pumping for the Artesia System has ranged from 3,712 ac-ft/yr to 5,434 ac-ft/yr.

Basin Name	Metered or Unmetered	2005	2006	2007	2008	2009	2010
Central Basin	Metered	4,826	3,712	4,186	5,241	5,434	5,166
Percent of Total Water Supply		70%	57%	62%	82%	91%	93%

Notes:

1. Table format based on DWR Guidebook Table 18.
2. Years are reported in calendar years (January 1 – December 31).

The projected amounts of groundwater needed to supply the Artesia System through 2035 are shown in Table 4-5. The projected groundwater volumes will be extracted from the five active wells shown in Table 4-3. GSWC's groundwater rights and future leases within the Central Basin are shared among all GSWC systems in the basin. Therefore, the actual pumping amounts for wells in each of their systems could vary based on GSWC's overall system management. Their access to local groundwater and imported water affords GSWC flexibility to meet demands in all of its systems. In addition to GSWC's APA in the Central Basin, GSWC also has the ability to lease groundwater rights from other Central Basin right-holders on an annual basis, if needed and available. Since 1991, GSWC has obtained up to 7,500 ac-ft/yr to augment their Central Basin APA. As noted in other parts of this UWMP, it is possible that additional wells will be constructed and a greater volume of groundwater pumping allowed in accordance with the terms of a future groundwater basin management plan and amended or new Judgment that could be filed in the basin.

The projected groundwater pumping amounts for the Artesia System between 2005 and 2035 is shown in Table 4-5. The groundwater pumping amounts include adjudicated rights only. Ongoing groundwater leases (as available), consistent with current system operation strategies would allow GSWC to obtain 50% or more of total water supply. However, since leases are determined annually, water provided by groundwater lease pumping cannot be reliably projected for the time period 2015 – 2035.

Basin Name	2010	2015	2020	2025	2030	2035
Central Basin	5,166	5,000	5,000	5,000	5,000	5,000
Percent of Total Water Supply	92%	74%	73%	72%	71%	70%

Notes:

1. Table format based on DWR Guidebook Table 19.
2. 2010 groundwater pumping includes APA and leased quantities. Projected values (2015 through 2035) are based on GSWC's allowed pumping allocation from adjudicated rights only. Leased groundwater rights as obtained in the future will result in groundwater constituting a greater percentage of total water supply to the system.
3. Years are reported in fiscal years (July 1 – June 30).

GSWC has historically obtained leases to augment its APA in the Central Basin, averaging 4,047 ac-ft/yr from 1999 to 2010. Leases for additional groundwater in the Central Basin are renewed annually, on an as-needed basis, and after an evaluation of the economic benefits to their rate payers. Table 4-7 presents the total unused APA from all users in the Central Basin, as reported by the Central Basin Watermaster, from 2005 to 2010. In each year, between 6,251 and 27,406 ac-ft/yr of available APA has not been pumped. A portion of this unpumped water could be available for GSWC to lease, on an annual basis, to augment their Central Basin APA and support overall water supply reliability. Water transfers and exchanges may also be undertaken as part of conjunctive use storage programs to be developed.

Table 4-6: Annual Unused APA in Central Basin	
Fiscal Year	Unused APA (ac-ft/yr)
2005 - 2006	27,406
2006 - 2007	21,478
2007 - 2008	6,251
2008 - 2009	17,436
2009 - 2010	20,609

Notes:

1. Total APA for Central Basin for these years is 217,367 ac-ft/yr.
2. Fiscal year is July 1 through June 30.
3. Data reported in annual Watermaster reports.

4.4 Transfers and Exchanges

Water transfers and exchanges may also be undertaken as part of conjunctive use storage programs to be developed, however; no specific transfer or exchange opportunities have been identified in the Central Basin for the Artesia System at this time; therefore, Table 4-7 has been left blank.

Table 4-7: Transfer and Exchange Opportunities					
Source Transfer Agency	Transfer or Exchange	Short Term	Proposed Quantities	Long-Term	Proposed Quantities
GSWC	N/A	N/A	N/A	N/A	N/A

Note:

Table format based on DWR Guidebook Table 20.

4.5 Planned Water Supply Projects and Programs

If approved, GSWC plans to purchase and store water in the Central Basin in accordance with amendments to the existing court Judgments or new Judgments, the terms of which are presently unknown. Implementation of storage programs may involve constructing new wells and other infrastructure improvements. In addition, GSWC will construct new wells, pipelines, and treatment systems as part of its normal operations and maintenance. Such efforts are part

of GSWC's ongoing Capital Investment Program to maintain its supply and meet distribution system requirements.

Another potential long-term water supply transfer opportunity that GSWC is evaluating is the Cadiz Valley Water Conservation, Recovery and Storage Project (Cadiz Project). The project is designed to capture and conserve thousands of acre-feet of native groundwater currently being lost to evaporation through an aquifer system beneath Cadiz's property in eastern San Bernardino County, California. By implementing established groundwater management practices, the project will create a new, sustainable annual water supply for project participants. In addition, the project offers storage capacity that can be used by participants to carry-over – or “bank” – annual supplies, without the high rates of evaporative loss suffered by local surface reservoirs.

The Cadiz Project will produce up to 50,000 ac-ft/yr for fifty years. GSWC is one of five entities that have expressed an interest in receiving water from the project. In 2009, GSWC signed a letter of intent to purchase up to 5,000 ac-ft/yr and committed to paying a share of the cost of the project's environmental evaluation. GSWC continues to evaluate the economics and technical feasibility of this project.

The projected future water supply from the Cadiz Project is shown in Table 4-8. Supply associated with a conjunctive use storage program in the Central Basin is not determined.

Table 4-8: Future Water Supply Projects in ac-ft					
Project Name	Normal Year	Single-Dry Year	Multiple-Dry Years		
			Year 1	Year 2	Year 3
Cadiz Project	5,000	5,000	5,000	5,000	5,000

Note:

This table is based on the DWR Guidebook Table 26.

4.6 Wholesale Agency Supply Data

Table 4-9 provides existing and planned wholesale water provider water sources available to the Artesia System.

Table 4-9: Existing and Planned Wholesale Water Sources in ac-ft/yr							
Wholesaler Sources	Contracted Volume	2010	2015	2020	2025	2030	2035
City of Cerritos		391	1,680	1,785	1,862	1,949	2,024

Note:

This table is based on DWR Guidebook Table 17.

The reliability of wholesale water supply available to meet annual water demand in 2035 under an average, single-dry, and multiple-dry year condition for the Artesia System is provided in Table 4-10.

Table 4-10: Reliability of Wholesale Supply for Year 2035 in ac-ft/yr

Wholesaler	Average / Normal Water Year Supply	Single-Dry	Multiple-Dry Water Years		
			Year 1	Year 2	Year 3
City of Cerritos ⁽¹⁾	2,024	2,024	2,024	2,024	2,024
Percent Normal	100	100	100	100	100

Notes:

1. Projected City of Cerritos imported water values are calculated assuming groundwater is provided within the APA only. Leased groundwater rights as obtained in the future will result in groundwater constituting a greater percentage of total water supply to the system.
2. Table format based on DWR Guidebook Table 31.

Table 4-11 lists factors affecting wholesale supply for the Artesia System. Metropolitan intends to provide 100 percent supply reliability to CBMWD, which in turn provides a reliable supply to the City of Cerritos. The City has also stated that they anticipate their groundwater supply to be 100 percent reliable for the projection period.

Table 4-11: Factors Affecting Wholesale Supply

Name of Supply	Legal	Environmental	Water Quality	Climatic
City of Cerritos	N/A	N/A	N/A	N/A

Note:

Table format based on DWR Guidebook Table 29.

4.7 Desalination

This section presents a discussion of opportunities to use desalinated water as a supplemental future water supply source for the Artesia System. Section 10631(i) of the Act requires an evaluation of desalination opportunities within the Artesia System. The Act states the following:

Section 10631.

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

Wholesalers providing water to the Artesia System are actively pursuing seawater desalination projects. Water produced by these desalination projects would increase the total available water supply for the wholesalers and would, in-turn, improve the reliability of water supply for the Artesia System. However, it is not possible at this point to quantify the amount of desalinated water that will be available for the GSWC's Artesia System. The following discussion summarizes the desalination plans of water wholesalers. Metropolitan and its member agencies view seawater desalination as a component of a diversified water supply portfolio. Recent and continuous breakthroughs in membrane technology have helped to reduce desalination costs, leading to the consideration of desalination among the alternative resource options outlined in Metropolitan's 2010 Integrated Resources Plan (IRP) Update. This updated plan describes a diversified regional strategy to include recycled water, groundwater recharge, and seawater desalination in its portfolio of methods to ensure robust water supply reliability. In 2001,

Metropolitan established the Seawater Desalination Program to encourage its member agencies to develop desalination projects, and in the 2004 IRP Update established a target goal of up to 150,000 ac-ft/yr of desalination capacity from its retailers by 2025. This is an important component of the total estimated water supply production for the region.

Metropolitan is also involved in efforts to assess current desalination projects and to compare project features and applicability to Southern California. Furthermore, Metropolitan, in association with member agencies, is involved in assessing established and emerging desalination treatment technologies, pretreatment alternatives, and brine disposal issues, as well as the permitting and regulatory approvals associated with the delivery of desalinated seawater to regional and local distribution systems.

CBMWD is land locked without direct access to the ocean and therefore does not view desalination as a practical nor economically feasible water supply option at this time. Additionally, seawater barriers are not employed within CBMWD’s service area, so recovery and desalination of brackish groundwater is not a viable potential water resource. However, CBMWD could provide financial assistance to other SWP contractors or wholesalers such as WBMWD in the construction of their seawater desalination facilities in exchange for SWP supplies.

Table 4-12 provides a summary of opportunities for water desalination. Any future desalination projects of Metropolitan and CBMWD would increase the reliability of water supply for the region, however it is unknown at this time to what extent desalinated water supplies would directly benefit GSWC’s systems.

Source of Water	Potential Yield (ac-ft/yr)	Anticipated Source Availability Date	Type of Use	Other
Seawater (Metropolitan) ⁽¹⁾	150,000	2025	Municipal	N/A

Note:

1. Metropolitan goal for seawater desalination does not identify specific sources, but instead documents a regional objective representative of all 26 Metropolitan retailers.

4.8 Recycled Water Plan

This chapter covers Section 10633 which details the requirements of the Recycled Water Plan that are included in the Act. The Act states the following:

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

- A description of the wastewater collection and treatment systems in the supplier’s service area, including a quantification of the amount of wastewater collected and treated and the methods of wastewater disposal.*
- A description of the recycled water currently being used in the supplier’s service area, including, but not limited to, the type, place, and quantity of use.*
- A description and quantification of the potential uses of recycled water, including, but not limited to, agricultural irrigation, landscape irrigation, wildlife habitat enhancement, wetlands, industrial reuse,*

groundwater recharge, and other appropriate uses, and a determination with regard to the technical and economic feasibility of serving those uses.

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

4.8.1 Coordination

Table 4-13 summarizes the role of the agencies that participated in the development of recycled water plans that affect the Artesia Customer Service Area for GSWC.

Table 4-13: Role of Participating Agencies in the Development of the Recycled Water Plan	
Participating Agencies	Role in Plan Development
Water agencies	GSWC provides data to CBMWD for its use in planning a potential recycled water distribution system expansion and identifying additional recycled water customers. The CBMWD, acting as the recycled water wholesaler, has sole decision-making authority regarding the implementation of the recycled water plan and distribution network.
Wastewater agencies	The Sanitation Districts of Los Angeles County provide a reliable supply of recycled water that meets California recycled water quality standards set forth in Title 22 of the California Code of Regulations.
Groundwater agencies	Not applicable for this System.
Planning agencies ⁽¹⁾	The city governments affected by any future recycled water projects may play a role in conducting economic analysis, data assessment, customer assessment, analyzing community impacts, defining customer involvement, establishing conceptual pipeline routes, and estimating costs.

Note:

1. The role of planning agencies is solely defined by CBMWD, the owner and operator of the recycled water distribution network affecting the Artesia System.

4.8.2 Wastewater Quantity, Quality, and Current Uses

Wastewater in the Artesia System is collected by gravity sewers and lift stations owned by the City of Artesia, as well as by the Sanitation Districts of Los Angeles County (LACSD). The wastewater is transported through trunk sewers to LACSD's Los Coyotes Water Reclamation Plant (WRP) in Cerritos and San Jose Creek WRP in Whittier for treatment.

The Los Coyotes WRP provides primary, secondary, and tertiary treatment for an average dry weather flow (DWF) of 37 million gallons of wastewater per day (mgd). The plant serves a population of approximately 370,000 people. Of the total water treated, over 5 mgd of purified water is reused at more than 200 reuse sites. The uses for recycled water include irrigation of schools, golf courses, parks, nurseries and greenbelts, as well as industrial use at local companies for carpet dyeing and concrete mixing. The remaining effluent (approximately 32 mgd) is discharged into the San Gabriel River (LACSD 2011).

The San Jose Creek WRP provides primary, secondary, and tertiary treatment for an average DWF of 100 mgd. The plant serves a largely residential population of approximately one million people. An average of 35 mgd is reused at 17 different sites. The uses for recycled water include groundwater recharge and irrigation of parks, schools and greenbelts. The remaining effluent (65 mgd) is discharged into the San Gabriel River (LACSD 2011).

Because the Los Coyotes and San Jose Creek WRPs treat wastewater for a larger population than exists in the Artesia System, an estimated per capita wastewater generation factor was used to calculate the volume of wastewater generated by the customers in the Artesia System. The wastewater generation factor is based on the total populations served and the average wastewater treatment rates for the San Jose Creek and Los Coyotes WRPs. Based on the statistics cited above, both plants have an average per capita wastewater generation factor of 100 gallons per person per day. This factor was used to estimate the existing and projected volumes of wastewater collected and treated in the Artesia System as summarized in Table 4-14.

Because all of the effluent from Los Coyotes and San Jose Creek WRPs is treated to meet Title 22 recycled water standards, 100 percent of the treated effluent is included in Table 4-14 as meeting such standards. However, out of the combined wastewater effluent (137 mgd) from these two treatment plants, 40 mgd of the treated water is actively reused throughout the region. Therefore, it is assumed that 29 percent of the treated wastewater collected in the Artesia System is actively reused throughout the region, and the remaining 71 percent is discharged into the unlined portions of the San Gabriel River. Although the majority of the water that is discharged into the San Gabriel River will contribute to groundwater recharge through the river bed, LACSD does not consider this an active recycled water use and is therefore included in Table 4-15 as a discharge volume. Of the wastewater collected in the Artesia System, Table 4-15 lists the estimates of existing and projected volumes of treated effluent that will be discharged into the San Gabriel River.

Table 4-14: Estimates of Existing and Projected Wastewater Collection and Treatment in ac-ft/yr (mgd) for the Artesia System

	2005 ⁽²⁾	2010 ⁽²⁾	2015	2020	2025	2030	2035
Projected population in service area ⁽¹⁾	52,980	52,974	53,405	53,812	54,192	54,553	54,899
Wastewater collected and treated in service area ⁽³⁾	5,935 (5.30 mgd)	5,934 (5.30 mgd)	5,982 (5.34 mgd)	6,028 (5.38 mgd)	6,070 (5.42 mgd)	6,111 (5.46 mgd)	6,149 (5.49 mgd)
Quantity that meets recycled water standard	5,935 (5.30 mgd)	5,934 (5.30 mgd)	5,982 (5.34 mgd)	6,028 (5.38 mgd)	6,070 (5.42 mgd)	6,111 (5.46 mgd)	6,149 (5.49 mgd)

Notes:

1. For population projections see section 2.3.
2. Based on actual year.
3. Values of wastewater collected and treated are estimated. For a description of the methodology, refer to the text.
4. This table is based on the DWR Guidebook Table 21.

Table 4-15: Estimates of Existing and Projected Disposal of Non-Recycled Wastewater in ac-ft/yr (mgd) for the Artesia System

Method of Disposal	Treatment Level	2005 ⁽²⁾	2010 ⁽²⁾	2015	2020	2025	2030	2035
River Discharge ⁽¹⁾	Tertiary	4,214 (3.76)	4,213 (3.76)	4,247 (3.79)	4,280 (3.82)	4,310 (3.85)	4,339 (3.87)	4,366 (3.90)

Notes:

1. Volumes of effluent discharged are estimated. For a description of the methodology, refer to the text.
2. Based on actual year.
3. This table is based on the DWR Guidebook Table 22.

4.8.3 Potential and Projected Use

The Central Basin Municipal Water District (CBMWD) acquires, controls, distributes, and sells recycled water to several cities, agencies, and customers in the greater Los Angeles area. CBMWD owns and operates the recycled water distribution infrastructure in its service area. The Artesia System currently receives recycled water from CBMWD as part of the district's Central Basin Recycled Water Project (CBRWP). CBRWP consists of two interconnected distribution systems (the E. Thornton Ibbetson Century Recycled Water Project and the Esteban Torres Rio Hondo Recycled Water Project). CBRWP distributes over 4,000 ac-ft/yr of recycled water to its network of commercial, industrial, and landscape irrigation uses. CBRWP receives reclaimed water from LACSD's Los Coyotes and San Jose Creek WRPs. In addition to GSWC, CBRWP provides recycled water to more than 150 industrial, commercial, and landscape irrigation sites throughout southeast Los Angeles County.

CBMWD owns one existing recycled water pipeline that falls within the boundaries of the Artesia System, but does not currently have plans to expand its recycled water distribution network to reach any more of the Artesia System. The existing CBMWD recycled water line is located on

the border between the City of Cerritos and the City of Lakewood, traveling from the intersection of Del Amo Boulevard and Norwalk Boulevard to the intersection of 207th Street and Hawaiian Avenue. This pipeline serves four existing recycled water connections in the Artesia System. From 1994 through 2010, the average recycled water use for these four connections was 92 ac-ft/yr; during this time period, the maximum recycled water used by these four connections was 113 ac-ft/yr in the year 2002. The maximum (113 ac-ft/yr) is categorized as the existing potential recycled water use for the Artesia System, given that this demand was met in 2002.

One of the Artesia connections is an irrigation line for the Palms Park, operated by the City of Lakewood Recreation and Community Services Department. In addition to the recycled water connection, the department has three potable water connections that are classified as irrigation lines and are located along the recycled water pipeline alignment. There is a potential, therefore, to convert this potable water use into an additional recycled water use for the Artesia System; thereby reducing the demand on potable water supplies. From 1999 to 2004, the average water use for these three potable water connections was approximately 3 ac-ft/yr; this volume is categorized as the additional potential recycled water use for the Artesia System. Therefore, the total potential recycled water use in the future for the Artesia System is the sum of the existing potential recycled water use (113 ac-ft/yr) and the additional potential recycled water use (3 ac-ft/yr), for a total potential recycled water use of 116 ac-ft/yr, as summarized in Table 4-16. As noted in the 2010 Draft UWMP for CBMWD, the addition of other recycled water customers in the Artesia service area is unlikely due to proximity to recycled water pipelines, capacity and pressure to serve, and retrofit cost-feasibility.

Recent trends have shown a decrease in recycled water use, likely due to cost-saving measures, economic down-turn, and conservation programs. As shown in Table 4-18, the projected recycled water use identified in the 2005 UWMP for the year 2010 was 100 ac-ft, while actual usage was only 56 ac-ft. This is the lowest recorded annual usage rate for recycled water in the Artesia system. Assuming, however, that the schools and cities currently using recycled water for irrigation will continue to maintain their landscapes, recycled water use is projected to remain relatively constant at approximately 100 ac-ft/yr (see Table 4-17).

Table 4-16: Potential Future Recycled Water Uses in ac-ft/yr

Type of Use	Treatment Level	Description	Feasibility	2015	2020	2025	2030	2035
Landscape Irrigation	Tertiary	Existing Max Demand	High	113	113	113	113	113
Landscape Irrigation	Tertiary	Potential new connections		3	3	3	3	3
Total				116	116	116	116	116

Note:

This table is based on the DWR Guidebook Table 23.

Table 4-17: Projected Future Recycled Water Use in Service Area in ac-ft/yr

Type of Use	2015	2020	2025	2030	2035
Landscape Irrigation	100	100	100	100	100

Table 4-18: Comparison of Recycled Water Uses—Year 2005 Projections versus 2010 Actual in ac-ft/yr

Type of Use	2005 Projection for 2010	2010 Actual Use
Landscape Irrigation	100	56

Note:

This table is based on the DWR Guidebook Table 24.

4.8.4 Optimization and Incentives for Recycled Water Use

GSWC provides data to CBMWD for planning system expansion and identifying potential recycled water customers. Once identified, GSWC works with the wholesaler in explaining the benefits of using recycled water. CBMWD would then lead the way in securing a contract and implementing retro-fit installations for conversion to recycled water. GSWC participates in the local workshops held by the wholesalers, and distributes conservation materials and literature including a discussion of recycled water and its benefits at local community events. GSWC has developed a special recycled water tariff approved by the CPUC which allows recycled water to be sold at a discount from the potable water rates.

Table 4-19 provides a summary of the actions performed by GSWC to encourage recycled water use and the resulting projected use. For the Artesia System, the assumption is that the financial incentives of using recycled water account for 100 percent of the recycled water sales in the system. The CPUC encourages recycled water use and is currently conducting a proceeding to evaluate targets for recycled water use and potential penalties for not participating in the program. Additional program actions, such as this, may support increased recycled water use within the service area in the future.

Table 4-19: Methods to Encourage Recycled Water Use and the Resulting Projected Use in ac-ft/yr

Actions	2015	2020	2025	2030	2035
Recycled Water Tariff	100	100	100	100	100

Note:

This table is based on the DWR Guidebook Table 25.

Chapter 5: Water Quality

Section 10634 of the Act requires an analysis of water quality issues and their impact to supply reliability. The Act states as follows:

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

5.1 GSWC Measures for Water Quality Regulation Compliance

To facilitate full compliance with water quality laws and regulations, GSWC maintains an Environmental Quality Department that has independent lines of reporting authority within the organization. The Environmental Quality Department is headed by a company officer specifically assigned to oversee and manage the company's environmental and water quality programs. The Vice President of Environmental Quality has a staff of three managers, including two Water Quality Managers. The Water Quality Managers, in turn, manage a staff of Water Quality Engineers and Technicians that are assigned to district offices. Each district office is assigned one Water Quality Engineer and at least one Water Quality Technician to provide direct support to the local drinking water systems within the district.

The District Water Quality Engineer is the main point of contact for the California Department of Public Health (CDPH) as well as other regulatory agencies. The Water Quality Engineer also is responsible for coordinating compliance measures through scheduling required sample collection, preparing water quality related plans, maintaining a water quality database, providing training to operations, implementing a cross connection control program, and preparing and submitting monitoring reports, permit applications and other regulatory related correspondence.

As a whole, the Environmental Quality Department monitors and participates in the implementation of new water quality related laws and regulations. Through routine department meetings and training, the District Water Quality Engineers are kept up to date with changing water quality regulations and related technology. These efforts contribute towards maintaining a pool of trained water quality professionals that can be utilized throughout the company. This provides the company the ability to respond to a wide variety of water quality issues or emergencies.

5.2 Water Quality Issues

The drinking water quality of the Artesia System must comply with the Safe Drinking Water Act (SDWA), which is composed of primary and secondary drinking water standards regulated by the U.S. Environmental Protection Agency and CDPH. Water Quality sampling is performed at each well and within the distribution system to ensure compliance with the regulatory standards.

5.2.1 Groundwater Quality

Table 5-1 summarizes water quality concerns and management actions for all the wells in the Artesia System. The active groundwater wells in the Artesia System meet all current California Title 22 drinking water standards before water is delivered to customers. The following discussion relates to contaminants with MCLs that are either existing or have been proposed by the U.S. Environmental Protection Agency (USEPA) and/or CDPH.

Drinking water regulations pertaining to emerging contaminants of concern, such as chromium (VI), nitrosamines, and VOCs, and potential revisions to existing regulations are closely monitored by GSWC's Environmental Quality Department. The appropriate sampling and action will be taken on any affected water supply sources as monitoring requirements, new or revised MCLs are promulgated by the USEPA or CDPH. It is anticipated that it will take approximately 2 to 5 years from official adoption of a new or revised MCL to implement wellhead treatment or alternative approach for a source, including all steps from procuring CPUC funding approval to planning, permitting, design, and construction. There is typically adequate time allotted from regulatory approval to promulgation of a new drinking water standard to address localized treatment requirements; therefore no direct impacts to water supply reliability from future water quality regulations are anticipated at this time.

Strategies for treating groundwater in the Artesia System are designed to meet state and federal regulations. All equipment is regularly maintained by GSWC personnel, and any failures are immediately addressed, resulting in minimal disruption to water supply.

Iron and Manganese. The system consists of five active wells (Centralia No. 6, Hawaiian No. 1, Massinger No. 1, Roseton No. 1 and No. 2), and three offline wells (Centralia No. 3 and No. 4, Juan No. 4). In the Artesia system six (Centralia No. 3, Centralia No. 4, Juan No. 4, Hawaiian No. 1, Massinger No. 1, and Roseton No. 2) of its eight active and standby wells have manganese above the SMCL (50 ppb), and two (Centralia No. 4 and Juan No. 4) wells have iron above the SMCL (300 ppb). An iron and manganese dual media filtration treatment plant has been installed at the Centralia Plant. Pyrolusite treatment is used for the iron and manganese removal at Juan No. 4, Hawaiian No. 1, Massinger No. 1 and Roseton No. 2.

Arsenic. There are five wells (Centralia No. 3, Centralia No. 4, Centralia No. 6, Hawaiian No. 1, and Massinger No. 1) in the Artesia system that have concentrations of arsenic above the MCL of 10 µg/L. Coagulation/Filtration treatment using addition of Ferric Chloride is employed at the Centralia site. Adsorption using Granular Ferric Hydroxide treatment is in use at the Hawaiian and Massinger sites.

Table 5-1: Summary of Assessment

Well	Current Well Capacity (gpm) ⁽¹⁾	Status	Water Quality Issue/Concern	Existing Treatment	Recommendation
Centralia No. 3	0	Offline	Mn, As	Dual media pressure Filter for Mn removal, adsorption for As removal	Continue Treatment
Centralia No. 4	0	Offline	Mn, As, Fe	Dual media pressure Filter for Mn removal, adsorption for As removal	Continue Treatment
Centralia No. 6	2,000	Active	Mn, Fe, As	Dual media pressure Filter for Mn removal, adsorption for As removal	Continue Treatment
Hawaiian No. 1	600	Active	Mn, As	Pyrolusite for Mn removal, adsorption for As removal.	Continue treatment
Juan No. 4	0	Offline	Mn	Pyrolusite/Iron-based Adsorption	Continue Treatment
Massinger No. 1	580	Active	Mn, As	Pyrolusite for Mn removal, adsorption for As removal	Continue treatment
Roseton No. 1	750	Active	None	None	Continue monitoring
Roseton No. 2	950	Active	Mn, As, Fe	Pyrolusite for Mn removal	Continue monitoring

Note:

1. Estimated annual average current well production capacity is provided; actual and design instantaneous pumping capacity may be greater for each well.

5.2.2 Distribution System Water Quality

Distribution system water quality monitoring is performed for several water quality parameters in the Artesia System, including general physical parameters, presence of coliform bacteria, disinfectant and disinfection by-product levels. Corrosivity of the water is monitored by measuring lead and copper levels at customer water taps. The Artesia System utilizes an approved Sample Siting Plan for the collection, recording, and reporting of all bacteriological analyses. All monitoring parameters and levels currently meet drinking water standards. The ability to continue to meet these standards is not expected to change in the foreseeable future.

The Artesia System has also established an aggressive cross-connection control program to reduce the hazard associated with backflow and back-siphonage. The program is required to comply with DHS regulations for Waterworks Standards and Cross Connection Control.

5.3 Projected Impact of Water Quality

Impacts to the water supplies due to water quality issues are not expected based on known and proposed drinking water regulations. The limited sources of water supply to the water system are not viewed to change in either quality or supply in the projected future. This is summarized in Table 5-2 below:

Table 5-2: Summary of Projected Water Supply Changes Due to Water Quality Issues in ac-ft/yr						
Water Source	2005	2010	2015	2020	2025	2030
Centralia No. 3	0	0	0	0	0	0
Centralia No. 4	0	0	0	0	0	0
Centralia No. 6	0	0	0	0	0	0
Hawaiian No. 1	0	0	0	0	0	0
Juan No. 4	0	0	0	0	0	0
Massinger No. 1	0	0	0	0	0	0
Roseton No. 1	0	0	0	0	0	0
Roseton No. 2	0	0	0	0	0	0

Note:

Table format based on DWR Guidebook Table 30.

Chapter 6: Water Supply Reliability

Sections 10631 and 10635 of the Act require that an assessment of water supply reliability for various climatic conditions be undertaken. The Act states:

Section 10631.

- (c) (1) *Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage, to the extent practicable, and provide data for each of the following:*
- (A) *An average water year.*
 - (B) *A single dry water year.*
 - (C) *Multiple dry water years.*
- (2) *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.*

Section 10635.

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

6.1 Reliability of Supply

The Artesia System obtains its water supply from three sources: groundwater, imported Central Basin Municipal Water District (CBMWD) water from the City of Cerritos and recycled water from CBMWD. Since CBMWD obtains water supply from Metropolitan and Metropolitan obtains water supply from a number of different sources, conditions in local and distant areas can affect the reliability of supplies. This section summarizes the reliability of Golden State Water Company's (GSWC) water supply sources for the Artesia System. In general, GSWC's supply is expected to be 100 percent reliable through 2035. This reliability is a result of the following:

- Adjudicated groundwater rights in the Central Basin;
- Availability of leased groundwater;
- Benefits of conjunctive use storage programs to be developed in accordance with court Judgments that are anticipated at some time in the near future;
- Water supplies available from the City of Cerritos and their supplemental suppliers, CBMWD and Metropolitan, projected to be 100 percent reliable;
- Conservation derived supply; and
- The availability of recycled water from CBMWD.

6.1.1 City of Cerritos Water Supply Reliability

The Artesia System obtains imported water from the City of Cerritos, which is supplied by CBMWD, the local imported water wholesaler. CBMWD is largely a pass-through entity which obtains nearly all of its imported water from Metropolitan, directly or indirectly. Metropolitan has prepared several resource management plans, which are intended to document strategies that will be utilized to optimize the use of its available resources during both surpluses and droughts to minimize the probability of severe shortages, as well as shortage allocations. This section includes a discussion of Metropolitan and CBMWD water supply reliability considerations. Significant additional supply reliability detail may be obtained from the CBMWD and Metropolitan's 2010 Regional Urban Water Management Plan.

6.1.1.1 Metropolitan Supply Reliability

This section presents a brief discussion of the source reliability of Metropolitan's primary water supply sources: imported water supply from the Colorado River and the State Water Project, and Metropolitan's plans to ensure a reliable water supply into the future. Metropolitan maintains a diverse portfolio of water sources including surface water supply, aquifer recharge and recovery, desalination, and recycled water. The two primary components of Metropolitan's water supplies are also the most variable:

- **Colorado River Supply:** Metropolitan owns and operates the Colorado River Aqueduct (CRA), which connects the Colorado River to the Metropolitan regional distribution system. The CRA has a capacity of 1.25 Million AFY (MAF) to transport Metropolitan's current contracted entitlement of 550 Thousand AFY (TAF) of Colorado River water. Metropolitan also holds a priority for an additional 662 TAF and 180 TAF when surplus flows are available.
- **State Water Project (SWP) Supply:** The original State Water Project Contract called for an ultimate delivery capacity of 4.2 MAF, with Metropolitan holding a contract for 1.9 MAF. Since that time there have been significant challenges to meeting those delivery goals. DWR released a Water Allocation Analysis in 2010 that has resulted in a Metropolitan estimated reduction in SWP supplies of 150 – 200 TAF for 2010 (Metropolitan Draft Regional UWMP, 2010).

As a result of the inherent uncertainty in Colorado River and SWP supplies given various hydrologic, environmental, and legal considerations, Metropolitan has undertaken several planning initiatives, summarized below, to broaden its water resources reliability. Metropolitan has documented that consistent with Section 4202 of its Administrative Code, the agency is prepared to provide its member agencies with adequate supplies of water to meet expanding and increasing needs in the years ahead. When additional water resources are required to meet increasing needs, Metropolitan has stated that it will be prepared to deliver such supplies. In its 2010 Regional Urban Water Management Plan, Section II.4, Metropolitan also states that as a result of investments made in supply and storage, it has identified a resource management plan that should result in 100 percent reliability for non-discounted non-interruptible demands through 2035.

- **Integrated Resources Plan Updates (IRP):** Metropolitan's IRP updates completed in 1996, and updated in 2004 and 2010, included assessments of potential future regional demand projections based upon anticipated population and economic growth as well as conservation potential. The IRP also includes regional supply strategies and implementation plans to better manage resources, meet anticipated demand, and ensure overall system reliability.

Metropolitan intends to implement the 2010 IRP to further support member agency local resource development as well as to investigate generating its own local resources for distribution to member agencies. The development of local resources, as well as the furthering of existing conservation goals to meet the Water Conservation Act of 2009 targets, is anticipated to provide a supply buffer for member agencies to rely upon in times of drought and long-term climatic changes.

- **1999 Water Surplus and Drought Management Plan (WSDM):** The WSDM provides the policy guidance to manage the region's water supplies to achieve the reliability goals of the IRP. This is achieved by integrating the operating activities of surplus and shortage supplies through a series of stages and principles.
- **2008 Water Supply Allocation Plan (WSAP):** The WSAP includes the specific formula for calculating member agency supply allocations and the key implementation elements needed for administering the allocation. The need for the WSAP arose after the 2008 Bay-Delta biological opinions and rulings that limited SWP supplies to its contractors including Metropolitan. The WSAP formula seeks to balance the impacts of a shortage at the retail level while maintaining equity on the wholesale level for shortages of Metropolitan supplies up to 50 percent.

Since the 2008 Bay-Delta reductions, Metropolitan has been using the WSAP formulas to contend with the reduction in available imported supplies implementing a Stage 2 (Regional 10 percent reduction in supply allocation) of the WSAP from July 2009 to April 2011. During such allocations, Metropolitan institutes severe financial penalties should an entity request supply over their reduced allocation. This in effect, limits supply at the retail level. Although it is anticipated that the WSAP will continue to be in effect in the near-term, Metropolitan states in its 2010 Draft UWMP that there will be sufficient supply to meet member agency demands in single and multiple-dry years from 2015 through 2035. However, this is assuming that Metropolitan storage levels are at or above average levels prior to those cycles, and key programs come to fruition as assumed by Metropolitan in their projections. For example, Metropolitan assumes that a Delta conveyance solution will be in place by 2022. Also, Metropolitan has indicated that there is a 50 percent probability that storage levels will be lower than the assumption used. Based on the recent WSAP allocations and regulatory restrictions in the Delta, GSWC's conservative assumption is that Metropolitan's projections in their 2010 Draft UWMP may not be 100 percent reliable in all cases.

6.1.1.2 CBMWD's Water Supply Programs

CBMWD also expects its overall supply reliability to be 100 percent through 2035 for normal, single, and multiple-dry year scenarios. CBMWD's Draft 2010 UWMP states that their plan for reliability focuses on water resource diversification. CBMWD plans to further diversify its water resource mix during the next 25 years with the expansion of the recycled water system and increased conservation efforts. CBMWD has stated that imported supplies will decrease with the increase of recycled water and conservation.

6.1.2 GSWC's Groundwater Supply Reliability

Any water extracted from the Central Groundwater Basin requires water rights. GSWC has a total APA of 16,439 ac-ft/yr in the Central Basin that is divided between all of their systems in the Basin. GSWC maintains a legal right to pump their Central Basin APA each year. GSWC also leases groundwater rights to extract additional groundwater in the Central Basin annually,

on an as-needed basis. Historically, GSWC has leased up to an additional 7,500 ac-ft/yr in the Central Basin, averaging 3,550 ac-ft/yr from 1991 to 2010. If GSWC's actual demands exceed the adjudicated limits, GSWC can use leased rights to increase their allowed pumping.

Three agencies, Los Angeles County Department of Public Works (LACDPW), Water Replenishment District of Southern California (WRDSC), and CBMWD, work together with the groundwater producers such as GSWC to ensure that the APA is available to be pumped from wells in the Central Basin. LACDPW operates and maintains the Rio Hondo and San Gabriel spreading grounds in the Montebello Forebay. LACDPW diverts and recharges storm flows from the Rio Hondo and San Gabriel Rivers, highly treated wastewater from the Los Angeles County Sanitation Districts (Whittier and San Jose Wastewater Reclamation Plants), and imported water from Metropolitan (including both State Water Project water and Colorado River water). LACDPW, in conjunction with Orange County Water District, operates and maintains the Alamitos Barrier Project, which recharges imported water into a series of injection wells designed to prevent seawater intrusion into the Central Basin. WRDSC collects a replenishment assessment from all groundwater producers in the Basin to pay for water supplies to replenish the Basin. Annually, by statute, WRDSC is required to determine replenishment requirements. WRDSC pays CBMWD for imported and recycled water for recharge into the Central Basin.

These agencies have worked cooperatively to increase the reliability of the Central Basin groundwater supply. Recycled water is one of the cornerstones of the CBMWD's efforts to augment local supplies and reduce dependence on imported water. The use of recycled water assists in meeting demand for non-potable applications such as landscape irrigation, commercial and industrial processes, and seawater barriers (CBMWD, 2010). CBMWD currently delivers an average of 4,800 ac-ft/yr of recycled water and is planning to increase recycled water deliveries to 11,000 ac-ft/yr by 2020.

WRDSC provides recycled water to LACDPW for recharge as part of the Montebello Forebay Groundwater Recharge Project. LACDPW recharges up to 45,000 ac-ft/yr of recycled water annually through the spreading grounds. In addition, WRDSC plans to reduce imported water use at the Alamitos Barrier by 3,000 ac-ft/yr by replacing it with the delivery of recycled water through WRDSC's Leo Vander Lans Recycling facilities in Long Beach (CBMWD, 2005). Given the high cost of recycled water and the low cost of storage programs, it is possible that other purchasers of the recycled water may be found if regional needs are otherwise met in a groundwater management program to be developed according to the terms of an amended judgment.

One of the key tools that could be used to ensure future supply reliability is groundwater storage. Over the past 8 years, groundwater producers, cities, and regulated water utilities having extraction rights in the Central and West Coast Groundwater Basins have been working with the California Department of Water Resources and other regional water agencies to develop an integrated water storage plan for conjunctive use in both basins. However, as mentioned previously, DWR, acting as the court appointed Watermaster, has determined that stored water above the pumping allocation has no legal standing under the Central Basin Judgment (Judgment). This opinion has been upheld to date through court proceedings, including a May 12, 2010 decision in Los Angeles County Superior Court. This decision established that storage rights were not encompassed in the original Judgment, and a new complaint, proceeding and trial would need to be held to develop a new Judgment which would include storage rights. This decision has been appealed by proponents of a storage program, but a final review of the appeal has not been completed.

Despite the recent Court findings, CBMWD has started working on a groundwater storage plan which it could implement without amending the existing Judgment. In February, 2011, CBMWD released their preliminary plan entitled: *Initial Study Central Basin Groundwater Storage Plan: A Blueprint for Future Reliability* for California Environmental Quality Act compliance. The purpose of the plan is to implement an aquifer storage plan that will improve water supply reliability through the groundwater basin. It is GSWC's position that CBMWD's current plans fall short of what is needed to ensure long-term reliable groundwater supply because the plan does not include an amendment to the existing Judgment and does not fully address the costs or financial impacts of developing a plan. While GSWC supports implementation of conjunctive use management in the basin, any future management program must include a new Judgment or an amendment to the existing Judgment.

6.1.3 Artesia System's Water Supply Reliability

Table 6-1 presents water supply projections for imported water, recycled water, and groundwater sources during a normal year, single-dry year, and multiple-dry years for the Artesia System. The normal-year supply represents the expected supply under average hydrologic conditions, the dry-year supply represents the expected supply under the single driest hydrologic year, and the multiple-dry year supply represents the expected supply during a period of three consecutive dry years. Ongoing groundwater right leases (as available), consistent with current system operation strategies would allow GSWC to obtain 50 percent or more of total water supply which essentially increases supply reliability. However, since leases are determined annually, groundwater lease pumping estimates are not available for the water supply reliability analysis.

As described above, imported water supplies, whether from Metropolitan or other parties in conjunctive use storage programs that are anticipated to be developed, are expected to be 100 percent reliable and able to meet demands through 2035. Therefore, the imported water supply projections for a normal water year, single-dry year, and multiple-dry years are taken as the 2035 projection, which is equivalent to the imported water demand projected for 2035. It is assumed that the single-dry year and multiple-dry year supplies are the same as those for the normal years because available supplies are sufficient to meet projected demands under all anticipated hydrologic conditions – whether it be from water transfers stored in conjunctive use storage programs that could be developed, or core or buffer water supplies from Metropolitan. Recycled water is expected to be available during all hydrologic conditions because it is not subject to hydrologic variations

Groundwater from the Central Basin is also expected to be 100 percent reliable. The Central Basin has substantial storage capacity to provide a buffer during droughts and to accept recharge of surplus waters during times of available supplies (e.g., storm water, highly treated recycled water, and imported water). Continued diligence by the pumpers, WRDSC, LACDPW, and CBMWD is expected to ensure the reliability of the Central Basin groundwater supply. Recycled water is expected to be available during all hydrologic conditions because it is not subject to hydrologic variations.

Table 6-1: Supply Reliability for the Artesia System for Year 2035 in ac-ft/yr

Source	Normal Water Year	Single-Dry Water Year	Multiple-Dry Water Years		
			Year 1	Year 2	Year 3
Imported water from CBMWD / City of Cerritos	2,024	2,024	2,024	2,024	2,024
Groundwater APA Central Basin ⁽²⁾	5,000	5,000	5,000	5,000	5,000
Recycled Water	100	100	100	100	100
Total	7,124	7,124	7,124	7,124	7,124
Percent of Normal		100%	100%	100%	100%

Note:

1. Table format based on DWR Guidebook Table 28.
2. Groundwater APA pumping supply reliability does not include potential groundwater right leases.

Table 6-2 lists single-dry year and multiple-dry year periods for both groundwater and imported water supplies. As discussed earlier, the City of Cerritos receives Metropolitan imported water through CBMWD. Therefore, the single-dry year and multiple-dry year periods are based on CBMWD’s analysis on the lowest average precipitation for a single year, consecutive multiple-year period, respectively. CBMWD’s estimates, based on average rainfall over the last 100 years, suggest that FY 2009-2010 represents a normal water year, FY 2006-2007 represents the single-dry year, and the years of FY 2006-2007, 2007-2008, and 2008-2009 represent the driest three consecutive years. CBMWD has determined that they can meet their projected water demands for these periods, so the available supply is equal to the projected demands. Moreover, effective management of the Central Basin in accordance with anticipated amendments to the existing court Judgment will greatly enhance the entire region’s water supply reliability, allowing programs to be implemented at a lower cost.

Again, the Central Basin is operated to store surplus waters (storm water, recycled water, and imported water) when these waters are available, and then to draw down the basin in drier years to meet the requirements of the APA established under the Central Basin Judgment. The Basin has proven to be very reliable under extreme climate conditions over the last 40 years and is expected to remain reliable through 2035.

Table 6-2: Basis of Water Year Data		
Water Year Type	Base Year(s)	Historical Sequence
Imported and Groundwater		
Normal Water Year	FY 2009-2010	1910 – 2010
Single-Dry Water Year	FY 2006-2007	1910 – 2010
Multiple-Dry Water Years	FY 2006-2009	1910 – 2010

Notes:

1. Analysis of precipitation data provided by CBMWD.
2. Table format based on DWR Guidebook Table 27.

6.1.4 Factors Resulting in Inconsistency of Supply

Table 6-3 presents factors that could potentially result in inconsistency of supply for the Artesia System. As described above, GSWC's water rights are adjudicated and its lease rights are contractual. While there is legal uncertainty regarding the terms under which storage programs can be implemented in the Central Basin, development of a future storage program would provide greater certainty of groundwater supplies should surface water supply reliability ever decline. While the legal uncertainty regarding storage affects the cost of water, it does not affect the reliability of the regional supply as a result of Metropolitan's core and buffer water supply programs which are expected to assure the region, including GSWC customers, of 100 percent reliability (Metropolitan 2010 UWMP).

Table 6-3: Factors Resulting in Inconsistency of Supply				
Name of Supply	Legal	Environmental	Water Quality	Climatic
City of Cerritos ⁽¹⁾	N/A	N/A	N/A	N/A
Groundwater (Central Basin)	Adjudicated APA of 16,439 ac-ft/yr for all GSWC systems in the Central Basin. Lease agreements are in place to supplement pumping above 16,439 ac-ft/yr.	N/A	GSWC does not anticipate any changes in supply due to water quality issues.	N/A

Notes:

1. No further constraints affecting supply. Metropolitan's and CBMWD's supplies already accounted for these factors (see Metropolitan's UWMP and CBMWD's UWMP).
2. Table format based on DWR Guidebook Table 29.
3. N/A – Not Applicable.

6.2 Normal Water Year Analysis

Table 6-4 summarizes the supply reliability assessment for a normal water year based on water supply and water demand projections for the Artesia System.

Table 6-4: Comparison of Projected Normal Year Supply and Demand					
	2015	2020	2025	2030	2035
Water Supply Total (ac-ft/yr)	6,780	6,885	6,962	7,049	7,124
Water Demand Total (ac-ft/yr)	6,780	6,885	6,962	7,049	7,124
Difference (supply minus demand)	0	0	0	0	0
Difference as Percent of Supply	0%	0%	0%	0%	0%
Difference as Percent of Demand	0%	0%	0%	0%	0%

Note:

Table format based on DWR Guidebook Table 32.

6.3 Single-Dry-Year Analysis

Table 6-5 demonstrates the reliability of water supplies to meet projected annual water demands for the Artesia System in a single-dry year. CBMWD has determined that they can meet their projected water demands in a single-dry year, so the projected combination of imported water, local groundwater, and recycled water supplies are equal to the projected demands.

Table 6-5: Comparison of Projected Supply and Demand for Single-Dry Year					
	2015	2020	2025	2030	2035
Supply Total (ac-ft/yr)	6,780	6,885	6,962	7,049	7,124
Demand Total (ac-ft/yr)	6,780	6,885	6,962	7,049	7,124
Difference (supply minus demand)	0	0	0	0	0
Difference as Percent of Supply	0%	0%	0%	0%	0%
Difference as Percent of Demand	0%	0%	0%	0%	0%

Note:

Table format based on DWR Guidebook Table 33.

6.4 Multiple-Dry-Year Analysis

Table 6-6 presents the projected multiple-dry year water supply and demand assessment. It is assumed that the multiple-dry year water supplies are the same as those for the normal years because Metropolitan (through CBMWD) intends to meet projected imported demands under all anticipated hydrologic conditions. The third year of the multiple-dry year water supply projection represents the end of each 3-year multiple-dry year period as required for the multiple-dry year analysis. CBMWD has determined that it can meet projected water demands for multiple-dry years, so the water supply is projected to equal the projected demands.

Table 6-6 demonstrates that the water supplies are sufficient to meet the projected water demand for each multiple-dry year period because:

- CBMWD has determined that they can meet projected water demands for the multiple-dry year periods (see Chapter 3);
- Groundwater from the Central Basin is expected to be 100 percent reliable in multiple-dry years, and;
- Recycled water is expected to be available during all hydrologic conditions because it is not subject to hydrologic variations.

It should be noted that the active connection capacity to deliver imported water is significantly higher than the projected imported water supply that is needed to meet these demands. Therefore, the imported water supply is generally expected to be much greater than the expected projected water demands during multiple-dry years.

In summary, GSWC, Metropolitan, and CBMWD have implemented and will implement projects to ensure that imported water demands can be met under normal year, single-dry year, and multiple-dry years.

Table 6-6: Projected Multiple-Dry Year Water Supply and Demand Assessment

Year	Supply (ac-ft/yr)	Demand (ac-ft/yr)	Difference	Difference as Percent of Supply	Difference as Percent of Demand
2011					
2012					
2013	6,313	6,313	0	0%	0%
2014	6,547	6,547	0	0%	0%
2015	6,780	6,780	0	0%	0%
2016					
2017					
2018	6,843	6,843	0	0%	0%
2019	6,864	6,864	0	0%	0%
2020	6,885	6,885	0	0%	0%
2021					
2022					
2023	6,931	6,931	0	0%	0%
2024	6,946	6,946	0	0%	0%
2025	6,962	6,962	0	0%	0%
2026					
2027					
2028	7,014	7,014	0	0%	0%
2029	7,032	7,032	0	0%	0%
2030	7,049	7,049	0	0%	0%
2031					
2032					
2033	7,094	7,094	0	0%	0%
2034	7,109	7,109	0	0%	0%
2035	7,124	7,124	0	0%	0%

Notes:

1. This assessment is based on the 3-year multiple-dry year period ending in 2015, 2020, 2025, 2030, and 2035.
2. Table format based on DWR Guidebook Table 34.

Chapter 7: Conservation Program and Demand Management Measures

This Chapter addresses the water conservation requirements of the Act for the Artesia System and includes a summary of current and planned Demand Management Measure (DMM) implementation and an overview of the proposed program for compliance with SBX7-7, which requires 20 percent statewide reduction in urban water use by 2020. The DMM portions of the Act state the following:

Section 10631.

- (f) *Provide a description of the supplier's water demand management measures. This description shall include all of the following:*
- (1) *A description of each water demand management measure that is currently being implemented, or scheduled for implementation, including the steps necessary to implement any proposed measures, including, but not limited to, all of the following:*
 - (A) *Water survey programs for single-family residential and multifamily residential customers.*
 - (B) *Residential plumbing retrofit.*
 - (C) *System water audits, leak detection, and repair.*
 - (D) *Metering with commodity rates for all new connections and retrofit of existing connections.*
 - (E) *Large landscape conservation programs and incentives.*
 - (F) *High-efficiency washing machine rebate programs.*
 - (G) *Public information programs.*
 - (H) *School education programs.*
 - (I) *Conservation programs for commercial, industrial, and institutional accounts.*
 - (J) *Wholesale agency programs.*
 - (K) *Conservation pricing.*
 - (L) *Water conservation coordinator.*
 - (M) *Water waste prohibition.*
 - (N) *Residential ultra-low-flush (ULF) toilet replacement programs.*
 - (2) *A schedule of implementation for all water demand management measures proposed or described in the plan.*
 - (3) *A description of the methods, if any, that the supplier will use to evaluate the effectiveness of water demand management measures implemented or described under the plan.*
 - (4) *An estimate, if available, of existing conservation savings on water use within the supplier's service area, and the effect of the savings on the supplier's ability to further reduce demand.*
- (g) *An evaluation of each water demand management measure listed in paragraph (1) of subdivision (f) that is not currently being implemented or scheduled for implementation. In the course of the evaluation, first consideration shall be given to water demand management measures, or combination of measures, that offer lower incremental costs than expanded or additional water supplies. This evaluation shall do all of the following:*
- (1) *Take into account economic and noneconomic factors, including environmental, social, health, customer impact, and technological factors.*
 - (2) *Include a cost-benefit analysis, identifying total benefits and total costs.*
 - (3) *Include a description of funding available to implement any planned water supply project that would provide water at a higher unit cost.*
 - (4) *Include a description of the water supplier's legal authority to implement the measure and efforts to work with other relevant agencies to ensure the implementation of the measure and to share the cost of implementation.*
- (j) *For purposes of this part, urban water suppliers that are members of the California Urban Water Conservation Council shall be deemed in compliance with the requirements of subdivisions (f) and (g) by*

complying with all the provisions of the "Memorandum of Understanding Regarding Urban Water Conservation in California," dated December 10, 2008, as it may be amended, and by submitting the annual reports required by Section 6.2 of that memorandum.

7.1 Conservation Program Background

In 1991, GSWC became a signatory to the MOU regarding water conservation in California and a member of the CUWCC, establishing a firm commitment to the implementation of the Best Management Practices (BMPs) or DMMs. The CUWCC is a consensus-based partnership of agencies and organizations concerned with water supply and conservation of natural resources in California. By becoming a signatory, GSWC committed to implement a specific set of locally cost-effective conservation practices in its service areas.

To facilitate efficient BMP reporting for water systems located in GSWC's three regions in California, GSWC established a number of BMP "Reporting Units" based on geographic proximity. GSWC's Metro BMP Reporting Unit is defined as all of the company's water systems within their Region II. Therefore, this chapter includes conservation activities for the Artesia, Bell/Bell Gardens, Culver City, Florence/Graham, Hollydale, Norwalk, Southwest and Willowbrook Systems.

As an investor-owned utility, GSWC's ability to obtain funding and implement conservation programs is contingent on approval of the General Rate Case by the CPUC. GSWC is currently in the process of reviewing and revising its existing conservation program as follows:

- In 2011, GSWC will be submitting a General Rate Case with the CPUC which will facilitate further development of cost-effective conservation programs, including compliance with SBX7-7.
- Subject to funding approval for each rate making area, GSWC will conduct a baseline water use efficiency assessment of each of its districts to identify the opportunities for cost-effective conservation. Results of the baseline assessment will be available by 2013 and will enable GSWC to define programs that target water savings in specific areas and meet DMM requirements.
- To the extent practicable, a companywide conservation program will then be implemented. Varying levels of program implementation will be scaled as appropriate for each district depending on funding availability, local wholesaler and regional participation levels, and SBX7-7 targets.

The MOU and associated BMPs were revised by the CUWCC in 2008, which is equated to the DMMs per Section 10631(j) of the Act. The revised BMPs now contain a category of "Foundational BMPs" that signatories are, for the first time and with few exceptions, expected to implement as a matter of their regular course of business. These include Utility Operations (metering, water loss control, pricing, conservation coordinator, wholesale agency assistance programs, and water waste ordinances) and Public Education (public outreach and school education programs). The remaining BMPs are called Programmatic BMPs and are divided into Residential, Large Landscape, and CII categories. These revisions are reflected in the CUWCC's BMP reporting database starting with reporting year 2009. The revised BMP organization is also reflected in the 2010 UWMP's DMM compliance requirements. A summary of the DMMs described in the Act and the current CUWCC BMP organization is presented in Table 7-1 for reference.

Table 7-1: CUWCC BMP and UWMP DMMs Organization and Names

CUWCC BMP Organization and Names (2009 MOU)				UWMP DMMs		
Type	Category	BMP #	BMP name	DMM #	DMM name	
Foundational	Operations Practices	1.1.1	Conservation Coordinator	L	Water conservation coordinator	
		1.1.2	Water Waste Prevention	M	Water waste prohibition	
		1.1.3	Wholesale Agency Assistance Programs	J	Wholesale agency programs	
		1.2	Water Loss Control	C	System water audits, leak detection, and repair	
		1.3	Metering with Commodity Rates for All New Connections and Retrofit of Existing Connections	D	Metering with commodity rates for all new connections and retrofit of existing connections	
		1.4	Retail Conservation Pricing	K	Conservation pricing	
	Education Programs	2.1	Public Information Programs	G	Public information programs	
		2.2	School Education Programs	H	School education programs	
	Programmatic	Residential	3.1	Residential assistance program	A	Water survey programs for single-family residential and multi-family residential customers ⁽¹⁾
					B	Residential plumbing retrofit
3.2			Landscape water survey	A	Water survey programs for single-family residential and multi-family residential customers ⁽¹⁾	
3.3			High-Efficiency Clothes Washing Machine Financial Incentive Programs	F	High-efficiency washing machine rebate programs	
3.4			WaterSense Specification (WSS) toilets	N	Residential ultra-low-flush toilet replacement programs	
Commercial, Industrial, and Institutional		4	Commercial, Industrial, and Institutional	I	Conservation programs for commercial, industrial, and institutional accounts	
Landscape		5	Landscape	E	Large landscape conservation programs and incentives	

Note:

1. Components of DMM A (Water survey programs for single-family residential and multi-family residential customers) applies to both BMP 3.1 (Residential assistance program) and BMP 3.2 (Landscape water survey).

7.2 Implementation of BMPs/DMMs

This section provides a description of the various programs and conservation activities implemented in the Metro Reporting Unit water systems. Signatories to the MOU are permitted by Water Code Section 10631(j) to include their biennial CUWCC BMP reports in an UWMP to meet the requirements of the DMMs sections of the UWMP Act if the agency is meeting all provisions of the MOU. The Metro Reporting Unit BMP coverage report for 2009 through 2010 is attached as Appendix C and supplements the summary of BMP implementation activities provided in this chapter.

GSWC is progressing towards implementing all Foundational BMPs for these systems, as required in the revised MOU and UWMP Act. The Programmatic BMPs are currently being implemented through a BMP approach for the systems. The SBX7-7 conservation goals and proposed implementation plans are discussed further in Section 7.5.

GSWC plans to continue to implement and track conservation programs for systems in the Metro Reporting Unit. GSWC also partners on conservation activities with its wholesale water suppliers, including Metropolitan, CBMWD and WBMWD. GSWC's customers are eligible for of a number of conservation programs offered by Metropolitan, providing water savings to GSWC. Examples of programs offered by wholesale suppliers that are available to customers include High Efficiency Clothes Washers (HECW) rebates, CII programs and rebates, and High Efficiency Toilets (HET) rebates.

7.3 Foundational DMMs

7.3.1 Utility Operations

7.3.1.1 Conservation Coordinator

This BMP is implemented. GSWC maintains a fully staffed Conservation Department with a companywide Water Use Efficiency Manager, Water Conservation Analyst and one Water Conservation Coordinator for each of the three regions to administer conservation programs and support wholesaler programs which includes the Artesia System. GSWC also employs a number of consultants to support program development and implementation.

7.3.1.2 Water Waste Prevention

Although GSWC does not have rule-making authority, it supports member agencies and local cities in efforts to adopt ordinances that will reduce water waste. This BMP is implemented through CPUC-approved rules provided in Appendix D, including Rule No. 14.1, the Water Conservation and Rationing Plan, and Rule 11, Discontinuance and Restoration of Service.

CPUC's methodology for water utilities to implement Rule 14.1 is documented in Standard Practice U-40-W, "Instructions for Water Conservation, Rationing, and Service Connection Moratoria." Rule No. 14.1 sets forth water use violation fines, charges for removal of flow restrictors, and the period during which mandatory conservation and rationing measures will be in effect. Water conservation restrictions include:

- Use of potable water for more than minimal landscaping.
- Use through a broken or defective water meter.

- Use of potable water which results in flooding or runoff in gutters or streets.
- Use of potable water for washing private cars or commercial aircrafts, cars, buses, boats, or trailers, except at a fixed location where water is properly maintained to avoid wasteful use.
- Use of potable water for washing buildings, structures, driveways, street cleaning or other hard-surfaced areas.
- Use of potable water to irrigate turf, lawns, gardens or ornamental landscaping.
- Use of potable water for construction purposes.
- Use of potable water for filling or refilling of swimming pools.

Rule No. 20 (approved in 1978) discourages wasteful use of water and promotes use of water saving devices. The stated purpose of the rule is to “ensure that water resources available to the utility are put to a reasonable beneficial use and that the benefits of the utility's water supply and service extend to the largest number of persons.” Together, Rules 11, 14.1 and 20 prohibit negligent or wasteful use of water, create a process for mandatory conservation and rationing, and promote the use of water saving devices.

7.3.1.3 Water Loss Control

Unaccounted for water losses are monitored by the Water Loss Control Department (WLCD) by reviewing the Water Audit program's survey results for each system. If the amount of unaccounted for water exceeds the established tolerance levels, a Leak Detection Audit is performed. This is conducted by the Water Loss Control Technician with the most current leak detection technology, a Sonic Leak Detection Sound Amplification Instrument. To pinpoint leaks, the technician conducts a comprehensive survey of the system by making physical contact with all available main line valves, hydrant valves and all service connections.

For Calendar Year 2009, GSWC implemented the American Water Works Association (AWWA) M36 Standard Water Audit methodology. The approach consists of a component analysis of leaks for designation into “revenue” and “non-revenue” categories and an economic analysis of recoverable loss. Results of the analysis are included in the BMP coverage report in Appendix C.

Before the AWWA Standard Water Audit M36 methodology was implemented, prescreening for water losses was conducted by comparing the total volume of water sales and other verifiable uses against the total water supply into the system. A full audit was triggered if the total sales and verifiable uses was less than 90 percent of the total supply (i.e., unaccounted-for-water exceeded 10 percent). Table 7-2 summarizes prescreening results.

Report Year	Prescreen Completed	Prescreen Result
2006	Yes	92.0%
2007	Yes	99.2%
2008	Yes	91.5%
2009	Yes	94.8%

Note:
2010 Data Not applicable; M36 method implemented.

Implementation Steps and Schedule

Effective 2010, GSWC will continue to complete the Standard Audit and Water Balance worksheets following the AWWA M36 protocol for the next 4 years, taking measurable steps to improve data accuracy while cost-effectively reducing non-revenue water through repair of leaks and other measures. The water audit for Calendar Year 2010 will be completed by mid-2011.

GSWC used version 3.0 of the AWWA Water Audit software for its initial evaluation, and will use the current software for 2010 and all future evaluations. The current version includes metrics for evaluating the validity of the data. GSWC already has a work order system in place that documents leak locations and repair history.

7.3.1.4 Metering with Commodity Rates for All New Connections and Retrofit of Existing Connections

All customers in Region II are metered and billed by volume on a monthly basis. A meter maintenance and repair plan has been submitted to the CUWCC. In addition, GSWC follows the requirements of CPUC General Order 103-A which prescribes minimum water system design, operation and maintenance standards for water utilities includes requirements for calibrating, testing frequency, and replacing water meters.

7.3.1.5 Retail Conservation Pricing

All metered customers in Region II are billed volumetrically. In addition, effective December 2010, GSWC has implemented a third tier of a conservation pricing rate structure for residential customers, as approved by the CPUC for Region II. The current rate structure for residential customers has a fixed charge as well as volumetric escalating pricing tiers, depending on customer usage. Non-residential customers have a fixed charge and a fixed volumetric charge. Implementation of this revised pricing policy is the result of GSWC's collaboration with CPUC to implement conservation tiered rates for residential customers of investor-owned utilities. Tiered rates are consistent with the CPUC's Water Action Plan.

Implementation Steps and Schedule

2009 and 2010 volumetric and fixed price revenue data for the Metropolitan Reporting Unit are summarized in the BMP Coverage Report located in Appendix C. Since 2010, GSWC has been adding third tier pricing structures and increasing volumetric charges. In 2010, volumetric

revenue consisted of 62.8 percent of the Metropolitan Reporting Unit's total revenue which is on track to meet the 2012 MOU goal of 70 percent.

As previously discussed, GSWC will be submitting a General Rate Case filing to the CPUC in 2011, which includes a proposed rate increase for volumetric charges for Region II customers. If approved, this rate increase will allow GSWC to increase volumetric revenues and progress towards fulfilling the requirements of the Retail Conservation Pricing BMP by 2015.

7.3.1.6 Education

Public Information Programs

Region II customers are notified of various conservation programs by the Community Education Department. GSWC had a 2010 annual budget of \$35,000 for public outreach in Region II. GSWC provides marketing and outreach materials to their customers by issuing press releases, publishing quarterly newsletters and using door tags and bill inserts. Customers can learn about rebates and other conservation programs on GSWC's website, which provides links to Metropolitan's website for detailed information. Outreach activities completed between 2006 and 2010 are summarized in Table 7-3.

Table 7-3: Outreach Activities					
Item	2006	2007	2008	2009	2010
Contacts with the Media/Paid Advertising	0	0	0	4	4
Bill Inserts / Newsletters / Brochures	3	1	1	4	4
Bill showing water usage in comparison to previous year's usage	Yes	Yes	Yes	Yes	Yes
Demonstration Garden Tours	0	0	0	6	12
Special Events, Media Events	3	3	4	8	8
Speaker's Bureau	0	0	0	2	2
Program to coordinate with other government agencies, industry, public interest groups and media	Yes	Yes	No	Yes	Yes

School Education Programs

GSWC sponsors a school education program in Region II elementary schools, as implemented by The Discovery Science Center (DSC). Students learn about conservation practices and receive a free conservation kit that includes a water survey, 1.5 gpm low-flow shower head, 1.5 gpm kitchen sink aerator and 1.0 gpm bathroom aerators, leak detection dye tablets, a watering gauge, and step-by-step instructions. The students are given homework assignments to complete a water audit form and replace inefficient showerheads and aerators with water-saving devices provided in the kit. The program has been a very effective way for GSWC to reach a large number of customers and educate students, who in turn educate their parents about water use efficiency practices and low-flow plumbing devices.

Results from the program are tracked, and a comprehensive Program Summary Report is generated at the end of each school year. This report documents the estimated reduction in water usage that was achieved through the retrofits and provides data on the percentage of students who participated in the program. Table 7-4 provides a summary of program participation results between 2006 and 2010.

Table 7-4: School Education Activities					
	2006	2007	2008	2009	2010
Presentations	155	120	95	275	275
Grade	4 th – 6 th	4 th – 6 th	5 th – 6 th	5 th – 6 th	5 th – 6 th
Number of students	5,938	7,445	8,300	8,900	8,900

In addition to the DSC and partnering with wholesalers and other public agencies, GSWC implements Resource Action Programs (RAP) and the Science Discover (SD) program. During the 2009/2010 school year, GSWC conducted school conservation education programs for an estimated 15,525 students companywide.

Implementation Steps and Schedule

GSWC recognizes the value in increased customer awareness of the various conservation programs that are available. To that end, GSWC will review opportunities to enhance its outreach program over the next two (2) years to supplement DSC’s existing public education efforts. Public information measures that will be evaluated include additional direct mail fliers, increased outreach participation at community functions, and an improved conservation website.

Going forward, GSWC plans to continue to use the RAP, DSC, and SD and internal staff to conduct its school conservation programs. RAP and DSC’s school conservation education programs will continue to include annual reports, classroom education and the distribution and installation of conservation kits that are part of the school education program.

7.3.1.7 Methods Used to Evaluate Effectiveness and Water Savings from Foundational BMPs

Effective implementation of the Foundational BMPs is critical to ensuring the long-term success of GSWC’s conservation efforts. GSWC will utilize quantitative methods to assess the effectiveness of each BMP, to the extent practicable. The effectiveness of the Water Waste Prevention and Water Loss Control BMPs can be measured, in part, by completing the annual M36 water loss audits and documenting the year-over-year change in unaccounted-for water as well as the number of repair projects completed. GSWC will track the impact of new conservation pricing by using its upgraded billing system to carefully monitor consumption of residential customers.

The effectiveness of implementing Public Education BMPs will be measured by tracking the number of public outreach events and education programs where customers receive information on conservation. A successful public information program should encourage customers to take advantage of conservation incentives being offered by GSWC and Metropolitan as Programmatic DMMs.

There are no direct estimates of water savings applicable to the Foundational BMPs; however, these measures will continue to contribute to reducing Region II's demand.

7.4 Programmatic DMMs

GSWC intends to continue to comply with the MOU using the BMP compliance approach for the Metro Reporting Unit. Implementation of the programmatic BMPs will continue to be a joint effort with Metropolitan. Metropolitan is responsible for administering most of the Residential, Landscape, and CII BMPs currently being offered to Region II customers. Additional detailed descriptions of wholesaler DMM implementation can also be found in Metropolitan's 2010 RUWMP, as well as CBMWD and WBMWD's 2010 UWMPs where appropriate. GSWC will continue to support Metropolitan activities and will focus on improving outreach to its customers and promoting awareness of the programs available to them.

Once the pending rate case is approved by the CPUC, GSWC will develop a prioritized water use efficiency program and implementation schedule for all customer service areas in the company focusing on systems with the highest SBX7-7 water use reduction targets, and those where specific conservation activities can be implemented that are locally cost-effective. Programs that are cost-effective to implement on a companywide basis will also be considered. At this time, all of the BMPs are cost-effective for implementation in Region II, where the avoided cost of water is \$980 per acre-foot.

7.4.1 Residential DMMs

7.4.1.1 Residential Assistance Programs

GSWC has an audit program targeting high-use single-family (SF) and multi-family (MF) residential customers. GSWC identifies these customers based on billing data and contacts them to offer free audits. Audits are also offered to walk-in customers at the local customer service area office. Additional home audits are conducted as part of the school education program (Section 7.3.1.6). The number of residential audits performed by GSWC and the number of low-flow devices that were distributed are summarized in Table 7-5. Low-flow devices are available for free to customers at the GSWC office and are distributed to students as part of the free conservation kits they receive in the school education program.

Table 7-5: Residential Surveys and Retrofits in the Metro Reporting Unit					
	2006	2007	2008	2009	2010
Single-Family Accounts					
Surveys Offered	0	0	5,878	13,286	14,100
Surveys Completed	0	0	1,821	3,186	2,945
Multi-Family Accounts					
Surveys Offered	0	0	5,878	97	119
Surveys Completed	0	0	1,821	32	20
Devices					
Showerheads	700	700	8,800	10,165	11,072
Aerators	1,000	700	8,500	26,766	28,255

Implementation Steps and Schedule

Over the next 5 years, GSWC will continue distributing low flow showerheads and aerators to customers, and offering audits to high-use SF and MF customers until saturation requirements are satisfied for this BMP. It is estimated that 1,308 devices per year will need to be installed in SF and MF residences. Once saturation requirements are met, GSWC will continue to offer the programs as required by the MOU.

Methods Used to Evaluate Effectiveness and Water Savings

Effectiveness of implementation of this program is evaluated by GSWC by tracking customer participation rates in surveys and distribution of low flow showerheads. The following water savings estimates were developed using data provided by the CUWCC:

- Residential Assistance Surveys: According to the CUWCC, SF surveys are estimated to save 40 gpd and MF surveys are estimated to save 20 gpd. At 1,308 surveys per year, it is estimated that GSWC will save more than 2,400 ac-ft over the next 10 years.
- Plumbing Retrofit kits: Per the CUWCC, it is estimated that 7.7 gpd per unit is conserved from installation of low flow showerheads and 1.5 gpd for a faucet aerator. At 75 percent saturation, the potential total savings is approximately 404 ac-ft over the next 10 years.

Program effectiveness and per capita use will continue to be monitored based on meter readings and billing data, and follow-up calls will be made to offer audits and other assistance to high-use customers. Implementation of the residential assistance programs BMP has no anticipated impacts on GSWC's ability to further reduce demands.

7.4.1.2 Landscape Water Surveys

GSWC offers landscape water surveys to high water-use SF and MF customers throughout the company. Since residential surveys include a landscape component, participation rates are included in the residential assistance program summary above. Introduction of the third tier of metered rates in late 2010 is expected to result in higher participation rates, and funding has been designated to improving program marketing.

Implementation Steps and Schedule

Residential assistance survey programs have a landscape component to them and are being implemented concurrently. A description of the proposed implementation strategy and schedule is provided in the section describing the Residential Assistance Program BMP.

Methods Used to Evaluate Effectiveness and Water Savings

See residential assistance programs description.

7.4.1.3 High-Efficiency Clothes Washers

GSWC customers are eligible to participate in the High Efficiency Clothes Washer (HECW) rebate program provided by Metropolitan, which has been available since 2003. Metropolitan has supplemented its HECW rebate using state or federal grants whenever possible. The water efficiency of clothes washers is represented by the "water factor," which is a measure of the amount of water used to wash a standard load of laundry. Washers with a lower water factor

save more water. Metropolitan has continued to transform the market by changing its program requirement to lower water factors. The program eligibility requirement is currently set at water factor 4.0, which saves over 10,000 gallons per year per washer over a conventional top loading washer. GSWC does not contribute funds to the HECW rebate program. The GSWC conservation webpage advertises the rebates and provides a link to the Metropolitan website for full program details. A summary of the HECW Rebates received by GSWC customers in Region II is provided in Table 7-6.

	2006	2007	2008	2009	2010	TOTAL
Rebates	50	0	581	400	134	1,165

Implementation Steps and Schedule

To comply with the BMP, rebates need to be issued to 704 customers per year in Region II until saturation requirements are met. GSWC intends to continue to participate in the HECW rebate program administered by Metropolitan and to increase program participation will increase marketing efforts to raise customer awareness that the program is being offered. GSWC will develop an updated conservation website, and prominently include HECW rebate incentive on future bill stuffers or other direct mail campaigns.

Methods Used to Evaluate Effectiveness and Water Savings

Metropolitan tracks customer participation in the HECW rebate program and estimates that 28 gallons per day are saved for each HECW installed. At the required implementation levels, it is estimated that GSWC will save a total of approximately 965 ac-ft from 704 HECWs installed per year over the next 10 years. There are no anticipated impacts on GSWC's ability to further reduce demands.

7.4.1.4 WaterSense Specification (WSS) Toilets

GSWC customers have been eligible to participate in the High Efficiency Toilet (HET) rebate program administered by Metropolitan since 2008 Metropolitan has provided incentives for toilet programs since 1988, including ULFT rebates. Currently, Metropolitan only provides funding for high-efficiency toilets (1.28 gallons per flush or less), which use 20 percent less than ultra-low-flush toilets (1.6 gallons per flush). Ultra-low-flush toilets are the current standard defined by the plumbing code. Metropolitan uses the EPA's WaterSense list of tested toilets in its programs as qualifying models. The GSWC webpage for Region II advertises the rebates and provides a link to the Metropolitan website for full details. The number of rebates issued by Metropolitan to GSWC Region II customers is provided in Table 7-7.

Table 7-7: Toilet Rebates and Replacements Received by Artesia System Customers

Type	2006	2007	2008	2009	2010
Single-Family					
ULFT Rebates	461	0	418	0	0
HET Rebates	0	0	0	500	362
Multi-Family					
ULFT Rebates	101	0	417	0	0
HET Rebates	0	0	0	0	30

Implementation Steps and Schedule

To comply with the BMP, rebates need to be issued to 634 SF and 302 MF customers per year in Region II. GSWC intends to continue to participate in the HET rebate program administered by Metropolitan as described above. GSWC will also evaluate augmenting existing public outreach efforts through direct mail and enhanced website features to inform customers about current incentive opportunities and increase program participation.

Methods Used to Evaluate Effectiveness and Water Savings

Metropolitan tracks customer participation in the HET rebate program to measure effectiveness. According to the CUWCC research and evaluation committee, it is estimated that 21.1 and 26.6 gallons per day are saved for each HECW installed in SF and MF units, respectively. It is estimated that GSWC will save approximately 1,172 ac-ft from HET installations completed over the next 10 years at required implementation levels of 634 SF and 302 MF installations. There are no anticipated impacts on GSWC’s ability to further reduce demands.

7.4.1.5 WaterSense Specification for Residential Development

Integration of WaterSense Specification (WSS) fixtures for new development will be accelerated by the 2010 California Green Building Standards Code (CAL Green Code), which became effective in January 2011. The CAL Green Code sets mandatory green building measures, including a 20 percent reduction in indoor water use, as well as dedicated meter requirements and regulations addressing landscape irrigation and design. Local jurisdictions, at a minimum, must adopt the mandatory measures; the CAL Green Code also identifies voluntary measures that set a higher standard of efficiency for possible adoption.

Implementation Exemption

GSWC is filing an exemption on implementation of the WSS specification for new developments due to lack of legal authority. As an investor-owned utility, GSWC does not have regulatory authority and cannot adopt ordinances or regulations; however, it does support standards that will achieve a reduction in indoor water use including implementation and use of WSS fixtures as well as adoption of the CAL Green Code by local jurisdictions, including Los Angeles County. GSWC will continue to support incentive programs for water efficient devices and standards.

The cost of implementing this BMP is non-quantifiable; therefore a cost-effectiveness evaluation was not completed.

7.4.1.6 Commercial, Industrial, and Institutional DMMs

The Commercial, Industrial, and Institutional (CII) programs are implemented by Metropolitan on behalf of GSWC. Table 7-8 provides a summary of CII program participation from GSWC's Region II customers from 2006 to 2010. GSWC customers are eligible to participate in Metropolitan's CII program, Save-A-Buck Program for Southern California businesses. Those who qualify are eligible for rebates to help encourage water efficiency and conservation. Devices available for rebates include: high efficiency toilets, zero water and ultra low water urinals, connectionless food steamers air-cooled ice machines (Tier III), cooling tower and pH conductivity controllers, water brooms, dry vacuum pumps. Additionally, the Save-A-Buck program offers rebates for outdoor landscaping equipment such as: weather based irrigation controllers, central computer irrigation controllers, rotating spray nozzles retrofits, and high efficiency large rotary nozzle retrofits.

Program	2006	2007	2008	2009	2010
CII HET Rebates	310	0	442	500	500
CII ULFT Rebates	0	0	74	0	0
Dual Flush Toilets	0	0	29	0	0
CII Urinal Rebates	47	0	17	330	240
CII HECW Rebates	0	0	71	25	0
Cooling Tower Controllers	0	0	1	0	0

Implementation Steps and Schedule

GSWC's goal for the next 3 to 5 years is to focus on advertising and outreach programs, including CII rebates, as described elsewhere in this chapter. If, after additional advertising efforts it is determined that Metropolitan's program is not meeting coverage requirements, GSWC will evaluate augmenting Metropolitan's program. To meet BMP requirements for the required 10 percent water savings (about 380 ac-ft/yr) by 2020, GSWC will need to support or augment Metropolitan's program to encourage customers to participate in rebate incentive programs. GSWC will also evaluate implementing additional CII water savings programs, such as industrial process water use reductions.

Methods Used to Evaluate Effectiveness and Water Savings

Effectiveness of the CII program will be evaluated by tracking multiple parameters, including program participation, metered CII water use, high water users, and measuring water savings from of specific CII activities where practicable to show a water savings of at least 151 ac-ft per year. There are no anticipated impacts on GSWC's ability to further reduce demands.

7.4.1.7 Large Landscape

GSWC's large landscape program consists of identifying and contacting high-use customers, providing information and offering water use surveys, voluntary landscape water use budgets, and landscape training. While the program is available to all large landscape customers free of charge. WBMWD and GSWC are currently partnering in the "Ocean-Friendly" program where

GSWC's customers who are in WBMWD's service territory can apply for free landscape audits and the installation of free weather based irrigation controllers. An increase in conservation pricing rates in 2011 is expected to prompt increased participation, and funding has been designated for improved program marketing.

Rebate Programs	Number of Incentives	Dollar Value of Incentives
Smart Irrigation Controller	100	\$ 14,675
Drip Irrigation Retrofits	11	\$ 275
MP Rotator Retrofits	1,200	\$ 3,600
Total	1,311	\$ 18,550

Implementation Steps and Schedule

Implementation of this BMP will be improved by promoting existing incentive opportunities and raising customer awareness about existing audit program offerings. For the next 4 to 5 years, GSWC will work to increase program participation at schools and other institutional accounts to establish landscape water budgets and decrease overall water use. Additionally, GSWC will discuss with Metropolitan specific measures that could be implemented to encourage broader interest in the multiple CII programs that are currently being offered.

In order to meet BMP coverage requirements, GSWC/Metropolitan will need to develop evapotranspiration-based landscape water budgets for 72 accounts with dedicated irrigation meters per year. GSWC will also continue to offer landscape water use surveys to customers without dedicated irrigation meters. Devices such as weather based irrigation controllers (WBIC) and precision nozzles will also be distributed to mix-metered high water use customers who have been determined not to be water efficient.

Methods Use to Evaluate Effectiveness and Water Savings

GSWC will track increased customer participation in the CII large landscape water budgeting and rebate programs. At the implementation rate described above, it is estimated that as much as 3,270 AF could be conserved by 2020. There are no anticipated impacts on GSWC's ability to further reduce demands.

7.5 SBX7-7 Compliance Strategy

The SBX7-7 water use baseline for the Artesia System is 113 gpcd, and the 2020 compliance goal is 108 gpcd, as detailed in Chapter 3. Several factors have contributed to a rapid reduction in gpcd over the past few years, including: the economic recession, recent mild climate conditions, implementation of a residential tiered conservation pricing structure, and other conservation measures. Over the past 3 years, there has been a recent 12 percent decline in gpcd in the Artesia System from 107 gpcd in 2008 to an estimated 94 gpcd in 2010. Therefore, the Artesia System is on track to meet its SBX7-7 goals, and will remain focused on maintaining these savings over the next 10 years.

However, if the gpcd begins to increase to previous levels, GSWC's continued commitment to complying with the CUWCC MOU and implementation of all BMPs should provide sufficient water savings to meet the goal of 108 gpcd. GSWC will assess implementation of a suite of programs over the next 2 to 3 years to meet conservation targets companywide. Implementation levels and specific program offerings will vary by system depending on system goals, including existing implementation levels, demographics, and hydrologic characteristics.

GSWC is developing a companywide approach that will include assessment of options such as accelerating the current programs, and adding additional programmatic, regulatory and information-based activities to meet the requirements of SBX7-7. This systematic approach may allow GSWC to do more with less, in essence, administering overall conservation program operations from a centralized location while allowing local resources for direct implementation of BMPs and other water savings practices. Funding for all conservation activities is subject to approval by the CPUC before programs can be implemented. Some of the programs that may be considered by GSWC if needed to meet SBX7-7 requirements include financial incentives, regulatory approaches, and information elements. These efforts will be planned to build on existing programs and activities. Programs that may be implemented by 2014 on a companywide basis include the following:

Conservation Pricing

GSWC is in the process of filing a General Rate Case application to increase tiered rates in its systems for residential and CII metered customers. If approved, increased tiered rates are expected to significantly increase water savings and participation in conservation incentive programs in many of GSWC's systems.

Financial Incentives

Ongoing and/or additional financial incentives may be offered directly to customers by GSWC or in partnership with other agencies:

1. HECW rebates: Clothes washer rebates are already being implemented by Metropolitan on behalf of GSWC and will continue to provide measurable water savings.
2. Zero and low-flow urinal rebates: Rebates would include CII fixtures such as zero consumption and ultra-low volume urinals as well as CII specific HETs.
3. Expansion of fixture rebates to CII and MF customers in all systems: currently, the toilet rebate programs are only available to CII and MF customers in select systems. GSWC will evaluate expansion of the programs to all customers and there will be increased focus on marketing to large Home Owner Association accounts.
4. Larger variety of fixture rebates: This may include hot water distribution tanks, pressurized water brooms and high-pressure spray nozzles.
5. Cash-for-grass rebates: Customers will be provided with an incentive of up to \$0.5 per square-foot of turf removed and replaced with landscape appropriate plants. The program is being considered for both residential and CII customers; it is currently being offered in select GSWC systems.
6. Expansion of large landscape program: GSWC will be evaluating the effectiveness of the current landscape program and making adjustments depending on the results. If the

program is found to be successful at meeting reduction targets, the program may be accelerated and more devices will be offered, such as precision nozzles.

Building Code/New Standards

Although it does not have regulatory authority, GSWC supports adoption of new building standards, beyond those currently in code to enhance conservation. If all current code changes that improve the efficiency of fixtures and design are implemented, it could account for up to 60 percent of the expected reduction in demand. Some of the changes proposed will be captured in the CAL Green Code, adopted January 2011 as well as SB407 (Plumbing Retrofit on Resale) and standard updates for toilets and washers that are being phased in.

Information/Tracking

Information and tracking represents a new element to the existing programs focusing on collecting and processing information and ensuring that the programs are on track to meet the goals. These activities will also help in program design by providing more robust information about customers and their water use patterns. The immediate priorities include:

1. Automatic Meter Reading (AMR): GSWC currently follows the requirements of CPUC General Order 103-A, which prescribe minimum water system design, operation and maintenance standards for water utilities, and includes requirements for calibrating, testing frequency, and replacing water meters. GSWC will continue to follow this standard and consider the use of AMR in its systems as a priority to obtain real time data for water usage and identify customer-side leaks. This information can also help GSWC monitor the impacts of existing programs, make adjustments where necessary and develop new programs.
2. Water Use Tracking Tools: Another priority, GSWC will consider plans to design and develop database tracking tools for water savings associated with its conservation plans and increase flexibility in adding or changing program elements.

GSWC is developing a companywide approach that will include assessment of options such as accelerating the current programs, and adding additional programmatic, regulatory and information-based activities to meet the requirements of SBX7-7. This systematic approach may allow GSWC to do more with less, in essence, administering overall conservation program operations from a centralized location while allowing local resources for direct implementation of BMPs and other water savings practices. Funding for all conservation activities is subject to approval by the CPUC before programs can be implemented.

7.5.1 Consideration of Economic Impacts

Since funding for all conservation activities is subject to approval by the CPUC before programs can be implemented, the economic impacts of complying with SBX7-7 have not yet been fully determined. However, an economic analysis to help develop programs that avoid placing disproportionate burdens on any single sector will be prepared during development of the SBX7-7 water use efficiency program. The annual costs associated with implementing all traditional CUWCC programmatic BMPs cannot be determined because it represents the combined efforts of Metropolitan and GSWC, where funding levels, incentives and particular measures change from year to year. To continue benefiting customers, GSWC will take advantage of applicable partnership programs that will make conservation programs more efficient and cost effective.

Chapter 8: Water Shortage Contingency Plan

Section 10632 of the Act details the requirements of the water-shortage contingency analysis. The Act states the following:

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

- (a) Stages of action to be undertaken by the urban water supplier in response to water supply shortages, including up to a 50 percent reduction in water supply, and an outline of specific water supply conditions, which are applicable to each stage.*
- (b) An estimate of the minimum water supply available during each of the next three water years based on the driest three-year historic sequence for the agency's water supply.*
- (c) Actions to be undertaken by the urban water supplier to prepare for, and implement during, a catastrophic interruption of water supplies including, but not limited to, a regional power outage, an earthquake, or other disaster.*
- (d) Additional, mandatory prohibitions against specific water-use practices during water shortages, including, but not limited to, prohibiting the use of potable water for street cleaning.*
- (e) Consumption reduction methods in the most restrictive stages. Each urban water supplier may use any type of consumption reduction methods in its water shortage contingency analysis that would reduce water use, are appropriate for its area, and have the ability to achieve a water-use reduction consistent with up to a 50 percent reduction in water supply.*
- (f) Penalties or charges for excessive use, where applicable.*
- (g) An analysis of the impacts of each of the actions and conditions described in subdivisions (a) to (f), inclusive, on the revenues and expenditures of the urban water supplier, and proposed measures to overcome those impacts, such as the development of reserves and rate adjustments.*
- (h) A draft water shortage contingency resolution or ordinance.*
- (i) A mechanism for determining actual reductions in water use pursuant to the urban water shortage contingency analysis.*

This chapter documents GSWC's Water Shortage Contingency Plan for the Artesia System per requirements of Section 10632 of the Act. The Water Shortage Contingency Plan is based on Rule No. 14.1 Mandatory Water Conservation, Restrictions and Ratings Program adopted by GSWC and on file with CPUC. Appendix D contains the full text of the rule.

The purpose of the Water Shortage Contingency Plan is to provide a plan of action to be followed during the various stages of a water shortage. The plan includes the following elements: action stages, estimate of minimum supply available, actions to be implemented during a catastrophic interruption of water supplies, prohibitions, penalties and consumption reduction methods, revenue impacts of reduced sales, and water use monitoring procedures.

8.1 Action Stages

The Act requires documentation of actions to be undertaken during a water shortage. GSWC has developed actions to be undertaken in response to water supply shortages, including up to a 50 percent reduction in water supply. Implementation of the actions is dependent upon approval of the CPUC, especially for implementing mandatory water use restriction. CPUC has jurisdiction over GSWC because GSWC is an investor-owned water utility. Section 357 of the California Water Code requires that suppliers subject to regulation by the CPUC secure its

approval before imposing water consumption regulations and restrictions required by water supply shortage emergencies.

GSWC has grouped the actions to be taken during a water shortage into four stages, I through IV, that are based on the water supply conditions. Table 8-1 describes the water supply shortage stages and conditions. The stages will be implemented during water supply shortages according to shortage level, ranging from 5 percent shortage in Stage I to 50 percent shortage in Stage IV. A water shortage declaration will be made by the American State Water Company Board. The water shortage stage determination during a water supply shortage will be made by the Regional Vice President Customer Service.

Stage No.	Water Shortage Supply Conditions	Shortage Percent
I	Minimum	5 - 10
II	Moderate	10 - 20
III	Severe	20 - 35
IV	Critical	35 - 50

Note:

This table is based on the DWR Guidebook Table 35.

The actions to be undertaken during each stage include, but are not limited to, the following:

Stage I (5 - 10 percent shortage) – Water alert conditions are declared and voluntary conservation is encouraged. The drought situation is explained to the public and governmental bodies. GSWC explains the possible subsequent water shortage stages in order to forecast possible future actions for the customer base. The activities performed by GSWC during this stage include, but are not limited to:

- Public information campaign consisting of distribution of literature, speaking engagements, website updates, bill inserts, and conversation messages printed in local newspapers
- Educational programs in area schools
- Conservation Hotline, a toll-free number with trained Conservation Representatives to answer customer questions about conservation and water use efficiency

Stage II (10 - 20 percent shortage) – Stage II will include actions undertaken in Stage I. In addition, GSWC may propose voluntary conservation allotments and/or require mandatory conservation rules. The severity of actions depends upon the percent shortage. The level of voluntary or mandatory water use reduction requested from the customers is also based on the severity. It needs to be noted that prior to implementation of any mandatory reductions, GSWC must obtain approval from CPUC. If necessary, GSWC may also support passage of drought ordinances by appropriate governmental agencies.

Stage III (20 - 35 percent shortage) – Stage III is a severe shortage that entails or includes allotments and mandatory conservation rules. This phase becomes effective upon notification by the GSWC that water usage is to be reduced by a mandatory percentage. GSWC implements mandatory reductions after receiving approval from CPUC. Rate changes are implemented to penalize excess usage. Water use restrictions are put into effect, i.e. prohibited uses can include restrictions of daytime hours for watering, excessive watering resulting in gutter flooding, using a hose without a shutoff device, use of non-recycling fountains, washing down sidewalks or patios, unrepaired leaks, etc. GSWC monitors production weekly for compliance with necessary reductions. Use of flow restrictors is implemented if abusive practices are documented.

Stage IV (35 - 50 percent shortage) – This is a critical shortage that includes all steps taken in prior stages regarding allotments and mandatory conservation. All activities are intensified and production is monitored daily by GSWC for compliance with necessary reductions.

8.2 Minimum Supply

The Act requires 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 GSWC's water supply.

Table 8-2 summarizes the minimum volume of water available from each source during the next three-years based on multiple-dry water years and normal water year. The driest three-year historic sequence is provided in Chapter 6. The water supply quantities for 2011 to 2013 are calculated by linearly interpolating between the projected water supplies of 2010 and 2015 for normal years. The water supplies for 2010 and 2015 are presented in Chapter 4.

It is assumed that the multiple-dry year supplies will be the same as those for the normal years because imported water supplies will meet projected imported water demands under all anticipated hydrologic conditions. It should be noted that the active connection capacity to deliver imported water is significantly higher than the projected imported water supply required to meet normal year demands.

GSWC's supply for the Artesia System is expected to be 100 percent reliable from 2011 to 2013. This reliability is a result of:

- adjudicated groundwater rights in the Central Basin,
- anticipated benefits of conjunctive use storage programs in accordance with the terms of amendments to the existing court Judgment to be developed, and
- the projected reliability of CBMWD/Metropolitan water supplies imported through the City of Cerritos, which are expected to be 100 percent reliable.

Table 8-2: Three-Year Estimated Minimum Water Supply in ac-ft/yr				
Source	2011	2012	2013	2010 Average Year
Imported water from the City of Cerritos	746	980	1,213	391
Groundwater	5,000	5,000	5,000	5,166
Recycled water	100	100	100	56
Total	5,846	6,080	6,313	5,613

Note:

1. Projected CBMWD imported water values are calculated assuming groundwater is provided within the APA only. Leased groundwater rights as obtained in the future will result in groundwater constituting a greater percentage of total water supply to the system.
2. Table format based on DWR Guidebook Table 31.

8.3 Catastrophic Supply Interruption Plan

The Act requires documentation of actions to be undertaken by the water supplier to prepare for, and implement during, a catastrophic interruption of water supplies. A catastrophic interruption constitutes a proclamation of a water shortage and could result from any event (either natural or man-made) that causes a water shortage severe enough to classify as either a Stage III or Stage IV water supply shortage condition.

In order to prepare for catastrophic events, GSWC has prepared an Emergency Response Plan (ERP) in accordance with other state and federal regulations. The purpose of this plan is to design actions necessary to minimize the impacts of supply interruptions due to catastrophic events.

The ERP coordinates overall company response to a disaster in any and all of its districts. In addition, the ERP requires each district to have a local disaster plan that coordinates emergency responses with other agencies in the area. The ERP also provides details on actions to be undertaken during specific catastrophic events. Table 8-3 provides a summary of actions cross-referenced against specific catastrophes for three of the most common possible catastrophic events: regional power outage, earthquake, and malevolent acts.

In addition to specific actions to be undertaken during a catastrophic event, GSWC performs maintenance activities, such as annual inspections for earthquake safety, and budgets for spare items, such as auxiliary generators, to prepare for potential events.

Table 8-3: Summary of Actions for Catastrophic Events

Possible Catastrophe	Summary of Actions
Regional power outage	<ul style="list-style-type: none"> • Isolate areas that will take the longest to repair and/or present a public health threat. Arrange to provide emergency water. • Establish water distribution points and ration water if necessary. • If water service is restricted, attempt to provide potable water tankers or bottled water to the area. • Make arrangements to conduct bacteriological tests, in order to determine possible contamination. • Utilize backup power supply to operate pumps in conjunction with elevated storage.
Earthquake	<ul style="list-style-type: none"> • Assess the condition of the water supply system. • Complete the damage assessment checklist for reservoirs, water treatment plants, wells and boosters, system transmission and distribution. • Coordinate with Cal EMA utilities group or fire district to identify immediate fire fighting needs. • Isolate areas that will take the longest to repair and/or present a public health threat. Arrange to provide emergency water. • Prepare report of findings, report assessed damages, advise as to materials of immediate need and identify priorities including hospitals, schools and other emergency operation centers. • Take actions to preserve storage. • Determine any health hazard of the water supply and issue any “Boil Water Order” or “Unsafe Water Alert” notification to the customers, if necessary. • Cancel the order or alert information after completing comprehensive water quality testing. • Make arrangements to conduct bacteriological tests, in order to determine possible contamination.
Malevolent acts	<ul style="list-style-type: none"> • Assess threat or actual intentional contamination of the water system. • Notify local law enforcement to investigate the validity of the threat. • Get notification from public health officials if potential water contamination • Determine any health hazard of the water supply and issue any “Boil Water Order” or “Unsafe Water Alert” notification to the customers, if necessary. • Assess any structural damage from an intentional act. • Isolate areas that will take the longest to repair and or present a public health threat. Arrange to provide emergency water.

8.4 Prohibitions, Penalties, and Consumption Reduction Methods

The Act requires an analysis of mandatory prohibitions, penalties, and consumption reduction methods against specific water use practices which may be considered excessive during water shortages. Given that GSWC is an investor-owned entity, it does not have the authority to pass any ordinance enacting specific prohibitions or penalties. In order to enact or rescind any prohibitions or penalties, GSWC would seek approval from CPUC to enact or rescind Rule No. 14.1, Mandatory Conservation and Rationing, which is included in Appendix D. When Rule No. 14.1 has expired or is not in effect, mandatory conservation and rationing measures will not be in force.

Rule No. 14.1 details the various prohibitions and sets forth water use violation fines, charges for removal of flow restrictors, as well as establishes the period during which mandatory conservation and rationing measures will be in effect. The prohibitions on various wasteful water uses, include, but are not limited to, the hose washing of sidewalks and driveways using potable water, and cleaning for filling decorative fountains. Table 8-4 summarizes the various prohibitions and the stages during which the prohibition becomes mandatory.

Examples of Prohibitions	Stage When Prohibition Becomes Mandatory
Uncorrected plumbing leaks	II, III, IV
Watering which results in flooding or run-off in gutters, waterways, patios, driveway, or streets	II, III, IV
Washing aircraft, cars, buses, boats, trailers, or other vehicles without a positive shut-off nozzle on the outlet end of the hose	II, III, IV
Washing buildings, structures, sidewalks, walkways, driveways, patios, parking lots, tennis courts, or other hard-surfaced areas in a manner which results in excessive run-off	II, III, IV
Irrigation of non-permanent agriculture	II, III, IV
Use of water for street watering with trucks or for construction purposes unless no other source of water or other method can be used	II, III, IV
Use of water for decorative fountains or the filling or topping off of decorative lakes or ponds	II, III, IV
Filling or refilling of swimming pools	II, III, IV

Note:

This table is based on the DWR Guidebook Table 36.

In addition to prohibitions during water supply shortage events requiring a voluntary or mandatory program, GSWC will make available to its customers water conservation kits as required by GSWC's Rule No. 20. GSWC will notify all customers of the availability of conservation kits.

In addition to prohibitions, Rule No. 14.1 provides penalties and charges for excessive water use. The enactment of these penalties and charges is contingent on approval of Rule 14.1 implementation by the CPUC. When the rule is in effect, violators receive one verbal and one written warning after which a flow-restricting device may be installed in the violator's service for a reduction of up to 50 percent of normal flow or 6 ccf per month, whichever is greater. Table 8-5 summarizes the penalties and charges and the stage during which they take effect.

Table 8-5: Summary of Penalties and Charges for Excessive Use	
Penalties or Charges	Stage When Penalty Takes Effect
Penalties for not reducing consumption	III, IV
Charges for excess use	III, IV
Flat fine; Charge per unit over allotment	III, IV
Flow restriction	III, IV
Termination of service	III, IV

Note:

This table is based on the DWR Guidebook Table 38.

In addition to prohibitions and penalties, GSWC can use other consumption reduction methods to reduce water use up to 50 percent. Based on the requirements of the Act, Table 8-6 summarizes the methods that can be used by GSWC in order to enforce a reduction in consumption, where necessary.

Table 8-6: Summary of Consumption Reduction Methods		
Consumption Reduction Method	Stage When Method Takes Effect	Projected Reduction Percentage
Demand reduction program	All Stages	N/A
Reduce pressure in water lines; Flow restriction	III, IV	N/A
Restrict building permits; Restrict for only priority uses	II, III, IV	N/A
Use prohibitions	II, III, IV	N/A
Water shortage pricing; Per capita allotment by customer type	II, IV	N/A
Plumbing fixture replacement	All Stages	N/A
Voluntary rationing	II	N/A
Mandatory rationing	III, IV	N/A
Incentives to reduce water consumption; Excess use penalty	III, IV	N/A
Water conservation kits	All Stages	N/A
Education programs	All Stages	N/A
Percentage reduction by customer type	III, IV	N/A

Note:

This table is based on the DWR Guidebook Table 37.

8.5 Revenue Impacts of Reduced Sales

Section 10632(g) of the Act requires an analysis of the impacts of each of the actions taken for conservation and water restriction on the revenues and expenditures of the water supplier. Because GSWC is an investor-owned water utility and, as such, is regulated by the CPUC, the CPUC authorizes it to establish memorandum accounts to track expenses and revenue shortfalls caused by both mandatory rationing and voluntary conservation efforts. Utilities with CPUC-approved water management plans are authorized to implement a surcharge to recover revenue shortfalls recorded in their drought memorandum accounts. Table 8-7 provides a summary of actions with associated revenue reductions; while Table 8-8 provides a summary of actions and conditions that impact expenditures. Table 8-9 summarizes the proposed measures to overcome revenue impacts. Table 8-10 provides a summary of the proposed measures to overcome expenditure impacts.

Table 8-7: Summary of Actions and Conditions that Impact Revenue

Type	Anticipated Revenue Reduction
Reduced sales	Reduction in revenue will be based on the decline in water sales and the corresponding quantity tariff rate
Recovery of revenues with CPUC-approved surcharge	Higher rates may result in further decline in water usage and further reduction in revenue

Table 8-8: Summary of Actions and Conditions that Impact Expenditures

Category	Anticipated Cost
Increased staff cost	Salaries and benefits for new hires required to administer and implement water shortage program
Increased O&M cost	Operating and maintenance costs associated with alternative sources of water supply
Increased cost of supply and treatment	Purchase and treatment costs of new water supply

Table 8-9: Proposed Measures to Overcome Revenue Impacts

Names of Measures	Summary of Effects
Obtain CPUC-approved surcharge	Allows for recovery of revenue shortfalls brought on by water shortage program
Penalties for excessive water use	Obtain CPUC approval to use penalties to offset portion of revenue shortfall

Table 8-10: Proposed Measures to Overcome Expenditure Impacts	
Names of Measures	Summary of Effects
Obtain CPUC-approved surcharge	Allows for recovery of increased expenditures brought on by water shortage program
Penalties for excessive water use	Obtain CPUC approval to use penalties to offset portion of increased expenditures

8.6 Water-Use Monitoring Procedures

The Act asks for an analysis of mechanisms for determining actual reduction in water use when the Water Shortage Contingency Plan is in effect. Table 8-11 lists the possible mechanisms used by GSWC to monitor water use and the quality of data expected.

Table 8-11: Water-Use Monitoring Mechanisms	
Mechanisms for Determining Actual Reductions	Type and Quality of Data Expected
Customer meter readings	Hourly/daily/monthly water consumption data for a specific user depending on frequency of readings
Production meter readings	Hourly/daily/monthly water production depending on frequency of readings; correlates to water use plus system losses

In addition to the specific actions that GSWC can undertake to verify level of conservation, GSWC can monitor long-term water use through regular bi-monthly meter readings, which give GSWC the ability to flag exceptionally high usage for verification of water loss or abuse.

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Chapter 9: References

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Appendix A

Urban Water Management Planning Act

CALIFORNIA WATER CODE DIVISION 6

PART 2.6. URBAN WATER MANAGEMENT PLANNING

All California Codes have been updated to include the 2010 Statutes.

CHAPTER 1.	GENERAL DECLARATION AND POLICY	10610-10610.4
CHAPTER 2.	DEFINITIONS	10611-10617
CHAPTER 3.	URBAN WATER MANAGEMENT PLANS	
Article 1.	General Provisions	10620-10621
Article 2.	Contents of Plans	10630-10634
Article 2.5.	Water Service Reliability	10635
Article 3.	Adoption and Implementation of Plans	10640-10645
CHAPTER 4.	MISCELLANEOUS PROVISIONS	10650-10656

WATER CODE

SECTION 10610-10610.4

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

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

- (1) The waters of the state are a limited and renewable resource subject to ever-increasing demands.
- (2) The conservation and efficient use of urban water supplies are of statewide concern; however, the planning for that use and the implementation of those plans can best be accomplished at the local level.
- (3) A long-term, reliable supply of water is essential to protect the productivity of California's businesses and economic climate.
- (4) As part of its long-range planning activities, every urban water supplier should make every effort to ensure the appropriate level of reliability in its water service sufficient to meet the needs of its various categories of customers during normal, dry, and multiple dry water years.
- (5) Public health issues have been raised over a number of contaminants that have been identified in certain local and imported water supplies.
- (6) Implementing effective water management strategies, including groundwater storage projects and recycled water projects, may require specific water quality and salinity targets for meeting groundwater basins water quality objectives and promoting beneficial use of recycled water.
- (7) Water quality regulations are becoming an increasingly important factor in water agencies' selection of raw water sources, treatment alternatives, and modifications to existing treatment facilities.
- (8) Changes in drinking water quality standards may also impact the usefulness of water supplies and may ultimately impact supply reliability.
- (9) The quality of source supplies can have a significant impact

on water management strategies and supply reliability.

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

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

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

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

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

WATER CODE

SECTION 10611-10617

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

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

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

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

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

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

10616. "Public agency" means any board, commission, county, city

and county, city, regional agency, district, or other public entity.

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

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

WATER CODE

SECTION 10620-10621

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

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

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

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

(2) Each urban water supplier shall coordinate the preparation of its plan with other appropriate agencies in the area, including other water suppliers that share a common source, water management agencies, and relevant public agencies, to the extent practicable.

(e) The urban water supplier may prepare the plan with its own staff, by contract, or in cooperation with other governmental agencies.

(f) An urban water supplier shall describe in the plan water management tools and options used by that entity that will maximize resources and minimize the need to import water from other regions.

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

(b) Every urban water supplier required to prepare a plan pursuant to this part shall, at least 60 days prior to the public hearing on the plan required by Section 10642, notify any city or county within which the supplier provides water supplies that the urban water

supplier will be reviewing the plan and considering amendments or changes to the plan. The urban water supplier may consult with, and obtain comments from, any city or county that receives notice pursuant to this subdivision.

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

WATER CODE

SECTION 10630-10634

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

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

(a) Describe the service area of the supplier, including current and projected population, climate, and other demographic factors affecting the supplier's water management planning. The projected population estimates shall be based upon data from the state, regional, or local service agency population projections within the service area of the urban water supplier and shall be in five-year increments to 20 years or as far as data is available.

(b) Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five-year increments described in subdivision (a). If groundwater is identified as an existing or planned source of water available to the supplier, all of the following information shall be included in the plan:

(1) A copy of any groundwater management plan adopted by the urban water supplier, including plans adopted pursuant to Part 2.75 (commencing with Section 10750), or any other specific authorization for groundwater management.

(2) A description of any groundwater basin or basins from which the urban water supplier pumps groundwater. For those basins for which a court or the board has adjudicated the rights to pump groundwater, a copy of the order or decree adopted by the court or the board and a description of the amount of groundwater the urban water supplier has the legal right to pump under the order or decree. For basins that have not been adjudicated, information as to whether the department has identified the basin or basins as overdrafted or has projected that the basin will become overdrafted if present management conditions continue, in the most current official departmental bulletin that characterizes the condition of the groundwater basin, and a detailed description of the efforts being undertaken by the urban water supplier to eliminate the long-term overdraft condition.

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

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

(c) (1) Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage, to the extent practicable, and provide data for each of the following:

- (A) An average water year.
- (B) A single dry water year.
- (C) Multiple dry water years.

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

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

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

- (A) Single-family residential.
- (B) Multifamily.
- (C) Commercial.
- (D) Industrial.
- (E) Institutional and governmental.
- (F) Landscape.
- (G) Sales to other agencies.
- (H) Saline water intrusion barriers, groundwater recharge, or conjunctive use, or any combination thereof.

(I) Agricultural.

(2) The water use projections shall be in the same five-year increments described in subdivision (a).

(f) Provide a description of the supplier's water demand management measures. This description shall include all of the following:

(1) A description of each water demand management measure that is currently being implemented, or scheduled for implementation, including the steps necessary to implement any proposed measures, including, but not limited to, all of the following:

- (A) Water survey programs for single-family residential and multifamily residential customers.
- (B) Residential plumbing retrofit.
- (C) System water audits, leak detection, and repair.
- (D) Metering with commodity rates for all new connections and retrofit of existing connections.
- (E) Large landscape conservation programs and incentives.
- (F) High-efficiency washing machine rebate programs.
- (G) Public information programs.
- (H) School education programs.
- (I) Conservation programs for commercial, industrial, and institutional accounts.

- (J) Wholesale agency programs.
- (K) Conservation pricing.
- (L) Water conservation coordinator.
- (M) Water waste prohibition.
- (N) Residential ultra-low-flush toilet replacement programs.
- (2) A schedule of implementation for all water demand management measures proposed or described in the plan.
- (3) A description of the methods, if any, that the supplier will use to evaluate the effectiveness of water demand management measures implemented or described under the plan.
- (4) An estimate, if available, of existing conservation savings on water use within the supplier's service area, and the effect of the savings on the supplier's ability to further reduce demand.
- (g) An evaluation of each water demand management measure listed in paragraph (1) of subdivision (f) that is not currently being implemented or scheduled for implementation. In the course of the evaluation, first consideration shall be given to water demand management measures, or combination of measures, that offer lower incremental costs than expanded or additional water supplies. This evaluation shall do all of the following:
 - (1) Take into account economic and noneconomic factors, including environmental, social, health, customer impact, and technological factors.
 - (2) Include a cost-benefit analysis, identifying total benefits and total costs.
 - (3) Include a description of funding available to implement any planned water supply project that would provide water at a higher unit cost.
 - (4) Include a description of the water supplier's legal authority to implement the measure and efforts to work with other relevant agencies to ensure the implementation of the measure and to share the cost of implementation.
- (h) Include a description of all water supply projects and water supply programs that may be undertaken by the urban water supplier to meet the total projected water use as established pursuant to subdivision (a) of Section 10635. The urban water supplier shall include a detailed description of expected future projects and programs, other than the demand management programs identified pursuant to paragraph (1) of subdivision (f), that the urban water supplier may implement to increase the amount of the water supply available to the urban water supplier in average, single-dry, and multiple-dry water years. The description shall identify specific projects and include a description of the increase in water supply that is expected to be available from each project. The description shall include an estimate with regard to the implementation timeline for each project or program.
 - (i) Describe the opportunities for development of desalinated water, including, but not limited to, ocean water, brackish water, and groundwater, as a long-term supply.
 - (j) For purposes of this part, urban water suppliers that are members of the California Urban Water Conservation Council shall be deemed in compliance with the requirements of subdivisions (f) and (g) by complying with all the provisions of the "Memorandum of Understanding Regarding Urban Water Conservation in California,"

dated December 10, 2008, as it may be amended, and by submitting the annual reports required by Section 6.2 of that memorandum.

(k) Urban water suppliers that rely upon a wholesale agency for a source of water shall provide the wholesale agency with water use projections from that agency for that source of water in five-year increments to 20 years or as far as data is available. The wholesale agency shall provide information to the urban water supplier for inclusion in the urban water supplier's plan that identifies and quantifies, to the extent practicable, the existing and planned sources of water as required by subdivision (b), available from the wholesale agency to the urban water supplier over the same five-year increments, and during various water-year types in accordance with subdivision (c). An urban water supplier may rely upon water supply information provided by the wholesale agency in fulfilling the plan informational requirements of subdivisions (b) and (c).

10631.1. (a) The water use projections required by Section 10631 shall include projected water use for single-family and multifamily residential housing needed for lower income households, as defined in Section 50079.5 of the Health and Safety Code, as identified in the housing element of any city, county, or city and county in the service area of the supplier.

(b) It is the intent of the Legislature that the identification of projected water use for single-family and multifamily residential housing for lower income households will assist a supplier in complying with the requirement under Section 65589.7 of the Government Code to grant a priority for the provision of service to housing units affordable to lower income households.

10631.5. (a) (1) Beginning January 1, 2009, the terms of, and eligibility for, a water management grant or loan made to an urban water supplier and awarded or administered by the department, state board, or California Bay-Delta Authority or its successor agency shall be conditioned on the implementation of the water demand management measures described in Section 10631, as determined by the department pursuant to subdivision (b).

(2) For the purposes of this section, water management grants and loans include funding for programs and projects for surface water or groundwater storage, recycling, desalination, water conservation, water supply reliability, and water supply augmentation. This section does not apply to water management projects funded by the federal American Recovery and Reinvestment Act of 2009 (Public Law 111-5).

(3) Notwithstanding paragraph (1), the department shall determine that an urban water supplier is eligible for a water management grant or loan even though the supplier is not implementing all of the water demand management measures described in Section 10631, if the urban water supplier has submitted to the department for approval a schedule, financing plan, and budget, to be included in the grant or loan agreement, for implementation of the water demand management measures. The supplier may request grant or loan funds to implement the water demand management measures to the extent the request is consistent with the eligibility requirements applicable to the water management funds.

(4) (A) Notwithstanding paragraph (1), the department shall

determine that an urban water supplier is eligible for a water management grant or loan even though the supplier is not implementing all of the water demand management measures described in Section 10631, if an urban water supplier submits to the department for approval documentation demonstrating that a water demand management measure is not locally cost effective. If the department determines that the documentation submitted by the urban water supplier fails to demonstrate that a water demand management measure is not locally cost effective, the department shall notify the urban water supplier and the agency administering the grant or loan program within 120 days that the documentation does not satisfy the requirements for an exemption, and include in that notification a detailed statement to support the determination.

(B) For purposes of this paragraph, "not locally cost effective" means that the present value of the local benefits of implementing a water demand management measure is less than the present value of the local costs of implementing that measure.

(b) (1) The department, in consultation with the state board and the California Bay-Delta Authority or its successor agency, and after soliciting public comment regarding eligibility requirements, shall develop eligibility requirements to implement the requirement of paragraph (1) of subdivision (a). In establishing these eligibility requirements, the department shall do both of the following:

(A) Consider the conservation measures described in the Memorandum of Understanding Regarding Urban Water Conservation in California, and alternative conservation approaches that provide equal or greater water savings.

(B) Recognize the different legal, technical, fiscal, and practical roles and responsibilities of wholesale water suppliers and retail water suppliers.

(2) (A) For the purposes of this section, the department shall determine whether an urban water supplier is implementing all of the water demand management measures described in Section 10631 based on either, or a combination, of the following:

(i) Compliance on an individual basis.

(ii) Compliance on a regional basis. Regional compliance shall require participation in a regional conservation program consisting of two or more urban water suppliers that achieves the level of conservation or water efficiency savings equivalent to the amount of conservation or savings achieved if each of the participating urban water suppliers implemented the water demand management measures. The urban water supplier administering the regional program shall provide participating urban water suppliers and the department with data to demonstrate that the regional program is consistent with this clause. The department shall review the data to determine whether the urban water suppliers in the regional program are meeting the eligibility requirements.

(B) The department may require additional information for any determination pursuant to this section.

(3) The department shall not deny eligibility to an urban water supplier in compliance with the requirements of this section that is participating in a multiagency water project, or an integrated regional water management plan, developed pursuant to Section 75026 of the Public Resources Code, solely on the basis that one or more of

the agencies participating in the project or plan is not implementing all of the water demand management measures described in Section 10631.

(c) In establishing guidelines pursuant to the specific funding authorization for any water management grant or loan program subject to this section, the agency administering the grant or loan program shall include in the guidelines the eligibility requirements developed by the department pursuant to subdivision (b).

(d) Upon receipt of a water management grant or loan application by an agency administering a grant and loan program subject to this section, the agency shall request an eligibility determination from the department with respect to the requirements of this section. The department shall respond to the request within 60 days of the request.

(e) The urban water supplier may submit to the department copies of its annual reports and other relevant documents to assist the department in determining whether the urban water supplier is implementing or scheduling the implementation of water demand management activities. In addition, for urban water suppliers that are signatories to the Memorandum of Understanding Regarding Urban Water Conservation in California and submit biennial reports to the California Urban Water Conservation Council in accordance with the memorandum, the department may use these reports to assist in tracking the implementation of water demand management measures.

(f) This section shall remain in effect only until July 1, 2016, and as of that date is repealed, unless a later enacted statute, that is enacted before July 1, 2016, deletes or extends that date.

10631.7. The department, in consultation with the California Urban Water Conservation Council, shall convene an independent technical panel to provide information and recommendations to the department and the Legislature on new demand management measures, technologies, and approaches. The panel shall consist of no more than seven members, who shall be selected by the department to reflect a balanced representation of experts. The panel shall have at least one, but no more than two, representatives from each of the following: retail water suppliers, environmental organizations, the business community, wholesale water suppliers, and academia. The panel shall be convened by January 1, 2009, and shall report to the Legislature no later than January 1, 2010, and every five years thereafter. The department shall review the panel report and include in the final report to the Legislature the department's recommendations and comments regarding the panel process and the panel's recommendations.

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

(1) Stages of action to be undertaken by the urban water supplier in response to water supply shortages, including up to a 50 percent reduction in water supply, and an outline of specific water supply conditions that are applicable to each stage.

(2) 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.

(3) 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.

(4) 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.

(5) 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.

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

(7) An analysis of the impacts of each of the actions and conditions described in paragraphs (1) to (6), 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.

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

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

(b) Commencing with the urban water management plan update due December 31, 2015, for purposes of developing the water shortage contingency analysis pursuant to subdivision (a), the urban water supplier shall analyze and define water features that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, separately from swimming pools and spas, as defined in subdivision (a) of Section 115921 of the Health and Safety Code.

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

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

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

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

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

(e) The projected use of recycled water within the supplier's

service area at the end of 5, 10, 15, and 20 years, and a description of the actual use of recycled water in comparison to uses previously projected pursuant to this subdivision.

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

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

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

WATER CODE

SECTION 10635

10635. (a) Every urban water supplier shall include, as part of its urban water management plan, an assessment of the reliability of its water service to its customers during normal, dry, and multiple dry water years. This water supply and demand assessment shall compare the total water supply sources available to the water supplier with the total projected water use over the next 20 years, in five-year increments, for a normal water year, a single dry water year, and multiple dry water years. The water service reliability assessment shall be based upon the information compiled pursuant to Section 10631, including available data from state, regional, or local agency population projections within the service area of the urban water supplier.

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

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

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

WATER CODE

SECTION 10640-10645

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

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

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

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

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

10644. (a) An urban water supplier shall submit to the department, the California State Library, and any city or county within which the supplier provides water supplies a copy of its plan no later than 30 days after adoption. Copies of amendments or changes to the plans shall be submitted to the department, the California State Library, and any city or county within which the supplier provides water supplies within 30 days after adoption.

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

(c) (1) For the purpose of identifying the exemplary elements of the individual plans, the department shall identify in the report those water demand management measures adopted and implemented by specific urban water suppliers, and identified pursuant to Section

10631, that achieve water savings significantly above the levels established by the department to meet the requirements of Section 10631.5.

(2) The department shall distribute to the panel convened pursuant to Section 10631.7 the results achieved by the implementation of those water demand management measures described in paragraph (1).

(3) The department shall make available to the public the standard the department will use to identify exemplary water demand management measures.

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

WATER CODE

SECTION 10650-10656

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

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

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

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

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

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

10654. An urban water supplier may recover in its rates the costs incurred in preparing its plan and implementing the reasonable water conservation measures included in the plan. Any best water management practice that is included in the plan that is identified in the

"Memorandum of Understanding Regarding Urban Water Conservation in California" is deemed to be reasonable for the purposes of this section.

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

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

Appendix B

Public Hearing Notices, Notifications, and Meeting Minutes



Golden State Water Company

A Subsidiary of American States Water Company

July 5, 2011

City of Artesia
Okina Dor
Redevelopment & Planning Director
18747 Clarksdale Avenue
Artesia, CA 90701

Subject: **REVISED** Notification of Public Hearing for the 2010 Urban Water Management Plan (UWMP) Golden State Water Company – Artesia and Norwalk Water Systems.

Dear Okina:

Golden State Water Company (GSWC) is providing you this notice pursuant to Water Code, section 10621, subdivision (b) of the Act, which requires an urban water supplier to notify any city or county within which it provides water that it is reviewing its plan and considering changes to the plan for the following water systems: Artesia and Norwalk

The UWMP's will be available for public review prior to the public hearing and can be reviewed during normal business hours. Please call 1-800-999-4033 to make an appointment to view the plan at:

Norwalk Customer Service Office
11469 Rosecrans Avenue
Norwalk, CA 90650

A public hearing to solicit comments on the draft UWMP will be held at 6:00 p.m., on *Wednesday, September 14, 2011* and take place at:

Artesia Community Center
18750 Clarkdale Avenue
Artesia, CA 90701

If you have any questions please contact me at (916) 853-3612.

Very truly yours,
GOLDEN STATE WATER COMPANY

Ernest A. Gisler
Planning Manager



Golden State Water Company

A Subsidiary of American States Water Company

July 5, 2011

City of Hawaiian Gardens
Joseph Colombo
Planning & Community Development Director
21815 South Pioneer Blvd.
Hawaiian Gardens, CA 90716

Subject: **REVISED** Notification of Public Hearing for the 2010 Urban Water Management Plan (UWMP) Golden State Water Company – Artesia and Norwalk Water Systems.

Dear Joseph:

Golden State Water Company (GSWC) is providing you this notice pursuant to Water Code, section 10621, subdivision (b) of the Act, which requires an urban water supplier to notify any city or county within which it provides water that it is reviewing its plan and considering changes to the plan for the following water systems: Artesia and Norwalk

The UWMP's will be available for public review prior to the public hearing and can be reviewed during normal business hours. Please call 1-800-999-4033 to make an appointment to view the plan at:

Norwalk Customer Service Office
11469 Rosecrans Avenue
Norwalk, CA 90650

A public hearing to solicit comments on the draft UWMP will be held at 6:00 p.m., on *Wednesday, September 14, 2011* and take place at:

Artesia Community Center
18750 Clarkdale Avenue
Artesia, CA 90701

If you have any questions please contact me at (916) 853-3612.

Very truly yours,
GOLDEN STATE WATER COMPANY

Ernest A. Gisler
Planning Manager



Golden State Water Company

A Subsidiary of American States Water Company

July 5, 2011

City of La Mirada
Rubin Arceo
Director of Community Development
13700 La Mirada Blvd.
La Mirada, CA 90638

Subject: **REVISED** Notification of Public Hearing for the 2010 Urban Water Management Plan (UWMP) Golden State Water Company – Artesia and Norwalk Water Systems.

Dear Rubin:

Golden State Water Company (GSWC) is providing you this notice pursuant to Water Code, section 10621, subdivision (b) of the Act, which requires an urban water supplier to notify any city or county within which it provides water that it is reviewing its plan and considering changes to the plan for the following water systems: Artesia and Norwalk

The UWMP's will be available for public review prior to the public hearing and can be reviewed during normal business hours. Please call 1-800-999-4033 to make an appointment to view the plan at:

Norwalk Customer Service Office
11469 Rosecrans Avenue
Norwalk, CA 90650

A public hearing to solicit comments on the draft UWMP will be held at 6:00 p.m., on *Wednesday, September 14, 2011* and take place at:

Artesia Community Center
18750 Clarkdale Avenue
Artesia, CA 90701

If you have any questions please contact me at (916) 853-3612.

Very truly yours,
GOLDEN STATE WATER COMPANY

Ernest A. Gisler
Planning Manager



Golden State Water Company

A Subsidiary of American States Water Company

July 5, 2011

City of Lakewood
Sonia Southwell
Planning Department Director
5050 Clark Avenue
Lakewood, CA 90712

Subject: **REVISED** Notification of Public Hearing for the 2010 Urban Water Management Plan (UWMP) Golden State Water Company – Artesia and Norwalk Water Systems.

Dear Sonia:

Golden State Water Company (GSWC) is providing you this notice pursuant to Water Code, section 10621, subdivision (b) of the Act, which requires an urban water supplier to notify any city or county within which it provides water that it is reviewing its plan and considering changes to the plan for the following water systems: Artesia and Norwalk

The UWMP's will be available for public review prior to the public hearing and can be reviewed during normal business hours. Please call 1-800-999-4033 to make an appointment to view the plan at:

Norwalk Customer Service Office
11469 Rosecrans Avenue
Norwalk, CA 90650

A public hearing to solicit comments on the draft UWMP will be held at 6:00 p.m., on *Wednesday, September 14, 2011* and take place at:

Artesia Community Center
18750 Clarkdale Avenue
Artesia, CA 90701

If you have any questions please contact me at (916) 853-3612.

Very truly yours,
GOLDEN STATE WATER COMPANY

Ernest A. Gisler
Planning Manager



Golden State Water Company

A Subsidiary of American States Water Company

July 5, 2011

City of Long Beach
Suzanne Frick
Building and Planning Director
1800 E. Wardlow Road
Long Beach, CA 90807

Subject: **REVISED** Notification of Public Hearing for the 2010 Urban Water Management Plan (UWMP) Golden State Water Company – Artesia and Norwalk Water Systems.

Dear Suzanne:

Golden State Water Company (GSWC) is providing you this notice pursuant to Water Code, section 10621, subdivision (b) of the Act, which requires an urban water supplier to notify any city or county within which it provides water that it is reviewing its plan and considering changes to the plan for the following water systems: Artesia and Norwalk

The UWMP's will be available for public review prior to the public hearing and can be reviewed during normal business hours. Please call 1-800-999-4033 to make an appointment to view the plan at:

Norwalk Customer Service Office
11469 Rosecrans Avenue
Norwalk, CA 90650

A public hearing to solicit comments on the draft UWMP will be held at 6:00 p.m., on *Wednesday, September 14, 2011* and take place at:

Artesia Community Center
18750 Clarkdale Avenue
Artesia, CA 90701

If you have any questions please contact me at (916) 853-3612.

Very truly yours,
GOLDEN STATE WATER COMPANY

Ernest A. Gisler
Planning Manager



Golden State Water Company

A Subsidiary of American States Water Company

July 5, 2011

City of Norwalk
Kurt Anderson
Community Development Director
12650 Imperial Highway
Norwalk, CA 90650

Subject: **REVISED** Notification of Public Hearing for the 2010 Urban Water Management Plan (UWMP) Golden State Water Company – Artesia and Norwalk Water Systems.

Dear Kurt:

Golden State Water Company (GSWC) is providing you this notice pursuant to Water Code, section 10621, subdivision (b) of the Act, which requires an urban water supplier to notify any city or county within which it provides water that it is reviewing its plan and considering changes to the plan for the following water systems: Artesia and Norwalk

The UWMP's will be available for public review prior to the public hearing and can be reviewed during normal business hours. Please call 1-800-999-4033 to make an appointment to view the plan at:

Norwalk Customer Service Office
11469 Rosecrans Avenue
Norwalk, CA 90650

A public hearing to solicit comments on the draft UWMP will be held at 6:00 p.m., on *Wednesday, September 14, 2011* and take place at:

Artesia Community Center
18750 Clarkdale Avenue
Artesia, CA 90701

If you have any questions please contact me at (916) 853-3612.

Very truly yours,
GOLDEN STATE WATER COMPANY

Ernest A. Gisler
Planning Manager



Golden State Water Company

A Subsidiary of American States Water Company

July 5, 2011

City of Santa Fe Springs
Robert Orpin
Director of Planning and Development
11710 Telegraph Road
Santa Fe Springs, CA 90670

Subject: **REVISED** Notification of Public Hearing for the 2010 Urban Water Management Plan (UWMP) Golden State Water Company – Artesia and Norwalk Water Systems.

Dear Robert:

Golden State Water Company (GSWC) is providing you this notice pursuant to Water Code, section 10621, subdivision (b) of the Act, which requires an urban water supplier to notify any city or county within which it provides water that it is reviewing its plan and considering changes to the plan for the following water systems: Artesia and Norwalk

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Artesia Community Center
18750 Clarkdale Avenue
Artesia, CA 90701

If you have any questions please contact me at (916) 853-3612.

Very truly yours,
GOLDEN STATE WATER COMPANY

Ernest A. Gisler
Planning Manager



Golden State Water Company

A Subsidiary of American States Water Company

July 5, 2011

County of Los Angeles
Gail Farber
Director of Public Works
P.O. Box 1460
Alhambra, CA 91802-1460

Subject: **REVISED** Notification of Public Hearing for the 2010 Urban Water Management Plan (UWMP) Golden State Water Company – Artesia and Norwalk Water Systems.

Dear Gail:

Golden State Water Company (GSWC) is providing you this notice pursuant to Water Code, section 10621, subdivision (b) of the Act, which requires an urban water supplier to notify any city or county within which it provides water that it is reviewing its plan and considering changes to the plan for the following water systems: Artesia and Norwalk

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Artesia Community Center
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Artesia, CA 90701

If you have any questions please contact me at (916) 853-3612.

Very truly yours,
GOLDEN STATE WATER COMPANY

Ernest A. Gisler
Planning Manager

LONG BEACH
PRESS-TELEGRAM
300 Oceangate
Long Beach, CA 90844

PROOF OF PUBLICATION
(2015.5 C.C.P.)

STATE OF CALIFORNIA
County of Los Angeles

I am a citizen of the United States, and a resident of the county aforesaid; I am over the age of eighteen years, and not a party to or interested in the above-entitled matter. I am the principal clerk of the printer of the Long Beach Press-Telegram, a newspaper of general circulation printed and published daily in the City of Long Beach, County of Los Angeles, and which newspaper has been adjudged a newspaper of general circulation by the Superior Court of the County of Los Angeles, State of California, on the date of March 21, 1934, Case Number 370512. The notice, of which the annexed is a true printed copy, has been published in each regular and entire issue of said newspaper and not in any supplement thereof on the following dates, to wit,

June 1, 2011

The Long Beach Press-Telegram, a newspaper of general circulation, is delivered to and available in, but not limited to the following cities: Long Beach, Lakewood, Bellflower, Cerritos, Downey, Norwalk, Artesia, Paramount, Wilmington, Compton, South Gate, Los Alamitos, Seal Beach, Cypress, La Palma, Lynwood, San Pedro, Hawaiian Gardens, Huntington Park, La Mirada, Santa Fe Springs, Carson. I declare under penalty of perjury that the foregoing is true and correct.

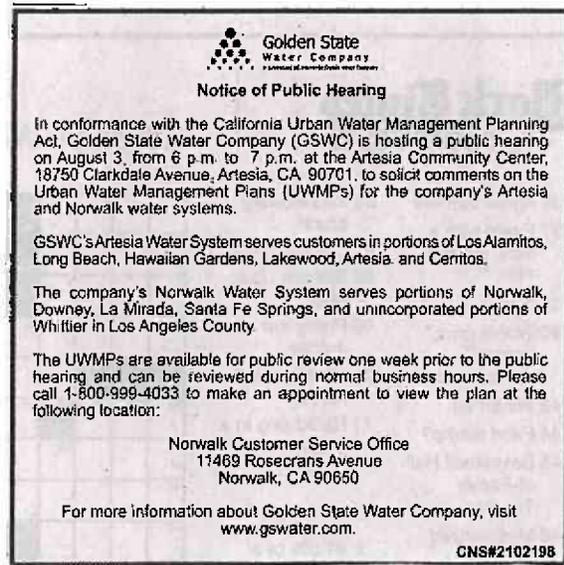
Executed at Long Beach, LA Co. California
this 1 day of June 2011

[Signature]

signature

Proof of Publication of

Paste Clipping of Notice
SECURELY in this space.



Golden State Water Company
A Division of Southern California Edison Company

Notice of Public Hearing

In conformance with the California Urban Water Management Planning Act, Golden State Water Company (GSWC) is hosting a public hearing on August 3, from 6 p.m. to 7 p.m. at the Artesia Community Center, 18750 Clarkdale Avenue, Artesia, CA 90701, to solicit comments on the Urban Water Management Plans (UWMPs) for the company's Artesia and Norwalk water systems.

GSWC's Artesia Water System serves customers in portions of Los Alamitos, Long Beach, Hawaiian Gardens, Lakewood, Artesia, and Cerritos.

The company's Norwalk Water System serves portions of Norwalk, Downey, La Mirada, Santa Fe Springs, and unincorporated portions of Whittier in Los Angeles County.

The UWMPs are available for public review one week prior to the public hearing and can be reviewed during normal business hours. Please call 1-800-999-4033 to make an appointment to view the plan at the following location:

Norwalk Customer Service Office
11469 Rosecrans Avenue
Norwalk, CA 90650

For more information about Golden State Water Company, visit www.gswater.com.

CNS#2102198





Search

- About Golden State Water Company
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- Water Quality

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- [Payment Options](#)
- [Understanding Your Bill](#)
- [How to Read Your Meter](#)
- [Definitions and Terminology](#)
- [Frequently Asked Questions](#)
- [New Customer Brochure](#)



[Find Local Office Information](#) » Central Basin East

Central Basin East Customer Service Area

Areas Served

This Customer Service Area serves approximately 20,000 customers in portions of Artesia, Downey, Hawaiian Gardens, La Mirada, Lakewood, Long Beach, Norwalk, Santa Fe Springs, and adjacent county territory

Office Location

Central Basin East CSA
11469 Rosecrans Ave
Norwalk, CA 90650

24 hour Customer Service and Emergency
800-999-4033 (24 hours, 7 days a week)
877-933-9533 (TTY hearing impaired)
Email: customerservice@gswater.com

For 24-hour customer service or emergency please call

1-800-999-4033
24 hours, 7 days a week

877-933-9533
TTY (hearing impaired)

WATER CONSERVATION TIPS

Don't run the hose while washing your car. Use a bucket of water and a quick hose rinse at the end and save as much as 150 gallons each time.

Urban Water Management Plan Public Meeting Notice

Golden State Water Company (GSWC) is in the process of updating its existing Urban Water Management Plan and is seeking public input. The plan is expected to be available for review one week prior to the meeting date.

See [public notice](#) for more information.

Monthly Billing Beginning in June 2011 for Central Basin East Customer Service Area

Starting June 1, Golden State Water Company (GSWC) customers in the Central Basin East Customer Service Area will begin receiving monthly bills instead of bi-monthly bills. See [more information](#).

GSWC Files a Cost of Capital Application

A Cost of Capital application was filed May 2, 2011 with the the California Public Utilities Commission (CPUC). The CPUC regulates GSWC to ensure adequate levels of service are provided at the lowest reasonable costs.

In this filing, GSWC is requesting for the CPUC to review and authorize an increase in the cost of capital reflected in rates for 2012, 2013, and 2014. A decision is expected in December 2011.

A copy of the application is [here](#).

New Rates Established in Central Basin East Customer Service Area for 2010, 2011 and 2012

The California Public Utilities Commission (CPUC), which regulates Golden State Water Company (GSWC) to ensure adequate levels of service are provided at the lowest reasonable costs, issued a final decision on the company's 2008 General Rate Case on Nov. 19, 2010. The decision established rates for GSWC to charge customers for 2010, 2011 and 2012 in its Region II, which includes the Central Basin East Customer Service Area.

[Fact Sheet](#)

RATES, SCHEDULES & TARIFFS

- [Residential Metered Service](#)
- [Non-Residential Metered Service](#)
- [Mandatory Conservation-Rationing \(Schedule 14.1\)](#)

[CLICK HERE](#) to view all our rates, tariffs and advice letters

**Third Tier Added to Tiered Rates
for Central Basin East Customer Service Area
to Encourage Water Use Efficiency**

Golden State Water Company (GSWC) residential customers in the utility's Central Basin East Customer Service Area (CSA) had a third tier added to their tiered rates to promote water use efficiency.

The change, approved by the California Public Utilities Commission, began in December 2010. GSWC will not exceed CPUC authorized revenues as a result of tiered rates.

Here's how tiered rates work. Customers get charged for each unit of water they use. A unit is equal to one hundred cubic feet of water, or Ccf (748 gallons). In the Central Basin East CSA, residential customers will pay the lowest rate for each Ccf they use in tier one, up to 11 Ccf. For every unit of water used in tier two, which is 12-15 Ccf, customers will pay a 15 percent higher rate. In tier three, customers will pay an additional 15 percent for every unit of water from 16 Ccf and above.

The top of the first tier is based on the average winter month usage for the service area. The top of second tier is based on the midpoint between the annual average usage and the average summer month usage for the service area. The per unit price differential between each tier is approximately 15 percent, a sufficient amount to encourage water use efficiency.

For more information, see our Residential Metered Service tariff in the article above.

**LOW INCOME PROGRAM
California Alternate Rates for Water (CARW)**

Golden State Water Company offers a discount through the California Alternate Rates for Water (CARW) program to eligible customers. The amount of the discount is \$8 per month, which is equal to 15 percent of the average bill in your customer service area.

If you qualify for a rate discount on your electricity, you may be eligible for a discount on your water bill. Qualifications are based on the number of people living in your home and your total household income, including wages, government checks and benefits, and other financial support you and members of your family receive.

For further information, see the application below or contact our CARW hotline at (866) 360-CARW (2279).

-  [Application \(English\)](#)
-  [Application \(Spanish\)](#)

**Golden State Water Company's
Water Shortage Plan
for Central Basin East Customers**

Golden State Water Company developed a water shortage plan ([schedule 14.1](#)) for its Central Basin East Customer Service Area that asks customers to voluntarily reduce their usage based on historical averages. Read additional plan details [here](#). Each water allocation is based on the customer's average historical usage in 2004, 2005, and 2006, minus 10 percent.

Additionally, water use restrictions are now in place. GSWC may issue fines to customers who are involved in water wasting activities such as using water in any manner that results in run-off in gutters, waterways, patios, driveways or streets. Repeated violations could lead to the installation of flow restrictors at the customer's cost and suspension of service. See [list of restrictions](#).

Should a mandatory allocation stage be implemented, exception forms will be available for customers to request an allocation adjustment. For example, if a household added several people since 2006, or if customers require additional water for medical needs, they may be eligible for a higher water budget. Water conservation practices and devices may be evaluated as part of the exception evaluation process.

Since the targeted reductions in the current stage for Central Basin customers are voluntary, allocation forms will not be processed at this time.

WATER CONSERVATION REBATE PROGRAMS

Golden State Water Company partners with other agencies to offer various rebate programs as an incentive for customers to purchase water-efficient products. Here are some programs created for Los Angeles County customers. Funding is limited.

FREE Smart Irrigation Controllers
Available for a limited time, [click here](#) for more information.

High-Efficiency Clothes Washer (HECW) Rebates
For single-family homes call 1-888-376-3314 or visit www.socalwatersmart.com.
Up to \$85 rebate for those who qualify.

High-Efficiency Toilet (HET) Rebates
Up to \$125 for qualifying customers. Click [here](#) for application or call 1-800-999-4033.

Rotating Nozzles and Pressure Regulating Sprinkler Heads
Single-family homes, call 888-376-3314 or visit www.socalwatersmart.com.
Up to \$4 per set rebate for those who qualify.

Weather-based Irrigation Controller (SmartTimer)
Single-family homes and multi-family buildings up to four units,
call 888-376-3314 or visit www.socalwatersmart.com.

Up to \$25 rebate per station for those who qualify.

SmarTimer rebates for multi-family buildings with more than four units are currently no longer available due to overwhelming public response.

To learn more about any of our current rebate programs, please call customer service at 800-999-4033.

WATER QUALITY ANNUAL REPORT



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[Conservation Information and Rebate Programs](#) | [Rates, Schedules and Tariffs](#) | [Water Quality](#) | [Contact Us](#)

For 24-hour emergency and customer service, please call: 1-800-999-4033 or 877-933-9533 TTY (hearing impaired)
customerservice@gswater.com

Website design by [NetPilot Web Solutions](#)

No Meeting Minutes were taken since there was no attendance by the public.

Appendix C

Council Annual Reports for Demand Management Measures



CUWCC BMP RETAIL COVERAGE REPORT 2009-2010

Foundation Best Management Practices for Urban Water Efficiency

CUWCC Unit #: 5041

Agency: Golden State Water Company
Retail

District Name: Metro

Primary Contact: John Turner

Telephone: (909) 394-3600 Ext

Email:

johnturner@gswater.com

Compliance Option Chosen By Reporting Agency:
(Traditional, Flex Track or GPCD)
GPCD if used:

GPCD in 2010	139
GPCD Target for 2018	142

Year	Report	Target	Highest Acceptable Bound		
	% Base	GPCD	% Base	GPCD	
2010	1	96.4%	167	100%	173
2012	2	92.8%	161	96%	167
2014	3	89.2%	155	93%	161
2016	4	85.6%	148	89%	155
2018	5	82.0%	142	82%	142

Not on Track if 2010 GPCD is \geq than target

GPCD in 2010 Highest: 139

Acceptable GPCD for 2010: 173

On Track



CUWCC BMP RETAIL COVERAGE REPORT 2009-2010

Foundation Best Management Practices for Urban Water Efficiency

Foundational BMPs BMP 1.1 Operational Practices

	2009	2010	Conservation Coordinator provided with necessary resources to implement BMPs?
1. Conservation Coordinator provided with necessary resources to implement BMPs?	Albert Frias Water Conservation Coordinator AlbertFrias@gswc On Track	Albert Frias Water Conservation Coordinator AlbertFrias@gswc On Track	
2. Water waste prevention documentation			
Descriptive File	http://www.aswater.com/Organiz		
Descriptive File 2010			Rule 20 = Water Conservation. Rule 11B = Discontinuance of Service based upon Water Wastage. Rule 14.1 can be implemented when mandatory conservation measures are necessary to maintain sufficient water
URL	Retail		done, plus
URL 2010		http://www.aswater.com/Organization/Rates_and_Regulations/Rates_and_Tariffs/Rule_20.pdf	documentation or links provided
Describe Ordinance Terms	Retail		
Describe Ordinance Terms 2010		Where negligent or wasteful use of water exists on customer's premises, the utility may discontinue the service if such practices are not remedied within five days after it has given the customer written notice to such effect.	

On Track

On Track



CUWCC BMP RETAIL COVERAGE REPORT 2009-2010
Foundation Best Management Practices for Urban Water Efficiency

BMP 1.2 Water Loss Control

	2009	2010
Complete Standard Water Audit using AWWA Software?	Yes	Yes
See Note below		
AWWA files for each area provided to CUWCC?	Yes	On Track
AWWA Water Audit Validity Score?	See files	On Track
Completed Training in AWWA Audit Method?	0	
Completed Training in Component Analysis Process?	0	
Complete Component Analysis?	0	
Repaired all leaks and breaks to the extent cost effective?	Yes	On Track
Locate and repair unreported leaks to the extent cost effective.	Yes	On Track
Maintain a record-keeping system for the repair of reported leaks, including time of report, leak location, type of leaking pipe segment or fitting, and leak running time from report to repair.		
Provided 7 types of Water Loss Control Info		
Leaks Repaired	0	0
Value Real Losses	\$ -	\$ -
Value Appearant Losses	\$ -	\$ -
Miles Surveyed	0	0
Press Reduction	0	0
Cost of Interventions	\$ -	\$ -
Water Saved	0	0

Metro Districts consist of small, medium and large rate making areas, or CSA's (Customer Service Areas):

Artesia
Bell-Bell Gardens
Culver City
Florence Graham
Norwalk
Hollywood
Southwest (Carson) (SW)
Willowbrook

On Track if Yes, Not on Track if No

On Track if Yes, Not on Track if No

Info only until 2012

Info only until 2012

Info only until 2012

On Track if Yes, Not on Track if No

On Track if Yes, Not on Track if No

Info only until 2012

Info only until 2012

Info only until 2012

	2010
Complete Standard Water Audit using AWWA Software?	Yes
AWWA file provided to CUWCC?	On Track
AWWA Water Audit Validity Score?	See files
Completed Training in AWWA Audit Method?	Off
Completed Training in Component Analysis Process?	Off
Complete Component Analysis?	Off
Repaired all leaks and breaks to the extent cost effective?	Yes
Locate and repair unreported leaks to the extent cost effective.	Yes
Maintain a record-keeping system for the repair of reported leaks, including time of report, leak location, type of leaking pipe segment or fitting, and leak running time from report to repair.	
Provided 7 types of Water Loss Control Info	
Leaks Repaired	0
Value Real Losses	\$ -
Value Appearant Losses	\$ -
Miles Surveyed	0
Press Reduction	0
Cost of Interventions	\$ -
Water Saved	0

On Track if Yes, Not on Track if No

On Track if Yes, Not on Track if No

Info only until 2012

Info only until 2012

Info only until 2012

On Track if Yes, Not on Track if No

On Track if Yes, Not on Track if No

Info only until 2012

Info only until 2012



CUWCC BMP RETAIL COVERAGE REPORT 2009-2010

Foundation Best Management Practices for Urban Water Efficiency

1.3 METERING WITH COMMODITY RATES FOR ALL NEW CONNECTIONS AND RETROFIT OF EXISTING CONNECTIONS

Exemption or 'At least as Effective As' accepted by CUWCC

Numbered Unmetered Accounts **2008**

Metered Accounts billed by volume of use

Number of CII accounts with Mixed Use meters

Conducted a feasibility study to assess merits of a program to provide incentives to switch mixed-use accounts to dedicated landscape meters?

Feasibility Study provided to CUWCC?

Completed a written plan, policy or program to test, repair and replace meters

	2009	2010
Numbered Unmetered Accounts	0	0
Metered Accounts billed by volume of use	Yes	Yes
Number of CII accounts with Mixed Use meters	2,028	2,050
Conducted a feasibility study to assess merits of a program to provide incentives to switch mixed-use accounts to dedicated landscape meters?	No	No
Feasibility Study provided to CUWCC?	No	No
Completed a written plan, policy or program to test, repair and replace meters	Yes	Yes

On Track if no unmetered accounts

Volumetric billing required for all connections on same schedule as metering
Info only

On Track if Yes, Not on Track if No

On Track if Yes, Not on Track if No

On Track if Yes, Not on Track if No

If signed MOU prior to 31 Dec 1997, On Track if all connections metered; if signed after 31 Dec 1997, complete meter installations by 1 July 2012 or within 6 yrs of signing and 20% biannual reduction of unmetered connections.



CUWCC BMP RETAIL COVERAGE REPORT 2009-2010

Foundation Best Management Practices for Urban Water Efficiency

Agency: Retail
Golden State Water Company
District Name: Metro
CUWCC Unit #: 5041
Coverage Report Date: June 9, 2011
Primary Contact: John Turner
Email: johnturner@gswater.com

1.4 Retail Conservation Pricing
Metered Water Rate Structure
 Date 2009 data received June 15, 2011
 Date 2010 data received June 15, 2011
 On Track if: Increasing Block, Uniform, Allocation, Standby Service; Not on Track if otherwise

Customer Class	2009 Rate Type	Conserving Rate?	Customer Class	2010 Rate Type	Conserving Rate?
Single-Family	Increasing Block	Yes	Single-Family	Increasing Block	Yes
Multi-Family	Increasing Block	Yes	Multi-Family	Increasing Block	Yes
Commercial	Uniform	Yes	Commercial	Uniform	Yes
Industrial	Uniform	Yes	Industrial	Uniform	Yes
Institutional	Uniform	Yes	Institutional	Uniform	Yes
	On Track			On Track	

Year Volumetric Rates began for Agencies with some Unmetered Accounts
 Info only
 Agencies with Partially Metered Service Areas: If signed MOU prior to 31 Dec. 1997, implementation starts no later than 1 July 2010. If signed MOU after 31 Dec. 1997, implementation starts no later than 1 July 2013, or within seven years of signing the MOU.



CUWCC BMP RETAIL COVERAGE REPORT 2009-2010

Foundation Best Management Practices for Urban Water Efficiency

BMP 2. EDUCATION PROGRAMS

BMP 2.1 Public Outreach Actions Implemented and Reported to CUWCC

Does a wholesale agency implement Public Outreach Programs for this utility's benefit?
Names of Wholesale Agencies

- 1) Contacts with the public (minimum = 4 times per year)
- 2) Water supplier contacts with media (minimum = 4 times per year, i.e., at least quarterly).
- 3) An actively maintained website that is updated regularly (minimum = 4 times per year, i.e., at least quarterly).
- 4) Description of materials used to meet minimum requirement.

	2009 Yes	2010 Yes	Yes/No
Metropolitan Water District of Los Angeles, West Basin Municipal Water District, Central Basin Municipal Water District	 25	 25	
	 4	 4	
	 Yes	 Yes	
Newsletters articles on conservation			All 6 action types implemented and reported to CUWCC to be 'On Track'
Website Newspaper contacts			
	 \$ 25,000	 \$ 25,000	
	 Description is too large for text area. Data will be stored in the BMP Reporting database when online.	 Description is too large for text area. Data will be stored in the BMP Reporting database when online.	
	On Track		On Track



CUWCC BMP RETAIL COVERAGE REPORT 2009-2010

Foundation Best Management Practices for Urban Water Efficiency

2.2 School Education Programs Implemented and Reported to CUWCC

	2009	2010	Yes/No
Does a wholesale agency implement School Education Programs for this unity's benefit? Name of Wholesale Supplier?	No 0	No 0	
1) Curriculum materials developed and/or provided by agency	Discover Science Center Each participant receives classroom materials and a water conservation and activity Kit containing efficiency measures for their homes to perform the hands-on activities. Modifications were made to select materials which incorporate	Discover Science Center Each participant receives classroom materials and a water conservation and activity Kit containing efficiency measures for their homes to perform the hands-on activities. Modifications were made to select materials which incorporate	
2) Materials meet state education framework requirements and are grade-level appropriate?	Yes Yes	Yes Yes	All 5 actions types implemented and reported to CUWCC to be On
3) Materials Distributed to K-6? Describe K-6 Materials	Discover Science Center Each participant receives classroom materials and a water conservation and activity Kit containing efficiency measures for their homes to perform the hands-on activities. Modifications were made to select materials which incorporate	Discover Science Center Each participant receives classroom materials and a water conservation and activity Kit containing efficiency measures for their homes to perform the hands-on activities. Modifications were made to select materials which incorporate	Describe materials to meet minimum requirements
Materials distributed to 7-12 students?	No \$ 200,000	No \$ 200,000	Info Only
4) Annual budget for school education program.	Harvest Festival & Water Awareness Month held at West Basin.	Harvest Festival & Water Awareness Month held at West Basin.	
5) Description of all other water supplier education programs	0 On Track	0 On Track	



CUWCC BMP COVERAGE REPORT BMP 3 RESIDENTIAL

Agency: Golden State Water Company District Name: Metro CUWCC Unit #: 5041

Primary Contact: John Turner Date: January 0, 1900

Compliance Option Chosen By Reporting Agency: Flex Track Email: johnturner@gswater.com

BMP 3 C 1 Residential Assistance

Total Number of Customers

Total Participants during Reporting Period

Number of Leak Detection Surveys or

Assistance on Customer Property

Number of Faucet Aerators

Distributed

Number of WSS

Showerheads Distributed

	2009	2009 SF Target	2009 Multi Family Units	2009 MF Targets
2009 Single Family Accounts	50,487		21,637	
2009 Multi Family Units	13,286		97	
2009 SF Target	3,186	757	32	325
2009 Multi Family Units	26,572		194	
2009 MF Targets	10,100	On Track	65	On Track

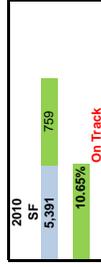
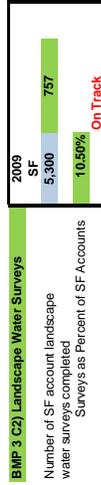
	2010	2010 SF Target	2010 Multi Family Units	2010 MF Targets
2010 Single Family Accounts	50,620		21,694	
2010 Multi Family Units	14,100		119	
2010 SF Target	2,945	759	20	325
2010 Multi Family Units	28,200		921	
2010 MF Targets	11,045	On Track	27	On Track

On Track if annual number of surveys/assistance >= 1.5% of SF accounts and MF units

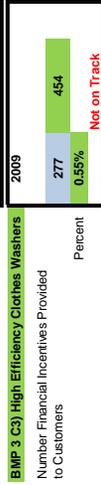
Agency: Golden State Water Company

District Name: Metro

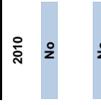
CUWCC Unit #: 5041



On Track if annual number of landscape surveys >= 1.5% of SF accounts



On Track if number of incentives for HECW (WF =5.0) => 0.9% SF accounts in 2009 and 1.0 % in 2010



Ordinance must require replacement of toilets => 3.5 gal when property is sold
On Track if ordinance exists
On Track if 75% penetration achieved and documentation provided



On Track if number of toilets installed => average resale rate X number toilets per residence (from Base Year Data)



On Track if ordinance exists requiring WSS in new residential units and documentation is provided

Enter District ID No. 5041

Agency Row #

2010 BMP 5

2009 BMP 5

Data File Name



CUWCC BMP COVERAGE REPORT

Traditional BMP 4 - Commercial Industrial Institutional

Agency: **Golden State Water Company**
 Primary Contact: John Turner
 Compliance Option Chosen By Reporting Agency:
 Date Agency Signed MOU: 12/1/1991

District Name: **Metro**
 Email: johnturner@gswater.com

CUWCC Unit #: **5041**

CII Baseline Water Use (AF): 10,204 AF/Year

Target CII Water Use Reduction (AF)

1,020

Target Reduction is 10% of Baseline CII water use over 10 years.

Water Efficiency Measures

	2009 Quantity Installed	2009 Water Savings AF	2010 Quantity Installed	2010 Water Savings AF	Type of Program	Other type of Program
1 High Efficiency Toilets (1.2 GPF or less)	1242	51.85	500	20.87	Incentive	
2 High Efficiency Urinals (0.5 GPF or less)			40	3.44	Incentive	
3 Ultra Low Flow Urinals	282	25.97	200	18.42	Incentive	
4 Zero Consumption Urinals	55	6.41				
5 Commercial High Efficiency Single Load Clothes Washers						
6 Cooling Tower Conductivity Controllers	1	1.03				
7 Cooling Tower pH Controllers						
8 Connectionless Food Steamers						
9 Medical Equipment Steam Sterilizers						
10 Water Efficient Ice Machines	1	0.15				
11 Pressurized Water Brooms						
12 Dry Vacuum Pumps						
Total Water Savings		85.41		42.73		

On Track

128.14

Guideline: 'On Track' if estimated savings as percent of baseline: 0.5% by the end of first reporting per 2.4% by end of yr 4, 6.4% by end of year 8

9 % by end of yr 10
 CII List of Efficiency Measures from MOU Compliance Policies Tier 3, page 5, dated 10-06-09

Enter District ID No.

5041

Data File Name



2009 BMPs

2010 BMP 5

Agency Row #

CUWCC BMP COVERAGE REPORT

Traditional BMP 5 - Landscape

Agency: Golden State Water Company
 Primary Contact: John Turner
 Compliance Option Chosen By Reporting Agency: Traditional
 Date Agency Signed MOU: 12/11/1991

District Name: Metro
 Email: johnturner@gswater.com

Report Date: [Redacted]
 CUWCC Unit #: 5041

Initial 10 year period completed: Y/N If "Yes", 50% credit for past BMP 9 Implementation? y/n

Required Documentation

Number of dedicated irrigation meter accounts

Number of dedicated irrigation meter accounts with water budgets.

Percent of dedicated irrigation meters with water budgets

Target Rate for Year 1

Aggregate water use for dedicated non-recreational landscape accounts with budgets

Aggregate acreage assigned water budgets and average ET for dedicated non-recreational landscape accounts with budgets.

Aggregate acreage of recreational areas assigned water budgets and average ET for dedicated recreational landscape accounts with budgets.

2009

298

9%

Target Rate for Year 1

2009 Acres 2009 Average ET

2009 Accounts $\geq 20\%$ over-budget Number of Offered Technical Assistance

2009 Acres 2009 Average ET

2010

341

18%

Target Rate for Year 2

2010 Acres 2010 Average ET

2010 Accounts $\geq 20\%$ over-budget Number of Offered Technical Assistance

2010 Acres 2010 Average ET

ETo-based water use budgets developed for 90% of CII accounts with dedicated irrigation meters at an average rate of 9% per year over 10 years

Offer site-specific technical assistance annually to all accounts that are 20% over budget within six years of the date implementation was to commence.

Not On Track - No Data

CII Accounts without Meters or with Mixed-Use Meters

2009

2010

Number of mixed use and un-metered accounts.

Incentive Type	2009 Incentives and Responses	
	Incentive Value \$	Number accepted by Customers
Rebate Smart Irrigation Controller-Rebates Timers	2125	4

Incentive Value \$	2010 Incentives and Responses	
	Number offered to Customers	Number accepted by Customers
5850	11	11

Agency will implement and maintain a customer incentive program(s) for irrigation equipment retrofits.

2009 Surveys	
Number offered.	Number accepted
14	14

2010 Surveys	
Number offered.	Number accepted
14	14

Complete irrigation water use surveys for not less than 15% of CII accounts with mixed-use meters and un-metered accounts within 10 years of the date implementation is to commence. (Note: CII surveys that include both indoor and outdoor components can be credited against coverage requirements for both the Landscape and CII BMPs.)

Landscape Irrigation Surveys

On Track if the percent of CII accounts with mixed-use meters receiving a landscape water use survey equals or exceeds the following: 1.5% by the end of the first reporting period (year two) following the date implementation is to commence; 3.6% by the end of year four; 6.3% by the end of year six; 9.6% by the end

Estimated annual water savings by customers receiving surveys and implementing recommendations.

2009 Savings AF
Not On Track - No Data

2010 Savings AF
Not On Track - No Data

Not On Track - No Data

Appendix D

CPUC Water Conservation and Rationing Rules and Regulations

Rule No. 11

DISCONTINUANCE AND RESTORATION OF SERVICE

A. Customer's Request for Discontinuance of Service

- 1. A customer may have service discontinued by giving not less than two day's advance notice thereof to the utility. Charges for service may be required to be paid until the requested date of discontinuance or such later date as will provide not less than the required two days' advance notice.
- 2. When such notice is not given, the customer will be required to pay for service until two days after the utility has knowledge that the customer has vacated the premises or otherwise has discontinued water service.

B. Discontinuance of Service by Utility

1. For Nonpayment of Bills

- a. Past-Due Bills. When bills are rendered monthly or bimonthly, they will be considered past due if not paid within 19 days from the date of mailing. The utility shall allow every residential customer at least 19 days from the date of mailing its bill for services, postage prepaid, to make payment of the bill. The utility may not discontinue residential service for nonpayment of a delinquent account unless the utility first gives notice of the delinquency and impending discontinuance, at least 10 days prior to the proposed discontinuance, by means of a notice mailed, postage prepaid, to the customer to whom the service is provided if different than to whom the service is billed, not earlier than 19 days from the date of mailing the utility's bill for services. The 10-day discontinuance of service notice shall not commence until five days after the mailing of the notice.
- b. When a bill for water service has become past due and a 10-day discontinuance of residential service notice or a 7-day discontinuance of residential service notice for nonpayment has been issued, service may be discontinued if bill is not paid within the time required by such notice. The customer's service, however, will not be discontinued for nonpayment until the amount of any deposit made to establish credit for that service has been fully absorbed.

(T)

(Continued)

Rule No. 11

DISCONTINUANCE AND RESTORATION OF SERVICE

(Continued)

B. Discontinuance of Services by Utility (Continued)

1. For Nonpayment of Bills (Continued)

- c. Any customer, residential as well as nonresidential, who has initiated a billing complaint or requested an investigation within 5 days of receiving a disputed bill or who has, before discontinuance of service made a request for extension of the payment period of a bill asserted to be beyond the means of the customer to pay in full within the normal period for payment, shall not have residential water service discontinued for nonpayment during the pendency of an investigation by the utility of such customer complaint or request and shall be given an opportunity for review of the complaint, investigation, or request by a review manager of the utility. The review shall include consideration of whether a residential customer shall be permitted to make installment payments on any unpaid balance of the delinquent account over a reasonable period of time, not to exceed 12 months. Such service shall not be discontinued for nonpayment for any customer complying with an installment payment agreement entered into with the utility, provided the customer also keeps current his account for water service as charges accrue in each subsequent billing period. If a residential customer fails to comply with an installment payment agreement, the utility will give a 10-day discontinuance of service notice before discontinuing such service, but such notice shall not entitle the customer to further investigation by the utility.
- d. Any customer whose complaint or request for an investigation pursuant to subdivision (c) has resulted in an adverse determination by the utility may appeal the determination to the Commission. Any subsequent appeal of the dispute or complaint to the Commission shall be in accordance with the Commission adopted Rules of Practice and Procedure.
- e. Service to a residential water customer will not be discontinued for nonpayment when the customer has previously established to the satisfaction of the utility that:

(Continued)

Rule No. 11

DISCONTINUANCE AND RESTORATION OF SERVICE

(Continued)

B. Discontinuance of Services by Utility (Continued)

1. For Nonpayment of Bills (Continued)

e. (Continued)

- (1) The customer is elderly (age 62 or over) or handicapped,* or upon certification of a licensed physical or surgeon that to discontinue water will be life threatening to the customer; and

*Proof of age must be supported by certificate of birth, driver's license, passport or other reliable document. Proof of handicap must be by certification from a licensed physician, surgeon, public health nurse or social worker.

- (2) The customer is temporarily unable to pay for such service in accordance with the provisions of the utility's tariffs; and

- (3) The customer is willing to arrange installment payments satisfactory to the utility, over a period not to exceed 12 months, including arrangements for prompt payment of subsequent bills.

However, service may be discontinued to any customer who does not comply with an installment payment agreement or keep current his account for water service as charges accrue in each subsequent billing period.

- (f) A customer's residential service may be discontinued for nonpayment of a bill for residential service previously rendered him at any location served by the utility.

A nonresidential service may be discontinued for nonpayment of a bill for residential as well as nonresidential service previously rendered him at any location served by the utility.

The discontinuance of service notice as set forth in subdivision (b) will be given in both cases stated above before discontinuance of service takes place.

(Continued)

ISSUED BY

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Advice Letter No. 925-W

F. E. WICKS

Effective Date September 7, 1993

Decision No. _____

President

Resolution No. W 3770

Rule No. 11

DISCONTINUANCE AND RESTORATION OF SERVICE
(Continued)

B. Discontinuance of Services by Utility (Continued)

1. For Nonpayment of Bills (Continued)

f. (Continued)

Residential services will not, however, be discontinued for nonpayment of bills for separate nonresidential service.

g. Service will not be discontinued by reason of delinquency in payment for service on any Saturday, Sunday, legal holiday, or at any time during which the business offices of the utility are not open to the public.

h. Where water service is provided to residential users in a multi-unit residential structure, mobilehome park, or permanent residential structures in a labor camp, where the owner, manager, or operator is listed by the utility as the customer of record, the utility will make every good faith effort to inform the users, when the account is in arrears, that service will be discontinued. Notice will be in as prescribed in subdivision (a) above, and in Rules Nos. 5 and 8. (T)

(1) Where said users are individually metered. (N)

The utility is not required to make service available to these users unless each user agrees to the terms and conditions of service and meets the requirement of the law and the utility's rules and tariffs. However, if one or more users are willing and able to assume responsibility for subsequent charges by these users to the account to the satisfaction of the utility, and if there is a practical physical means, legally available to the utility of selectively providing services to these users who have met the requirements of the utility's rules and tariffs, the utility will make service available to these users. For these selected users establishment of credit will be as prescribed in Rule No. 6, except that where prior service for a period of time is a condition for establishing credit with the utility, proof that is acceptable to the utility of residence and prompt payment of rent or other credit obligation during that period of time is a satisfactory equivalent. (N)

(Continued)

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F. E. WICKS

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President

Resolution No. _____

SOUTHERN CALIFORNIA WATER COMPANY
630 E. FOOTHILL BLVD. P. O. BOX 9016
SAN DIMAS, CALIFORNIA 91773-9016
W

Revised Cal. P.U.C. Sheet No. 745-W

Cancelling Revised Cal. P.U.C. Sheet No. 3075-

Advice Letter No. 925-W
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F. E. WICKS
President

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Resolution No. _____

Rule No. 11

DISCONTINUANCE AND RESTORATION OF SERVICE

(Continued)

B. Discontinuance of Services by Utility (Continued)

1. For Nonpayment of Bills (Continued)

h. (Continued)

(2) Where said users are master metered.

The utility is not required to make service available to these users unless each user agrees to the terms and conditions of service, and meets the requirements of the law and the utility's rules and tariffs and the following:

The same Rule 11, item B.1.h. (1) above which applies to individually metered users also applies to master metered users, except a representative may act on the behalf of a master metered user, and the utility will not discontinue service in any of the following situations:

- (a) During the pendency of an investigation by the utility of a master-meter customer dispute or complaint.
- (b) When the master-metered customer has been granted an extension of the period for repayment of a bill.
- (c) For an indebtedness owned by the master metered customer to any other person or corporation or when the obligation represented by the delinquent account or any other indebtedness was incurred with a person or corporation other than the utility demanding payment therefor.
- (d) When a delinquent account relates to another property owned, managed, or operated by the master-metered customer.
- (e) When a public health or building officer certifies that determination would result in a significant threat to the health or safety of the residential occupants or the public. Proof of age or handicap are described in Rule 11.B.1.e.

(N)
|
(N)

(Continued)

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President

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Resolution No. W 3770

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Rule No. 11

DISCONTINUANCE AND RESTORATION OF SERVICE

(Continued)

B. Discontinuance of Services by Utility (Continued)

1. For Nonpayment of Bills (Continued)

i. A reasonable attempt must be made by the utility to personally contact an adult person on the residential customer's premises either by telephone, or in person, at hours prior to discontinuance. For elderly or handicapped residential customers, the utility shall provide at least 48 hours' notice by telephone or in person. For these customers, if telephone or personal contact cannot be made, a notice of discontinuance of service shall be posted in a conspicuous location at the service address at least 48 hours prior to discontinuance. Such notice shall be independent of and in addition to, other notices(s) as may be prescribed in the utility's tariffs. (C)
(N)
(N)
(N)

j. Residential Customer's Remedies Upon Receipt of Discontinuance Notice.

- (1) If upon receipt of a 10 day discontinuance notice, a residential customer is unable to pay, he must contact the utility before discontinuance of service to make payment arrangements to avoid discontinuance of service.
- (2) If, after contacting the utility, the residential customer alleges to the Commission an inability to pay and that he is unable to make payment arrangements with the utility he should write to the Commission's Consumer Affairs Branch (CAB) to make an informal complaint. This action must be taken within the 10-day discontinuance of service notice.
- (3) The CAB's resolution of the matter will be reported to the utility and the residential customer within ten business days after receipt of the informal complaint. If the customer is not satisfied with such resolution, he must file, within ten business days after the date of the CAB's letter, a formal complaint with the Commission under Public Utilities Code Section 1702 on a form provided by the CAB.

(Continued)

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Resolution No. W 3770

Rule No. 11

DISCONTINUANCE AND RESTORATION OF SERVICE

(Continued)

B. Discontinuance of Services by Utility (Continued)

1. For Nonpayment of Bills (Continued)

j. Residential Customer's Remedies Upon Receipt of Discontinuance Notice.

(4) Failure of the residential as well as the nonresidential customer to observe these time limits shall entitle the utility to insist upon payment or, upon failure to pay, to discontinue the customer's service.

k. Designation of a Third-Party Representative (Elderly or Handicapped only)

(1) Customer must inform utility if he desires that a third party receive discontinuance or other notices on his behalf.

(2) Utility must be advised of name, address and telephone number of third party with a letter from third party accepting this responsibility.

(3) Only customers who certify that they are elderly or handicapped are entitled to third-party representation.*

2. For Noncompliance with Rules

The utility may discontinue service to any customer for violation of these rules after it has given the customer at least five days' written notice of such intention. Where safety of water supply is endangered, service may be discontinued immediately without notice.

3. For Waste of Water

a. Where negligent or wasteful use of water exists on customer's premises, the utility may discontinue the service if such practices are not remedied within five days after it has given the customer written notice to such effect.

(Continued)

* Proof of age must be supported by certificate of birth, driver's license, passport or other reliable document. Proof of handicap must be by certification from a licensed physician, public health nurse or social worker.

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F. E. WICKS

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Resolution No. W 3770

SOUTHERN CALIFORNIA WATER COMPANY

630 E. FOOTHILL BLVD. - P. O. BOX 9016
SAN DIMAS, CALIFORNIA 91773-9016

Revised Cal. P.U.C. Sheet No. 3748-W

Canceling Original Cal. P.U.C. Sheet No. 3077-W

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Resolution No. W 3770

W

Rule No. 11

DISCONTINUANCE AND RESTORATION OF SERVICE

(Continued)

B. Continuance of Services by Utility (Continued)

3. For Waste of Water (Continued)

b. In order to protect itself against serious and unnecessary waste or misuse of water, the utility may meter any flat rate service and apply the regularly established meter rates where the customer continues to misuse or waste water beyond five days after the utility has given the customer written notice to remedy such practices.

4. For Unsafe Apparatus or Where Service is Detrimental or Damaging to the Utility or its Customers

If an unsafe or hazardous condition is found to exist on the customer's premise, or if the use of water thereon by apparatus, appliances, equipment or otherwise is found to be detrimental or damaging to the utility or its customers, the service may be shutoff without notice. The utility will notify the customer immediately of the reasons for the discontinuance and the corrective action to be taken by the customer before service can be restored.

5. For Fraudulent Use of Service

When the utility has discovered that a customer has obtained service by fraudulent means, or has diverted the water service for unauthorized use, the service to that customer may be discontinued without notice. The utility will not restore service to such customer until that customer has complied with all filed rules and reasonable requirements of the utility and the utility has been reimbursed for the full amount of the service rendered and the actual cost to the utility incurred by reason of the fraudulent use.

C. Restoration of Service

1. Reconnection Charge

Where service has been discontinued for violation of these rules or for nonpayment of bills, the utility may charge \$25.00 for reconnection of service during regular working hours or \$37.50 (I) for reconnection of service at other than regular working hours when the customer has requested that the reconnection be made at other than regular working hours.

(Continued)

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F. E. WICKS

Effective Date September 21, 2004

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Resolution No. _____

Rule No. 11

DISCONTINUANCE AND RESTORATION OF SERVICE

(Continued)

C. Restoration of Service (Continued)

2. To be Made During Regular Working Hours

The utility will endeavor to make reconnections during regular working hours on the day of the request, if the conditions permit; otherwise reconnections will be made on the regular working day following the day the request is made.

3. To Be Made at Other Than Regular Working Hours

When a customer has requested that the reconnection be made at other than regular working hours, the utility will reasonably endeavor to so make the reconnection if practicable under the circumstances.

4. Wrongful Discontinuance

A service wrongfully discontinued by the utility, must be restored without charge for the restoration to the customer within 24 hours.

D. Refusal to Serve

1 Conditions for Refusal

The utility may refuse to serve an applicant for service under the following conditions:

- a. If the applicant fails to comply with any of the rules as filed with the Public Utilities Commission.
- b. If the intended use of the service is of such a nature that it will be detrimental or injurious to existing customers.
- c. If, in the judgment of the utility, the applicant's installation for utilizing the service is unsafe or hazardous, or of such nature that satisfactory service cannot be rendered.

(Continued)

Rule No. 11

DISCONTINUANCE AND RESTORATION OF SERVICE

(Continued)

C. Restoration of Service (Continued)

1. Conditions for Refusal (Continued)

d. Where service has been discontinued for fraudulent use, the utility will not serve an applicant until it has determined that all conditions of fraudulent use or practice has been corrected.

2. Notification to Customers

When an applicant is refused service under the provisions of this rule, the utility will notify the applicant promptly of the reason for the refusal to service and of the right of applicant to appeal the utility's decision to the Public Utilities Commission.

RULE 14.1
WATER CONSERVATION AND RATIONING PLAN

Page 1

GENERAL INFORMATION

1. If water supplies are projected to be insufficient to meet normal customer demand, and are beyond the control of the utility, the utility may elect to implement voluntary conservation using the portion of this plan set forth in Section A of this Rule, after notifying the Director of the Commission's Division of Water and Audits of its intent, via a letter in both hard-copy and e-mailed formats.
2. Prior to declaration of mandatory rationing, a utility may request authorization of a Schedule 14.1 – Staged Mandatory Water Conservation and Rationing tariff, via a Tier 2 advice letter.
3. If, in the opinion of the utility, more stringent water measures are required, the utility shall request Commission authorization to implement the staged mandatory conservation and rationing measures set forth in Sections B through E.
4. The utility shall file a Tier 1 advice letter to request activation of a particular stage of Schedule 14.1 – Staged Mandatory Water Conservation and Rationing tariff.
 - a. If a Declaration of Mandatory Rationing is made by utility or governing agency, or
 - b. If the utility is unable to address voluntary conservation levels set by itself, supplier, or governing agency, or
 - c. If the utility chooses to subsequently activate a different stage
5. When Schedule 14.1 is in effect and the utility determines that water supplies are again sufficient to meet normal demands, and mandatory conservation and rationing measures are no longer necessary, the utility shall seek Commission approval via a Tier 1 advice letter to de-activate the particular stage of mandatory rationing that had been authorized.

(N)

(N)

(Continued)

Advice Letter No. 1325-WA
Decision No. _____

ISSUED BY
R. J. SPROWLS
President

Date Filed June 22, 2009
Effective Date June 20, 2009
Resolution No. _____

RULE 14.1
WATER CONSERVATION AND RATIONING PLAN

Page 2
(N)

GENERAL INFORMATION (Continued)

6. In the event of a water supply shortage requiring a voluntary or mandatory program, the utility shall make available to its customers water conservation kits as required by its version of Rule 20. The utility shall notify all customers of the availability of conservation kits via a bill insert or direct mailers.

A. CONSERVATION - NON-ESSENTIAL OR UNAUTHORIZED WATER USE

No customer shall use utility-supplied water for non-essential or unauthorized uses, including but not limited to:

1. Use of potable water for more than minimal landscaping, as defined in the landscaping regulated of the jurisdiction or as described in Article 10.8 of the California Government Code in connection with new construction;
2. Use through any meter when the company has notified the customer in writing to repair a broken or defective plumbing, sprinkler, watering or irrigation system and the customer has failed to effect such repairs within five business days;
3. Use of potable water which results in flooding or runoff in gutters or streets;
4. Individual private washing of cars with a hose except with the use of a positive action shut-off nozzle. Use of potable water for washing commercial aircraft, cars, buses, boats, trailers, or other commercial vehicles at any time, except at commercial or fleet vehicle or boat washing facilities operated at a fixed location where equipment using water is properly maintained to avoid wasteful use;
5. Use of potable water washing buildings, structures, , driveways, patios, parking lots, tennis courts, or other hard-surfaced areas, except in the cases where health and safety are at risk;
6. Use of potable water to irrigate turf, lawns, gardens, or ornamental landscaping by means other than drip irrigation, or hand watering without quick acting positive action shut-off nozzles, on a specific schedule, for example: 1) before 8:00 a.m. and after 7:00 p.m.; 2) every other day; or 3) selected days of the week;

(N)

(Continued)

RULE 14.1
WATER CONSERVATION AND RATIONING PLAN

Page 3

GENERAL INFORMATION (Continued)

7. Use of potable water for watering streets with trucks, except for initial wash-down for construction purposes (if street sweeping is not feasible), or to protect the health and safety of the public;
8. Use of potable water for construction purposes, such as consolidation of backfill, dust control, or other uses unless no other source of water or other method can be used.
9. Use of potable water for construction purposes unless no other source of water or other method can be used;
10. Use of potable water for street cleaning;
11. Operation of commercial car washes without recycling at least 50% of the potable water used per cycle;
12. Use of potable water for watering outside plants, lawn, landscape and turf areas during certain hours if and when specified in Schedule No. 14.1 when the schedule is in effect;
13. Use of potable water for decorative fountains or the filling or topping off of decorative lakes or ponds. Exceptions are made for those decorative fountains, lakes, or ponds which utilize recycled water;
14. Use of potable water for the filling or refilling of swimming pools.
15. Service of water by any restaurant except upon the request of a patron; and
16. Use of potable water to flush hydrants, except where required for public health or safety.

(N)

B. STAGED MANDATORY RATIONING OF WATER USAGE

1. Prior to declaration of mandatory rationing, a utility may request authorization of a Schedule 14.1 – Staged Mandatory Water Conservation and Rationing tariff, via a Tier 2 advice letter, with full justification. The utility may not institute Schedule 14.1 until it has been authorized to do so by the Commission.

(N)

(Continued)

RULE 14.1
WATER CONSERVATION AND RATIONING PLAN

Page 4

STAGED MANDATORY RATIONING OF WATER USAGE (Continued)

(N)

- a. A staged Schedule 14.1 that has been authorized by the Commission shall remain dormant until triggered by specific conditions detailed in the Schedule 14.1 tariff and utility has requested and received authorization for activating a stage by Commission.
- b. Notice of the Tier 2 advice letter (example shown in Appendix C) and associated public participation hearing shall be provided to customers under General Order (GO) 96-B rules.
- c. Utility shall comply with all requirements of Sections 350-358 of the California Water Code.
- d. The Tier 2 advice letter requesting institution of a Schedule 14.1 shall include but not be limited to:
 - i. Proposed Schedule 14.1 tariff, which shall include but not be limited to:
 1. Applicability,
 2. Territory applicable to,
 3. A detailed description of each Stage of Rationing,
 4. A detailed description of the Trigger that Activates each Stage of Rationing,
 5. A detailed description of each water use restriction for each stage of rationing.
 6. Water use violation levels, written warning levels, associated fines, and exception procedures,

(N)

(Continued)

RULE 14.1
WATER CONSERVATION AND RATIONING PLAN

STAGED MANDATORY RATIONING OF WATER USAGE (Continued)

Page 5

- 7. Conditions for installation of a flow restrictor, (N)
- 8. Charges for removal of flow restrictors, and
- 9. Special Conditions
- ii. Justification for, and documentation and calculations in support of plan, including but not limited to each item in B.1.d.i above.
- 2. Number of Stages requested by each utility/district may vary, depending on specifics of water shortage event.
- 3. The utility shall file a Tier 1 advice letter to request activation of a particular stage of Schedule 14.1 – Staged Mandatory Water Conservation and Rationing tariff.
 - a. If a Declaration of Mandatory Rationing is made by utility or governing agency,
 - b. If the utility is unable to address voluntary conservation levels set by itself or governing agency, or
 - c. If the utility chooses to subsequently activate a different stage.
 - d. The Tier 1 advice letter requesting activation of a Schedule 14.1 shall include but not be limited to:
 - i. Justification for activating this particular stage of mandatory rationing, as well as period during which this particular stage of mandatory conservation and rationing measures will be in effect.
 - ii. When the utility requests activation of a particular Stage, it shall notify its customers as detailed in Section E, below.
- 4. All monies collected by the utility through water use violation fines shall not be accounted for as income.
- 5. All expenses incurred by utility to implement Rule 14.1 and Schedule 14.1 that have not been considered in a General Rate Case or other proceeding, shall be recoverable by utility if determined to be reasonable by Commission.

(N)

(Continued)

RULE 14.1
WATER CONSERVATION AND RATIONING PLAN

STAGED MANDATORY RATIONING OF WATER USAGE (Continued)

Page 6

(N)

- a. These monies shall be accumulated by the utility in a separate memorandum account for disposition as directed or authorized from time to time by the Commission.

C. ENFORCEMENT OF STAGED MANDATORY CONSERVATION AND RATIONING

1. The water use restrictions of the conservation program, in Section A of this rule, become mandatory when the authorized Schedule 14.1-Staged Mandatory Rationing Program is triggered, the utility files a Tier 1 advice letter requesting activation of a particular stage, and authorization is received from the Commission.
 - a. In the event a customer is observed to be using water for any nonessential or unauthorized use as defined in Section A of this rule, the utility may charge a water use violation fine in accordance with Schedule No. 14.1.
2. The utility may, after one written warning and one non-essential or unauthorized use violation notice, install a flow-restricting device on the service line of any customer observed by utility personnel to be using water for any non-essential or unauthorized use as defined in Section A above.
3. A flow restrictor shall not restrict water delivery by greater than 50% of normal flow. The restricting device may be removed only by the utility, only after a three-day period has elapsed, and only upon payment of the appropriate removal charge as set forth in Schedule No. 14.1.
4. After the removal of the restricting device, if any non-essential or unauthorized use of water shall continue, the utility may install another flow-restricting device. This device shall remain in place until water supply conditions warrant its removal and until the appropriate charge for removal has been paid to the utility.
5. Any tampering with flow restricting device by customer can result in fines or discontinuation of water use at the utility's discretion.

(N)

(Continued)

RULE 14.1
WATER CONSERVATION AND RATIONING PLAN

ENFORCEMENT OF STAGED MANDATORY CONSERVATION AND RATIONING

(Continued)

Page 7
(N)

6. If, despite installation of such flow-restricting device pursuant to the provisions of the previous enforcement conditions, any such non-essential or unauthorized use of water shall continue, then the utility may discontinue water service to such customer. In such latter event, a charge as provided in Rule No. 11 shall be paid to the utility as a condition to restoration of service.
7. All monies collected by the utility through water use violation fines shall not be accounted for as income. All expenses incurred by utility to implement Rule 14.1 and Schedule 14.1 that have not been considered in a General Rate Case or other proceeding, shall be recoverable by utility if determined to be reasonable by Commission. These additional monies shall be accumulated by the utility in a separate memorandum account for disposition as directed or authorized from time to time by the Commission.
8. The charge for removal of a flow-restricting device shall be in accordance with Schedule No. 14.1.

D. APPEAL PROCEDURE

1. Any customer who seeks a variance from any of the provisions of this water conservation and rationing plan shall notify the utility in writing, explaining in detail the reason for such a variation. The utility shall respond to each such request in writing.
2. Any customer not satisfied with the utility's response may file an appeal with the staff of the Commission. The customer and the utility will be notified of the disposition of such appeal by letter from the Executive Director of the Commission.

(N)

(Continued)

RULE 14.1
WATER CONSERVATION AND RATIONING PLAN

APPEAL PROCEDURE (Continued)

Page 8

(N)

3. If the customer disagrees with such disposition, the customer shall have the right to file a formal complaint with the Commission. Except as set forth in this Section, no person shall have any right or claim in law or in equity, against the utility because of, or as a result of, any matter or thing done or threatened to be done pursuant to the provisions of this water conservation and rationing plan.

E. PUBLICITY

1. As stated under Section B.1.b and c, when a utility requests authorization of a Schedule 14.1 – Staged Mandatory Water Conservation and Rationing tariff, via a Tier 2 advice letter, it shall provide notice of the Tier 2 advice letter (example shown in Attachment C) and associated public meeting provided to customers, under General Order (GO) 96-B rules, and shall comply with all requirements of Sections 350-358 of the California Water Code (CWC), including but not limited to the following:
 - a. In order to be in compliance with both the GO and CWC, the utility shall provide notice via both newspaper and bill insert/direct mailing.
 - b. Utility shall file one notice for each advice letter filed, that includes both notice of the filing of the Tier 2 advice letter as well as the details of the public meeting (date, time, place, etc).
 - c. The public meeting shall be held after the utility files the Tier 2 advice letter, and before the Commission authorizes implementation of the tariff.
 - d. Utility shall consult with Division of Water and Audits staff prior to filing advice letter, in order to determine details of public meeting.
2. In the event that a Schedule 14.1-Staged Mandatory Rationing Plan is triggered, and an utility requests activation through the filing of a Tier 1 advice letter, the utility shall notify its customers and provide each customer with a copy of Schedule 14.1 by means of bill insert or direct mailing. Notification shall take place prior to imposing any fines associated with this plan.

(N)

(Continued)

RULE 14.1
WATER CONSERVATION AND RATIONING PLAN

PUBLICITY (Continued)

Page 9

3. During the period that a stage of Schedule 14.1 is activated, the utility shall provide customers with updates in at least every other bill, regarding its water supply status and the results of customers' conservation efforts.

(N)

(N)

Rule No. 20

WATER CONSERVATION

(N)

A. Purpose

The purpose of this rule is to ensure that water resources available to the utility are put to a reasonable beneficial use and that the benefits of the utility's water water supply and service extend to the largest number of persons.

B. Waste of Water Discouraged

Refer to Rule 11 B. (3).

C. Use of Water-Saving Devices and Practices

Each customer of the utility is urged to install devices to reduce the quantity of water to flush toilets and to reduce the flow rate of showers.

Each customer is further urged to adopt such other water usage and reusage practices and procedures as are feasible and reasonable.

D. Water-Saving Kits

The utility will make available, without initial cost to the customer, for use in each residence receiving water service from the utility, a water-saving kit containing the following:

- (1) A device or devices for reducing toilet flush water requirements;
- (2) A device or devices for reducing shower flow rates;
- (3) A dye tablet or tablets for determining if a toilet tank leaks;
- (4) Other devices from time to time approved by the utility;
- (5) Installation and other instructions and information pertinent to conservation of water.

(N)

ISSUED BY

W. W. FRANKLIN

President

Date Filed June 12, 1978

Effective Date July 12, 1978

Resolution No. _____

Advice Letter No. 521-W

Decision No. 88466

Appendix E

DMM Supporting Documents

Schedule No. ME-1-R
Metropolitan District
RESIDENTIAL METERED SERVICE

APPLICABILITY

Applicable to all residential metered water services provided to single-family residential customers.

TERRITORY

Portions of the Cities of Artesia, Bell, Bell Gardens, Carson, Cerritos, Compton, Cudahy, Culver City, Downey, El Segundo, Gardena, Hawaiian Gardens, Hawthorne, Huntington Park, Inglewood, Lakewood, La Mirada, Lawndale, Long Beach, Norwalk, Paramount, Santa Fe Springs, South Gate, and the communities of Athens, Lennox, and Moneta and vicinity, Los Angeles County, and portions of the City of Los Alamitos, Orange County.

RATES

Quantity Rates:

First 1,100 cu. ft., per 100 cu. ft.....	\$3.417	(I)
Next 400 cu. ft., per 100 cu. ft.....	\$3.930	(I)
Over 1,500 cu. ft., per 100 cu. ft.....	\$4.519	(I)

Service Charge:

	<u>Per Month</u>	
For 5/8 x 3/4-inch meter.....	\$ 13.75	(I)
For 3/4-inch meter.....	20.65	(I)
For 1-inch meter.....	34.45	(I)
For 1-1/2 inch meter.....	68.85	(I)
For 2-inch meter.....	110.00	(I)
For 3-inch meter.....	207.00	(I)
For 4-inch meter.....	344.00	(I)
For 6-inch meter.....	689.00	(I)
For 8-inch meter.....	1,102.00	(I)
For 10-inch meter.....	1,584.00	(I)

Sprinkler Service Charge \$15.15 (I)

The service charge is a readiness-to-serve charge applicable to all metered service and to which is added the charge for water used computed at the Quantity Rates.

SPECIAL CONDITIONS

1. All bills are subject to the reimbursement fee set forth on Schedule No. UF.
2. Residential customers are defined as all single family customers with one dwelling unit that are individually metered.
3. As authorized by the California Public Utilities Commission, an amount of \$0.140 per Ccf for Tier 1, \$0.161 per Ccf for Tier 2 and \$0.185 per Ccf for Tier 3 is to be added to the Quantity Rate for a period of 24 months, beginning on the effective date of Advice Letter 1380-W, which is March 21, 2010. This surcharge will recover the undercollection in the WRAM/MCBA Balancing Accounts, as of December 31, 2009. (C)
4. As authorized by the California Public Utilities Commission, an amount of \$0.090 per Ccf for Tier 1, \$0.104 per Ccf for Tier 2 and \$0.119 per Ccf for Tier 3 is to be added to the Quantity Rate for a period of 12 months, beginning on the effective date of Advice Letter 1400-W, which is June 7, 2010. This surcharge will recover the undercollection in the CARW Balancing Account, as of December 31, 2009. (C)
5. Pursuant to Decision 10-11-035, a surcharge of \$0.0056 per Ccf will be applied to all metered customers bills excluding customers that are receiving the CARW credit, beginning on the effective date of Advice Letter 1416-W. This surcharge will offset the CARW credits and CARW administrative program costs recorded in the CARW Balancing Account
6. As authorized by the California Public Utilities Commission, an amount of \$0.0116 per Ccf is to be added to the Quantity Rate for a period of 12 months, beginning on the effective date of Advice Letter 1371-WA, which is November 1, 2010. This surcharge will recover the under-collection in the Outside Services Memorandum Account.
7. As authorized by the California Public Utilities Commission in D. 10-11-035, an amount of \$0.12933 per Ccf is to be added to the Quantity Rate for a period of 24 months, beginning on January 1, 2011. This surcharge recovers the difference between the interim rates and final rates for the period of January 1, 2010 through December 1, 2010.

ISSUED BY

Date Filed: December 15, 2010

Advice Letter No. 1423-W

R. J. SPROWLS

Effective Date: January 1, 2011

Decision No. 10-11-035

President

Resolution No. _____

GOLDEN STATE WATER COMPANY

630 E. FOOTHILL BLVD. - P. O. BOX 9016
SAN DIMAS, CALIFORNIA 91773-9016

Revised Cal. P.U.C. Sheet No. 5958-W

Canceling Revised Cal. P.U.C. Sheet No. 5942-W

Schedule No. ME-1-NR
Metropolitan District
NON-RESIDENTIAL METERED SERVICE

APPLICABILITY

Applicable to all metered water service except those covered under ME-1-R.

TERRITORY

Portions of the Cities of Artesia, Bell, Bell Gardens, Carson, Cerritos, Compton, Cudahy, Culver City, Downey, El Segundo, Gardena, Hawaiian Gardens, Hawthorne, Huntington Park, Inglewood, Lakewood, La Mirada, Lawndale, Long Beach, Norwalk, Paramount, Santa Fe Springs, South Gate, and the communities of Athens, Lennox, and Moneta and vicinity, Los Angeles County, and portions of the City of Los Alamitos, Orange County.

RATES

Quantity Rates:

For all water delivered, per 100 cu. ft..... \$ 2.965 (I)

Service Charge:

	<u>Per Month</u>	
For 5/8 x 3/4-inch meter.....	\$ 21.40	(I)
For 3/4-inch meter.....	32.10	(I)
For 1-inch meter.....	53.50	(I)
For 1-1/2 inch meter.....	107.00	(I)
For 2-inch meter.....	171.00	(I)
For 3-inch meter.....	321.00	(I)
For 4-inch meter.....	535.00	(I)
For 6-inch meter.....	1,070.00	(I)
For 8-inch meter.....	1,712.00	(I)
For 10-inch meter.....	2,461.00	(I)

The service charge is a readiness-to-serve charge applicable to all metered service and to which is added the charge for water used computed at the Quantity Rates.

SPECIAL CONDITIONS

1. All bills are subject to the reimbursement fee set forth on Schedule No. UF.
2. As authorized by the California Public Utilities Commission, an amount of \$0.131 per Ccf is to be added to the Quantity Rate for a period of 24 months, beginning on the effective date of Advice Letter 1380-W, which is March 21, 2010. This surcharge will recover the undercollection in the WRAM/MCBA Balancing Accounts, as of December 31, 2009.
3. As authorized by the California Public Utilities Commission, an amount of \$0.08471 per Ccf is to be added to the Quantity Rate for a period of 12 months, beginning on the effective date of Advice Letter 1400-W, which is June 7, 2010. This surcharge will recover the undercollection in the CARW Balancing Account, as of December 31, 2009.
4. Pursuant to Decision 10-11-035, a surcharge of \$0.0056 per Ccf will be applied to all metered customers bills excluding customers that are receiving the CARW credit, beginning on the effective date of Advice Letter 1416-W. This surcharge will offset the CARW credits and CARW administrative program costs recorded in the CARW Balancing Account.
5. As authorized by the California Public Utilities Commission, an amount of \$0.0116 per Ccf is to be added to the Quantity Rate for a period of 12 Months beginning on the effective date of Advice Letter 1371-W, which is November 1, 2010. This surcharge will recover the under-collection in the Outside Services Memorandum Account.
6. As authorized by the California Public Utilities Commission in D. 10-11-035, an amount of \$0.12933 per Ccf is to be added to the Quantity Rate for a period of 24 months, beginning on January 1, 2011. This surcharge recovers the difference between the interim rates and final rates for the period of January 1, 2010 through December 1, 2010.

ISSUED BY

Date Filed: December 15, 2010

Advice Letter No. 1423-W

R. J. SPROWLS

Effective Date: January 1, 2011

Decision No. 10-11-035

President

Resolution No. _____

AWWA WLCC Water Audit Software: Reporting Worksheet

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WASv3.0

[Back to Instructions](#)

Water Audit Report for: **Golden State Water Company - Artesia System**
 Reporting Year: **2008**

Please enter data in the white cells below. Where possible, metered values should be used; if metered values are unavailable please estimate a value. Indicate this by selecting a choice from the gray box to the left, where M = measured (or accurately known value) and E = estimated.

All volumes to be entered as: ACRE-FEET PER YEAR

WATER SUPPLIED

Volume from own sources:	<input type="button" value="M"/>	<input type="text" value="4,316.000"/>	acre-ft/yr
Master meter error adjustment:	<input type="button" value="E"/>	<input type="text" value="0.000"/>	under-registered acre-ft/yr
Water imported:	<input type="button" value="M"/>	<input type="text" value="2,330.000"/>	acre-ft/yr
Water exported:	<input type="button" value="E"/>	<input type="text" value="0.000"/>	acre-ft/yr

WATER SUPPLIED: acre-ft/yr

AUTHORIZED CONSUMPTION

Billed metered:	<input type="button" value="M"/>	<input type="text" value="6,339.000"/>	acre-ft/yr
Billed unmetered:	<input type="button" value="E"/>	<input type="text" value="0.000"/>	acre-ft/yr
Unbilled metered:	<input type="button" value="M"/>	<input type="text" value="71.470"/>	acre-ft/yr
Unbilled unmetered:	<input type="button" value="E"/>	<input type="text" value="83.075"/>	acre-ft/yr

AUTHORIZED CONSUMPTION: acre-ft/yr

Click here: for help using option buttons below

Pcnt: Value:

Use buttons to select percentage OR value

WATER LOSSES (Water Supplied - Authorized Consumption)

acre-ft/yr

Apparent Losses

Unauthorized consumption:	<input type="button" value="E"/>	<input type="text" value="16.615"/>	acre-ft/yr
Customer metering inaccuracies:	<input type="button" value="E"/>	<input type="text" value="130.826"/>	acre-ft/yr
Systematic data handling errors:	<input type="button" value="E"/>	<input type="text" value="5.000"/>	acre-ft/yr
Apparent Losses:		<input type="text" value="152.441"/>	acre-ft/yr

Pcnt: Value:
 Value:

Real Losses

Real Losses = (Water Losses - Apparent Losses): acre-ft/yr

WATER LOSSES: acre-ft/yr

NON-REVENUE WATER

NON-REVENUE WATER: acre-ft/yr

SYSTEM DATA

Length of mains:	<input type="button" value="M"/>	<input type="text" value="98.0"/>	miles
Number of active AND inactive service connections:	<input type="button" value="E"/>	<input type="text" value="11,127"/>	
Connection density:		<input type="text" value="114"/>	conn./mile main
Average length of customer service line:	<input type="button" value="E"/>	<input type="text" value="30.0"/>	ft (pipe length between curbstop and customer meter or property boundary)
Average operating pressure:	<input type="button" value="M"/>	<input type="text" value="61.5"/>	psi

COST DATA

Total annual cost of operating water system:	<input type="button" value="E"/>	<input type="text" value="\$6,687,852"/>	\$/Year
Customer retail unit cost (applied to Apparent Losses):	<input type="button" value="E"/>	<input type="text" value="\$40.77"/>	\$/100 cubic feet (ccf)
Variable production cost (applied to Real Losses):	<input type="button" value="E"/>	<input type="text" value="\$655.00"/>	\$/acre-ft/yr

DATA REVIEW - Please review the following information and make changes above if necessary:

- Input values should be indicated as either measured or estimated. You have entered:
 - 6 as measured values
 - 5 as estimated values
 - 2 as default values
 - 3 without specifying measured, estimated or default
- Water Supplied Data: No problems identified
- Unbilled unmetered consumption: No problems identified
- Unauthorized consumption: No problems identified
- It is important to accurately measure the master meter - you have entered the measurement type as: measured
- Cost Data: No problems identified

PERFORMANCE INDICATORS

Financial Indicators

Non-revenue water as percent by volume:	<input type="text" value="4.6%"/>
Non-revenue water as percent by cost:	<input type="text" value="42.0%"/>
Annual cost of Apparent Losses:	<input type="text" value="\$2,707,261"/>
Annual cost of Real Losses:	<input type="text" value="\$9"/>

Operational Efficiency Indicators

Apparent Losses per service connection per day:	<input type="text" value="12.23"/>	gallons/connection/day
Real Losses per service connection per day*:	<input type="text" value="0.00"/>	gallons/connection/day
Real Losses per length of main per day*:	<input type="text" value="N/A"/>	
Real Losses per service connection per day per psi pressure:	<input type="text" value="0.00"/>	gallons/connection/day/psi
<input type="button" value="M"/> Unavoidable Annual Real Losses (UARL):	<input type="text" value="60.01"/>	million gallons/year
<input type="button" value="M"/> Infrastructure Leakage Index (ILI) [Real Losses/UARL]:	<input type="text" value="0.00"/>	

* only the most applicable of these two indicators will be calculated

Appendix F

Groundwater Basin Water Rights Stipulation/Judgement

1 LAGERLOF, SENICAL, DRESCHER & SWIFT
2 301 North Lake Avenue, 10th Floor
3 Pasadena, California 91101
4 (818) 793-9400 or (213) 385-4345
5
6
7

8 SUPERIOR COURT OF THE STATE OF CALIFORNIA
9 FOR THE COUNTY OF LOS ANGELES
10

11 CENTRAL AND WEST BASIN WATER) No. 786,656
12 REPLENISHMENT DISTRICT, etc.,) SECOND AMENDED
13) JUDGMENT
14) Plaintiff,)
15) (Declaring and establishing
16) v.) water rights in Central Basin
17) and enjoining extractions
18 CHARLES E. ADAMS, et al.,) therefrom in excess of specified
19) quantities.)
20) Defendants.)
21)
22)
23)
24) CITY OF LAKEWOOD, a municipal)
25) corporation,)
26) Cross-Complaint,)
27)
28) v.)
29)
30) CHARLES E. ADAMS, et al.,)
31)
32) Cross-Defendants.)
33)
34)

35 The above-entitled matter duly and regularly came on for
36 trial, in Department 73 of the above-entitled Court (having been
37 transferred thereto from Department 75 by order of the presiding
38 Judge), before the Honorable Edmund M. Moor, specially assigned
39 Judge, on May 17, 1965, at 10:00 a.m. Plaintiff was represented by
40 its attorneys BEWLEY, KNOOP, LASSLEBEN & WHELAN, MARTIN E. WHELAN,

1 JR., and EDWIN H. VAIL, JR., and cross-
2 complainant was represented by its attorney JOHN S. TODD. Various
3 defendants and cross-defendants were also represented at the trial.
4 Evidence both oral and documentary was introduced. The trial
5 continued from day to day on May 17, 18, 19, 20, 21 and 24, 1965, at
6 which time it was continued by order of Court for further trial on
7 August 25, 1965, at 10:00 a.m. in Department 73 of the above-entitled
8 Court; whereupon, having then been transferred to Department 74,
9 trial was resumed in Department 74 on August 25, 1965, and then
10 continued to August 27, 1965 at 10:00 a.m. in the same Department.
11 On the latter date, trial was concluded and the matter submitted.
12 Findings of fact and conclusions of law have heretofore been signed
13 and filed. Pursuant to the reserved and continuing jurisdiction of
14 the court under the judgment herein, certain amendments to said
15 judgment and temporary orders have heretofore been made and entered.
16 Continuing jurisdiction of the court for this action is currently
17 assigned to HON. FLORENCE T. PICKARD. Motion of Plaintiff herein for
18 further amendments to the judgment, notice thereof and of the hearing
19 thereon having been duly and regularly given to all parties, came on
20 for hearing in Department 38 of the above-entitled court on MAY 6,
21 1991 at 8:45 a.m. before said HONORABLE PICKARD. Plaintiff was
22 represented by its attorneys LAGERLOF, SENEAL, DRESCHER & SWIFT, by
23 William F. Kruse. Various defendants were represented by counsel of
24 record appearing on the Clerk's records. Hearing thereon was
25 concluded on that date. The within "Second Amended Judgment"
26 incorporates amendments and orders heretofore made to the extent
27 presently operable and amendments pursuant to said last mentioned
28 motion. To the extent this Amended judgment is a restatement of the

1 amendments pursuant to said last mentioned motion. To the extent
2 this Amended judgment is a restatement of the judgment as
3 heretofore amended, it is for convenience in incorporating all
4 matters in one document, is not a readjudication of such matters
5 and is not intended to reopen any such matters. As used
6 hereinafter the word "judgment" shall include the original
7 judgment as amended to date. In connection with the following
8 judgment, the following terms, words, phrases and clauses are
9 used by the Court with the following meanings:

10 "Administrative Year" means the water year until
11 operation under the judgment is converted to a fiscal year
12 pursuant to Paragraph 4, Part I, p. 53 hereof, whereupon it
13 shall mean a fiscal year, including the initial 'short fiscal
14 year' therein provided.

15 "Allowed Pumping Allocation" is that quantity in acre
16 feet which the Court adjudges to be the maximum quantity which a
17 party should be allowed to extract annually from Central Basin as
18 set forth in part I hereof, which constitutes 80% of such party's
19 Total Water Right.

20 "Allowed Pumping Allocation for a particular Administra-
21 tive year" and "Allowed Pumping Allocation in the following
22 Administrative year" and similar clauses, mean the Allowed
23 Pumping Allocation as increased in a particular Administrative
24 year by an authorized carryovers pursuant to Part III, Subpart A
25 of this judgment and as reduced by reason of any over-extractions
26 in a previous Administrative year.

27 "Artificial Replenishment" is the replenishment of Central
28 Basin achieved through the spreading of imported or reclaimed

1 water for percolation thereof into Central Basin by a govern-
2 mental agency.

3 "Base Water Right" is the highest continuous extractions of
4 water by a party from Central Basin for a beneficial use in any
5 period of five consecutive years after the commencement of over-
6 draft in Central Basin and prior to the commencement of this
7 action, as to which there has been no cessation of use by that
8 party during any subsequent period of five consecutive years. As
9 employed in the above definition, the words "extractions of water
10 by a party" and "cessation of use by that party" include such
11 extractions and cessations by any predecessor or predecessors in
12 interest.

13 "Calendar Year" is the twelve month period commencing
14 January 1 of each year and ending December 31 of each year.

15 "Central Basin" is the underground water basin or reservoir
16 underlying Central Basin Area, the exterior boundaries of which
17 Central Basin are the same as the exterior boundaries of Central
18 Basin Area.

19 "Central Basin Area" is the territory described in Appendix
20 "1" to this judgment, and is a segment of the territory
21 comprising Plaintiff District.

22 "Declared water emergency" shall mean a period commencing
23 with the adoption of a resolution of the Board of Directors of
24 the Central and West Basin Water Replenishment District declaring
25 that conditions within the Central Basin relating to natural and
26 imported supplies of water are such that, without implementation
27 of the water emergency provision of this Judgment, the water
28 resources of the Central Basin risk degradation. In making such

1 declaration, the Board of Directors shall consider any
2 information and requests provided by water producers, purveyors
3 and other affected entities and may, for that purpose, hold a
4 public hearing in advance of such declaration. A Declared Water
5 Emergency shall extend for one (1) year following such
6 resolution, unless sooner ended by similar resolution.

7 "Extraction", "extractions", "extracting", "extracted", and
8 other variations of the same noun and verb, mean pumping, taking,
9 diverting or withdrawing ground water by any manner or means
10 whatsoever from Central Basin.

11 "Fiscal year" is the twelve (12) month period July 1 through
12 June 30 following.

13 "Imported Water" means water brought into Central Basin Area
14 from a non-tributary source by a party and any predecessors in
15 interest, either through purchase directly from The Metropolitan
16 Water District of Southern California or by direct purchase from
17 a member agency thereof, and additionally as to the Department of
18 Water and Power of the City of Los Angeles, water brought into
19 Central Basin area by that party by means of the Owens River
20 Aqueduct.

21 "Imported Water Use Credit" is the annual amount, computed
22 on a calendar year basis, of imported water which any party and
23 any predecessors in interest, who have timely made the required
24 filings under Water Code Section 1005.1, have imported into
25 Central Basin Area in any calendar year and subsequent to July 9,
26 1951, for beneficial use therein, but not exceeding the amount by
27 which that party and any predecessors in interest reduces his or
28 their extractions of ground water from Central Basin in that

1 calendar year from the level of his or their extractions in the
2 preceding calendar year, or in any prior calendar year not
3 earlier than the calendar year 1950, whichever is the greater.

4 "Natural Replenishment" means and includes all processes
5 other than "Artificial Replenishment" by which water may become a
6 part of the ground water supply of Central Basin.

7 "Natural Safe Yield" is the maximum quantity of ground
8 water, not in excess of the long term average annual quantity of
9 Natural Replenishment, which may be extracted annually from
10 Central Basin without eventual depletion thereof or without
11 otherwise causing eventual permanent damage to Central Basin as a
12 source of ground water for beneficial use, said maximum quantity
13 being determined without reference to Artificial Replenishment.

14 "Overdraft" is that condition of a ground water basin
15 resulting from extractions in any given annual period or periods
16 in excess of the long term average annual quantity of Natural
17 Replenishment, or in excess of that quantity which may be
18 extracted annually without otherwise causing eventual permanent
19 damage to the basin.

20 "Party" means a party to this action. Whenever the
21 term "party" is used in connection with a quantitative water
22 right, or any quantitative right, privilege or obligation, or in
23 connection with the assessment for the budget of the Watermaster,
24 it shall be deemed to refer collectively to those parties to whom
25 are attributed a Total Water Right in Part I of this judgment.

26 "Person" or "persons" include individuals, partner-
27 ships, associations, governmental agencies and corporations, and
28 any and all types of entities.

1 "Total Water Right" is the quantity arrived at in the
2 same manner as in the computation of "Base Water Right", but
3 including as if extracted in any particular year the Imported
4 Water Use Credit, if any, to which a particular party may be
5 entitled.

6 "Water" includes only non-saline water, which is that
7 having less than 1,000 parts of chlorides to 1,000,000 parts of
8 water.

9 "Water Year" is the 12-month period commencing Octo-
10 ber 1 of each year and ending September 30th of the following
11 year.

12 In those instances where any of the above-defined
13 words, terms, phrases or clauses are utilized in the definition
14 of any of the other above-defined words, terms, phrases and
15 clauses, such use is with the same meaning as is above set forth.

16
17 NOW THEREFORE, IT IS ORDERED, DECLARED, ADJUDGED AND
18 DECREED WITH RESPECT TO THE ACTION AND CROSS-ACTION AS FOLLOWS:

19 I. DECLARATION AND DETERMINATION OF WATER RIGHTS OF
20 PARTIES; RESTRICTION ON THE EXERCISE THEREOF.¹

21 1. Determination of Rights of Parties.

22 (a) Each party, except defendants, The City of Los
23 Angeles and Department of Water and Power of the City of Los
24 Angeles, whose name is hereinafter set forth in the tabulation at
25 the conclusion of Subpart 3 of Part 1, and after whose name there

26

27 ¹headings in the judgment are for purposes of reference and
28 the language of said headings do not constitute, other than for
such purpose, a portion of this judgment.

Exhibit B

1 appears under the column "Total Water Right" a figure other than
2 "0", was the owner of and had the right to extract annually
3 groundwater from Central Basin for beneficial use in the quantity
4 set forth after that party's name under said column "Total Water
5 Right" pursuant to the Judgment as originally entered herein.
6 Attached hereto as Appendix "2" and by this reference made a part
7 hereof as though fully set forth are the water rights of parties
8 and successors in interest as they existed as of the close of the
9 water year ending September 30, 1978 in accordance with the
10 Watermaster Reports on file with this Court and the records of
11 the Plaintiff. This tabulation does not take into account
12 additions or subtractions from any Allowed Pumping Allocation of
13 a producer for the 1978-79 water year, nor other adjustments not
14 representing change in fee title to water rights, such as leases
15 of water rights, nor does it include the names of lessees of
16 landowners where the lessees are exercising the water rights.
17 The exercise of all water rights is subject, however, to the
18 provisions of this Judgment is hereinafter contained. All of
19 said rights are of the same legal force and effect and are
20 without priority with reference to each other. Each party whose
21 name is hereinafter set forth in the tabulation set forth in
22 Appendix "2" of this judgment, and after whose name there appears
23 under the column "Total Water Right" the figure "0" owns no
24 rights to extract any ground water from Central Basin, and has no
25 right to extract any ground water from Central Basin.

26 (b) Defendant The City of Los Angeles is the owner of
27 the right to extract fifteen thousand (15,000) acre feet per
28 annum of ground water from Central Basin. Defendant Department

1 of Water and Power of the City of Los Angeles has no right to
2 extract ground water from Central Basin except insofar as it has
3 the right, power, duty or obligation on behalf of defendant The
4 City of Los Angeles to exercise the water rights in Central Basin
5 of defendant The City of Los Angeles. The exercise of said
6 rights are subject, however, to the provisions of this judgment
7 hereafter contained, including but not limited to, sharing with
8 other parties in any subsequent decreases or increases in the
9 quantity of extractions permitted from Central Basin, pursuant to
10 continuing jurisdiction of the Court, on the basis that fifteen
11 thousand (15,000) acre feet bears to the Allowed Pumping
12 Allocations of the other parties.

13 (c) No party to this action is the owner of or has any
14 right to extract ground water from Central Basin except as herein
15 affirmatively determined.

16 2. Parties Enjoined as Regards Quantities of Extractions.

17 (a) Each party, other than The State of California and The
18 City of Los Angeles and Department of Water and Power of The City
19 of Los Angeles, is enjoined and restrained in any Administrative
20 year commencing after the date this judgment becomes final from
21 extracting from Central Basin any quantity of Water greater than
22 the party's Allowed Pumping Allocation as hereinafter set forth
23 next to the name of the party in the tabulation appearing in
24 Appendix 2 at the end of this Judgment, subject to further
25 provisions of this judgment. Subject to such further provisions,
26 the officials, agents and employees of The State of California
27 are enjoined and restrained in any such Administrative year from
28 extracting from Central Basin collectively any quantity of water

1 greater than the Allowed Pumping Allocation of The State of
2 California as hereinafter set forth next to the name of that
3 party in the same tabulation. Each party adjudged and declared
4 above not to be the owner of and not to have the right to extract
5 ground water from Central Basin is enjoined and restrained in any
6 Administrative year commencing after the date this judgment
7 becomes final from extracting any ground water from Central
8 Basin, except as may be hereinafter permitted to any such party
9 under the Exchange Pool provisions of this judgment.

10 (b) Defendant The City of Los Angeles is enjoined and
11 restrained in any Administrative year commencing after the date
12 this judgment becomes final from extracting from Central Basin
13 any quantity of water greater than fifteen thousand (15,000) acre
14 feet, subject to further provisions of this judgment, including(
15 but not limited to, sharing with other parties in any subsequent
16 decreases or increases in the quantity of extractions permitted
17 from Central Basin by parties, pursuant to continuing
18 jurisdiction of the Court, on the basis that fifteen thousand
19 (15,000) acre feet bears to the Allowed Pumping Allocations of
20 the other parties. Defendant Department of Water and Power of
21 The City of Los Angeles is enjoined and restrained in any
22 Administrative year commencing after the date this judgment
23 becomes final from extracting from Central Basin any quantity of
24 water other than such as it may extract on behalf of defendant
25 The City of Los Angeles, and which extractions, along with any
26 extractions by said City, shall not exceed that quantity
27 permitted by this judgment to that City in any Administrative
28 year. Whenever in this judgment the term "Allowed Pumping

1 Allocation" appears, it shall be deemed to mean as to defendant
 2 The City of Los Angeles the quantity of fifteen thousand (15,000)
 3 acre feet.

Name ²	Total Water Right	Allowed Pumping Allocation
J. P. Abbott, Inc.	21	17
Charles E. Adams (Corty Van Dyke, tenant) (see additional listing below for Charles E. Adams)	8	6
Charles E. Adams and Rhoda E. Adams	5	4
Juan Aguayo and Salome Y. Aguayo	1	1
Aguiar Dairy, Inc.	33	26
Airfloor Company of California, Inc.	1	1
J. N. Albers and Nellie Albers	98	78
Jake J. Alewyn and Mrs. Jake J. Alewyn aka Normalie May Alewyn (see listing under name of Victor E. Gamboni)		
Tom Alger and Hilda Alger	9	7
Clarence M. Alvis and Doris M. Alvis	0	0
American Brake Shoe Company	52	42

28 ²Parties and Rights as originally adjudicated

1		Total	Allowed
2	<u>Name</u>	<u>Water</u>	<u>Pumping (</u>
3		<u>Right</u>	<u>Allocation</u>
3	American Pipe and Construction Co.	188	150
4	Anaconda American Brass Company	0	0
5	Gerrit Anker (see listing under 6 name of Agnes De Vries		
7	Archdiocese of Los Angeles Education & Welfare Corporation	8	6
8	George W. Armstrong and Ruth H. 9 Armstrong (Armstrong Poultry Ranch, tenant)	28	22
10	Artesia Cemetery District	30	24
11	Artesia Milling Company (see 12 listing under name of Dick Zuidervaart)		
13	Artesia School District	51	41
14	Arthur Land Co., Inc.	13	10
15	Charles Arzouman and Neuart 16 Arzouman	1	1
17	Associated Southern Investment 18 Company (William R. Morris, George V. Gutierrez and 19 Mrs. Socorro Gutierrez, tenants and licensees)	16	13
20	The Atchison, Topeka and Santa Fe Railway Co.	124	99
21	Atkinson Brick Company	11	9
22	Arthur Atsma (see listing under 23 name of Andrew De Voss)		
24	B.F.S. Mutual Water Company	183	146
25	Henry Baar (see listing under 26 name of Steve Stefani, Sr.)		
27	Vernon E. Bacon (see listing under name of Southern California Edison Company)		
28			

1		Total	Allowed
2	<u>Name</u>	<u>Water</u>	<u>Pumping</u>
3		<u>Right</u>	<u>Allocation</u>
3	Adolph Bader and Gesine Bader (Fred Bader, tenant)	14	11
4	K. R. Bailey and Virginia R. Bailey	1	1
5	Dave Bajema (see listing under name 6 of Peter Dotinga)		
7	Donald L. Baker and Patsy Ruth Baker	5	4
8	Allen Bakker	0	0
9	Sam Bangma and Ida Bangma	17	14
10	Bank of America National Trust and Savings 11 Association, as Trustee of Trust created 12 by Will of Tony V. Freitas, Deceased (Frank A. Gonsalves, tenant)	29	23
13	Emma Barbaria, as to undivided 1/2 interest; 14 John Barbaria, Jr. and Lorraine Barbaria 15 as to undivided 1/4 interest; and Frank 16 Barbaria as to undivided 1/4 interest (John Barbaria & Sons Dairy, tenant)	27	22
17	Antonio B. Barcellos and Manuel B. Barcellos	12	10
18	John Barcelos and Guilhermina Barcelos	16	13
19	Sam Bartsma and Birdie Bartsma	34	27
20	Bateson's School of Horticulture, Inc. (see listing under name of John Brown 21 Schools of California, Inc.)		
22	Bechard Mutual Water Corporation	4	4
23	Beck Tract Water Company, Inc.	29	23
24	Iver F. Becklund	1	1
25	Margaret E. Becklund	1	1
26	P. T. Beeghly (International 27 Carbonic, Inc., tenant)	1	1
28	Doutzen Bekendam and Hank Bekendam	0	0
	John Bekendam	0	0
	Tillie Bekendam	0	0

Exhibit B

	<u>Name</u>	<u>Total Water Right</u>	<u>Allowed Pumping (Allocation)</u>
1			
2	<u>Name</u>	<u>Total Water Right</u>	<u>Allowed Pumping (Allocation)</u>
3	Bell Trailer City (see listing under name of Bennett E. Simmons)	1	1
4	E. F. Bellenbaum and Marie P. Bellenbaum	32	26
5	Bellflower Christian School	243	194
6	Bellflower Home Garden Water Company	111	89
7	Bellflower Unified School District	2,109	1,687
8	Bellflower Water Company	11	9
9	Belmont Water Association	0	0
10	Tony Beltman	0	0
11	Berlu Water Company, Inc.	32	26
12	Jack R. Bettencourt and Bella Bettencourt	151	121
13	Bigby Townsite Water Co.		
14	Siegfried Binggeli and Trina L. Binggeli (see listing under name of Paul H. Lussman, Jr.)	0	0
15	Fred H. Bixby Ranch Company		
16	Delbert G. Black and Lennie O. Black as to undivided one-half; and Harley Lee, as to undivided one-half	40	32
17	Bloomfield School District	11	9
18	Adrian Boer and Julia Boer	5	4
19	Gerard Boere and Rosalyn Boer		
20	Henry Boer and Annie Boer (William Offinga & Son, including Sidney Offinga, tenants as to 33 acre feet of water right and 26 acre feet of allowed pumping allocation)	34	27
21	John Boere, Jr. and Mary J. Boere	30	24
22	John Boere, Sr. and Edna Boere (John Boere, Jr., tenant)	30	24
23	John Boere, Jr. (see also listing under name of Leonard A. Grenier)		
24			
25			
26			
27			
28			

1	2 <u>Name</u>	Total Water Right	Allowed Pumping Allocation
3	Frank Boersma and Angie Boersma	31	25
4	Gerrit Boersma and Jennie Boersma (George Boersma, tenant)	8	6
5	Jack Boersma	0	0
6	Sam Boersma and Berdina Boersma	42	34
7	Jan Bokma (see listing under name of August Vanderberg)		
9	Jacob Bollema	0	0
10	James C. Boogerd (see listing under name of Jake Van Leeuwen, Jr.)		
11	Bernard William Bootsma, Carrie Agnes Van Dam and Gladys Marie Romberg	12	10
13	Michel Bordato and Anna M. Bordato (Charlie Vander Kooi, tenant)	12	10
14	John Borges and Mary Borges, aka Mrs. John Borges (Manuel B. Ourique, tenant)	14	11
16	Mary Borges, widow of Manuel Borges (Manuel Borges, Jr., tenant)	7	6
17	Gerrit Bos and Margaret Bos	88	70
18	Jacob J. Bosma (see listing under name of Sieger Vierstra)		
20	Peter Bothof	6	5
21	William Bothof and Antonette Bothof	7	6
22	Frank Bouma and Myron D. Kolstad	3	3
23	Ted Bouma and Jeanette Bouma	21	17
24	Sam Bouman (Arie C. Van Leeuwen, tenant)	8	6
25	John Brown Schools of California, Inc. (Bateson's School of Horticulture, Inc., tenant)	2	2
27	M. J. Brown, Jr. and Margaret Brown	0	0
28	Adrian Bulk and Alice Bulk	20	16

1	2 <u>Name</u>	Total Water Right	Allowed Pumping (Allocation
3	Duke Buma and Martha Buma	8	6
4	Miles A. Burson and Rose Burson	7	6
5	Calavar Corporation (see listing under name of H R M Land Company)		
6	California Cotton Oil Corporation	101	81
7	California Portland Cement Company	0	0
8	California Rendering Company, Ltd.	149	119
9	California Water and Telephone Company	2,584	2,067
10	California Water Service Company (Base Water Right - 13,477)	14, 717	11,774
11	Candlewood Country Club	184	147
12	V. Capovilla and Mary Capovilla	0	0
13	Carmenita School District	9	7
14	Carson Estate Company	139	111
15	Paul Carver	0	0
16	Catalin Corporation of America	13	10
17	Center City Water Co.	86	69
18	Central Manufacturing District, Inc. (Louis Guglielmana and Richard Wigboly, tenants)	825	660
19	Century Center Mutual Water Association	317	254
20	Century City Mutual Water Company, Ltd.	62	50
21	Cerritos Junior College District	119	95
22	Cerritos Park Mutual Water Company	77	62
23	Challenge Cream & Butter Association	146	117
24	Chansall Mutual Water Company	101	81
25	Maynard W. Chapin, as Executor of the Estate of Hugh L. Chapin, deceased	36	29
26			
27			
28			

1	2 <u>Name</u>	Total Water Right	Allowed Pumping Allocation
3	Cherryvale Water Users' Association	14	11
4	Shigeru Chikami and Jack Chikami doing business as Chikami Bros. Farming	10	8
5	(see also listing under name of Southern California Edison Company)		
6	John Christoffels and Effie Christoffels	14	11
7	Citrus Grove Heights Water Company	277	222
8	City Farms Mutual Water Company No. 1	37	30
9	City Farms Mutual Water Company No. 2	15	12
10	City of Artesia	30	24
11	City of Bellflower	60	48
12	City of Compton	6,511	5,209
13	City of Downey	5,713	4,570
14	City of Huntington Park	4,788	3,830
15	City of Inglewood (Base Water Right - 629)	1,118	894
16	City of Lakewood	10,631	8,505
18	City of Long Beach (Base Water Right - 29,876)	33,538	26,830
19	City of Los Angeles (see paragraph 2 above of this Part I for water rights and restrictions on the exercise thereof of said defendant. See also such reference with respect to Department of Water and Power of the City of Los Angeles.)		
23	City of Lynwood	6,238	4,990
24	City of Montebello	260	208
25	City of Norwalk	613	490
26	City of Santa Fe Springs	505	404
27	City of Signal Hill	1,675	1,340
28			

Exhibit B

1		Total	Allowed
2	<u>Name</u>	<u>Water</u>	<u>Pumping (</u>
3		<u>Right</u>	<u>Allocation</u>
3	City of South Gate	9,942	7,954
4	City of Vernon	9,008	7,206
5	City of Whittier	776	621
6	Allan Clanton and Ina Clanton	80	64
7	Claretian Jr. Seminary (see listing		
8	under name of Dominguez Seminary)		
9	Dr. Russell B. Clark (see listing under		
10	name of Research Building Corporation)		
10	Jacob Cloo and Grace Cloo	16	13
11	Clougherty Packing Company	80	64
12	Coast Packing Company	426	341
13	Coast Water Company	588	470
14	Joe A. Coelho, Jr. and Isabel Coelho	5	4
15	J. H. Coito, Jr.	0	0
16	John H. Coito and Guilhermina Coito		
17	(Zylstra Bros., a partnership		
18	consisting of Lammert Zylstra and		
19	William Zylstra, tenant)	17	14
20	J. E. Collinsworth	15	12
21	Compton Union High School District	48	38
22	Conservative Water Company (Base		
23	Water Right - 4,101)	133	3,306
24	Container Corporation of America	323	1,058
25	Nicholas C. Contoas and P. Basil		
26	Lambros (Vehicle Maintenance &		
27	Painting Corporation, tenant)	1	1
28	Continental Can Company, Inc.	946	757
29	Contractors Asphalt Products		
30	Company, Inc.	16	13
31	R. M. Contreras	8	6

1		Total	Allowed
2	<u>Name</u>	<u>Water</u>	<u>Pumping</u>
3		<u>Right</u>	<u>Allocation</u>
3	Copp Equipment Company, Inc. and Humphries Investments Incorporated	7	6
4			
5	Mary Cordeiro and First Western Bank & Trust Company, as Trustee pursuant to last will and testament of Tony		
6	Cordeiro, deceased	46	37
7	Corporation of the Presiding Bishop of The Church of Jesus Christ of Latter		
8	Day Saints (Ray Mitchell, tenant)	39	31
9	Harry Lee Cotton and Doris L. Cotton	5	4
10	County of Los Angeles	737	590
11	County Water Company	280	224
12	Cowlitz Amusements, Inc. (La Mirada Drive-In Theater, tenant)	4	4
13			
14	Pete Coy	28	22
15	Crest Holding Corporation	20	16
16	Katherine M. Culbertson	2	2
17	Orlyn L. Culp and Garnetle Culp	21	17
18	Everett Curry and Marguerite Curry	2	2
19	D. V. Dairy (see listing under name of Frank C. Leal)		
20	Dairymen's Fertilizer Co-op, Inc.	1	1
21	Noble G. Daniels (see listing under name of Harold Marcroft)		
22			
23	John A. Davis	0	0
24	Henry De Bie, Jr. and Jessie De Bie	17	14
25	Clifford S. Deeth	0	0
26	Ernest De Groot and Dorothy De Groot	81	65
27	Pete de Groot	15	12
28	Pier De Groot and Fay De Groot	21	17

1	2 <u>Name</u>	Total Water Right	Allowed Pumping (<u>Allocation</u>
3	Martin De Hoog and Adriana De Hoog	12	10
4	Edward De Jager and Alice De Jager	37	30
5	Cornelius De Jong and Grace De Jong	13	10
6	Jake De Jong and Lena De Jong (Frank A. Gonsalves, tenant as to 8 acre-feet of water right)	21	17
8	William De Kriek (see listing under name of Gerrit Van Dam)		
9	Del Amo Dairy (see listing under name of Ed Haakma)		
10			
11	Del Amo Estate Company	0	0
12	Joe De Marco and Concetta De Marco	1	1
13	Louis F. De Martini (see listing under name of Southern California Edison Company)		
14			
15	Mary A. De Mello	16	13
16	John Den Hollander (see listing under name of James Dykstra)		
17	Department of Water and Power of The City of Los Angeles, by reason of charter provisions, has that manage- ment and control of water rights owned by the City of Los Angeles (see listing under name of City of Los Angeles)		
21			
22	Ruth E. Dever (Orange County Nursery, Inc., tenant)	0	0
23	Andrew De Voss and Alice De Voss (Arthur De Voss and Arthur Atsma, tenants)	36	29
24			
25	Agnes De Vries (Gerrit Anker, tenant)	16	13
26	Dick De Vries and Theresa De Vries	10	8
27	Gerrit De Vries and Claziena De Vries	18	14
28	Gerrit Deyager and Lena Deyager	0	0

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	
<u>Name</u>	<u>Total Water Right</u>	<u>Allowed Pumping Allocation</u>																										
Lloyd W. Dinkelspiel, Jr. (see listing under name of Florence Hellman Ehrman)																												
District VII, Division of Highways of the State of California Department of Public Works (see listing under name of State of California)																												
Dominguez Estate Company	0	0																										
Dominguez Seminary and Claretian Jr. Seminary	111	89																										
Dominguez Water Corporation	8,012	6,410																										
Peter Dotinga and Tena Dotinga (Dave Bajema, tenant)	9	7																										
Robert L. Dougherty	0	0																										
Downey Cemetery District	21	17																										
Downey Fertilizer Co. (see listing under name of Downey Land Company)																												
Downey Land Company (Downey Fertilizer Co., tenant)	101	81																										
Downey Valley Water Company	87	70																										
Jim Drost	0	0																										
James Dykstra and Dora Dykstra (John Den Hollander, tenant)	6	5																										
John Dykstra and Wilma Dykstra	52	42																										
Cor Dyt and Andy Dyt	6	5																										
Eagle Picher Company	141	113																										
Gail H. Eagleton	67	54																										
Florence Hellman Ehrman; I. W. Hellman, Jr.; Federick J. Hellman; Marco F. Hellman; Clarence E. Heller; Alfred Heller, Elizabeth Heller; Clarence E. Heller, Elinor R. Heller and Wells Fargo Bank, as co-executors of the Estate of Edward H. Heller, deceased; Lloyd W. Dinkelspiel, Jr., William H.																												

1	<u>Name</u>	<u>Total Water Right</u>	<u>Allowed Pumping (Allocation</u>
3	Green and Wells Fargo Bank, as co-executors of the Estate of Lloyd W. Dinkelspiel, deceased; Wells Fargo Bank, as Trustee under the trust created by the Will of Florence H. Dinkelspiel, deceased. (Union Oil Company of California, Lessee as to 190 acre-feet of right and as to 152 acre-feet of allowed pumping allocation)	555	444
8	El Rancho Unified School District	69	55
9	Berton Elson (see listing under name of D. P. Winslow)		
11	John H. Emoto and Shizuko Emoto	0	0
12	Addie L. Enfield (see listing under name of James L. Stamps)		
13	John W. England and Consuello England (see listing under name of Jenkins Realty Mutual Water Co.)		
15	Emma Engler (Morris Weiss, tenant)	10	8
16	Anthony F. Escobar and Eva M. Escobar (Henry Kampen, tenant)	14	11
18	Excelsior Union High School District	381	305
19	Kenneth A. Farris and Wanda Farris	1	1
20	Federal Ice and Cold Storage Company	92	74
21	Fred Fekkes (see listing under name of Steve Stefani, Sr.)		
22	Julius Felsenthal and Mrs. Julius Felsenthal, aka Marga Felsenthal	1	1
24	Tony Fernandes (see listing under name of U. Stewart Jones)		
25	Joe C. Ferreira and Carolina Ferreira (Joe C. Ferreira and Joe C. Ferreira, Jr., operators of well facility)	37	30

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	
	<u>Name</u>					<u>Total Water Right</u>																						
	Mary A. Ferreira (Joe Lucas, tenant) (see also listing under name of Jack Gonsalves)					1																						
	John Feuz, Jr.					0																						
	Fibreboard Paper Products Corporation					1,521																						
	Abe Fien					0																						
	Alfred Fikse, Jr. and Aggie Fikse					2																						
	Henry Fikse and Jennie Fikse					4																						
	Filtrol Corporation					570																						
	The Firestone Tire & Rubber Co.					1,536																						
	First Western Bank & Trust Co. (see listing under name of Mary Cordeiro)																											
	Clare Fisher					0																						
	Elizabeth Flesch, James Flesch, Margaret Flesch, Theodore Flesch, Ernest D. Roth and Eva Roth, doing business as Norwalk Mobile Lodge					18																						
	The Flintkote Company					2,567																						
	Ford Motor Company					11																						
	Robert G. Foreman (see listing under name of Lakewood Pipe Co.)																											
	Guisseppi Franciosi and Alice Franciosi					2																						
	Tony V. Freitas (see listing under name of Bank of America, etc.)																											
	S. Fujita					0																						
	Jun Fukushima (see listing under name of Chige Kawaguchi)																											
	Paul Fultheim and Helga Fultheim					5																						
	Fumi Garden Farms, Inc. (see listing under name of Southern California Edison Company and also under name of George Yamamoto)																											

1	2 <u>Name</u>	Total Water <u>Right</u>	Allowed Pumping <u>Allocation</u>
3	Gabby Louise, Inc. (Arthur Gilbert & Associates, tenant)	58	46
4	Victor E. Gamboni and Barbara H. Gamboni (Jake J. Alewyn and Mrs. Jake J. Alewyn also known as Normalie May Alewyn, tenants as to 13 acre feet of water right and 10 acre feet of allowed pumping allocation)	27	22
8	Nick Gandolfo and Palmera Gandolfo	5	4
9	Freddie A. Garrett and Vivian Marie Garrett	6	5
10	Martha Gatz	15	12
11	General Dynamics Corporation	675	540
12	General Telephone Company of California	2	2
13	Alfred Giacomi and Jennie Giacomi	58	46
14	Arthur Gilbert & Associates (see listing under name of Gabby Louise Inc.)		
16	Mary Godinho	0	0
17	Pauline Godinho (Joe C. Godinho and John C. Godinho, Jr., doing business as Godinho Bros. Dairy, tenants)	31	25
19	Harry N. Goedhart, Henry Otto Goedhart, Hilbrand John Goedhart, John Goedhart, Otto Goedhart, Jr., Peter Goedhart, and Helen Goedhart Van Eik (Paramount Farms, tenant)	21	17
22	Reimer Goedhart	12	10
23	Golden Wool Company	223	178
24	Albert S. Gonsalves and Caroline D. Gonsalves	10	8
25	Frank A. Gonsalves (see listing under name of Bank of America National Trust and Savings Association, etc.; and also under name of Jake De Jong)		

1		Total	Allowed
2	<u>Name</u>	<u>Water</u>	<u>Pumping</u>
3		<u>Right</u>	<u>Allocation</u>
3	Jack Gonsalves, Joe Lucas, Pete Koopmans,		
4	Manuel M. Souza, Sr., Manuel M. Souza,		
5	Jr., Frank M. Souza, Louie J. Souza,	55	44
5	and Mary A. Ferreira		
6	Jack Gonsalves and Mary Gonsalves	31	25
6	Joaquin Gonsalves and Elvira Gonsalves	27	22
7	Joe A. Gonsalves and Virginia Gonsalves	12	10
8	The B. F. Goodrich Company	519	415
9	The Goodyear Tire & Rubber Company	1,141	913
10	Eric Gorden and Hilde Gorden	2	2
11	Fern Ethyl Gordon as to an undivided		
12	1/2 interest; Fay G. Tawzer and		
13	Lawrence R. Tawzer, as to an undivided	17	14
13	1/2 interest		
14	Huntley L. Gordon (appearing by and		
15	through United California Bank, as		
16	Conservator of the Estate of	41	33
16	Huntley L. Gordon)		
17	Robert E. Gordon	5	4
17	Joe Gorzeman and Elsie Gorzeman	13	10
18	Florence M. Graham	7	6
19	Marie Granger	0	0
20	Great Western Malting Company	448	358
21	William H. Green (see listing under name		
22	of Florence Hellman Ehrman)		
23	Greene-Howard Petroleum Corporation (see		
24	listing under name of Hathaway Company)		
25	John H. Gremmius and Henry W. Gremmius	0	0
25	dba Henry and John Gremmius		
26	Leonard A. Grenier and Marie Louise		
27	Grenier (John Boere, Jr., tenant)	10	8
27	Florence Guerrero	2	2
28			

1		Total	Allowed
2	<u>Name</u>	<u>Water</u>	<u>Pumping</u>
3		<u>Right</u>	<u>Allocatio..</u>
3	Louis Guglielmana (see listing under		
4	name of Central Manufacturing		
4	District, Inc.)		
5	George V. Gutierrez and Mrs. Socorro		
6	Gutierrez (see listing under name of		
6	Associated Southern Investment Company)		
7	Salvatore Gutierrez (see listing under		
8	name of Southern California Edison		
8	Company)		
9	H. J. S. Mutual Water Co.	63	50
10	H R M Land Company (Harron, Rickard &		
11	McCone Company of Southern California		
11	and Calavar Corporation, tenants)	3	3
12	Gerrit Haagsma and Mary Haagsma	10	8
13	Ed Haakma and Sjana Haakma (Del Amo Dairy,		
14	tenant; Ed Haakma and Peter Vander Kooi,		
14	being partners of said Del Amo Dairy)	28	22
15	Verney Haas and Adelyne Haas	4	4
16	William H. Hadley and Grade Hadley	4	4
17	Henry C. Haflinger and Emily Haflinger	10	8
18	Clarence Theodore Halburg	3	3
19	Fred Hambarian	2	2
20	Henry Hamstra and Nelly Hamstra	33	26
21	Raymond Hansen and Mary Hansen	12	10
22	Earl Haringa; Evert Veenendaal and		
23	Gertrude Veenendaal	22	18
24	Antoine Harismendy and Claire Harismendy	0	0
25	Harron, Rickard & McCone Company of		
25	Southern California (see listing		
26	under name of H R M Land Company)		
26	Jack D. Hastings	0	0
27	Kameko Hatanaka	9	7
28			

1	<u>Name</u>	<u>Total Water Right</u>	<u>Allowed Pumping Allocation</u>
3	Kazuo Hatanaka (Minoru Yoshijima, tenant)	10	8
4	Masakazu Hatanaka, Isao Hatanaka, and Kenichi Hatanaka	5	4
5	Mrs. Motoye Hatanaka	0	0
6	Hathaway Company, Richard F. Hathaway, Julian I. Hathaway, and J. Elwood Hathaway (Greene-Howard Petroleum Corporation, tenant utilizing less than 1 acre foot per year)	70	56
10	Clarence E. Heller; Alfred Heller; Elizabeth Heller; Clarence E. Heller; Elinor R. Heller, as co-executors of the Estate of Edward H. Heller, deceased (see listing under name of Florence Hellman Ehrman)		
13	I. W. Hellman, Jr.; Federick J. Hellman; Marco F. Hellman (see listing under name of Florence Hellman Ehrman)		
15	Ralph Hicks	0	0
16	Alfred V. Highstreet and Evada V. Highstreet	10	8
17	John Highstreet and Eileen M. Highstreet	9	7
18	Bob Hilarides and Maaike Hilarides (Frank Hilarides, tenant)	51	41
20	John Hilarides and Maria Hilarides	26	21
21	Hajime Hirashima (see listing under name of Masaru Uyeda)		
22	Willis G. Hix	1	1
23	Henry H. Hoffman and Apolonia Hoffman	12	10
24	Dick Hofstra	0	0
25	Andrew V. Hohn and Mary G. Hohn	1	1
27	Kyle R. Holmes and Grace Ellen Holmes	20	16
28	Home Water Company	35	28

1	Name	Total Water Right	Allowed Pumping Allocatio.
3	Manuel L. Homen	17	14
4	Mrs. Paul Y. Homer (see listing under name of Mrs. Paul Y. Homer (King).)		
5	Cornelis Hoogland and Alice Hoogland	15	12
6	Art Hop, Jr.	0	0
7	Art Hop, Sr. and Johanna Hop (G. A. Van Beek, tenant)	5	4
9	Andrew Hop, Jr. and Muriel Hop	33	26
10	Theodore R. Houseman and Leona M. Houseman	14	11
11	Humphries Investments Incorporated (see listing under name of Copp Equipment Company, Inc.)		
13	Albert Huyg and Marie Huyg	22	18
14	Hygenic Dairy Farms, Inc.	0	0
15	Pete W. Idsinga and Annie Idsinga	13	10
16	Miss Alice M. Imbert	1	1
17	Industrial Asphalt of California, Inc.	116	93
18	Inglewood Park Cemetery Association	285	228
19	International Carbonic, Inc. (see listing under name of P. T. Beeghly)		
21	Jugora Ishii and Mumeno Ishii (Ishii Brothers, tenant)	10	8
22	Robert J. Jamison and Betty Jamison	7	6
23	Jenkins Realty Mutual Water Co. (Clyde H. Jenkins, Minnie R. Jenkins, Mary Wilcox, Ruby F. Marchbank, Robert B. Marchbank, John W. England, and Consuello England, Shareholders	10	8
26	John-Wade Co.	1	1
27	Henry S. Jones and Madelynne Jones	1	1
28			

1	2 <u>Name</u>	3 <u>Total</u> 4 <u>Water</u> 5 <u>Right</u>	6 <u>Allowed</u> 7 <u>Pumping</u> 8 <u>Allocation</u>
3	U. Stewart Jones and Dorothy E. Jones (Tony Fernandes, tenant)	1	1
4	Harold Jongsma and Mary N. Jongsma	65	52
5	W. P. Jordan (see listing under name of Henry Van Ruiten)		
7	Dave Jorritsma and Elizabeth Jorritsma	27	22
8	Christine Joseph (see listing under name of Helen Wolfsberger)		
9	Junior Water Co., Inc.	737	590
10	Kal Kan Foods, Inc.	120	96
11	Kalico, Inc.	4	4
12	Hagop Kalustian (11 acre feet of total water right attributable to well located at 6629 South Street, Lake- wood and reported to plaintiff under Producer No. 3925. 2 acre feet of total water right attributable to portion of property not sold to State of California formerly served by well located at 10755 Artesia Blvd., Artesia, the production of which well was reported to plaintiff under Producer No. 4030)	13	10
19	Fritz Kampen and Clare Kampen	14	11
20	William Kamstra and Bertha Kamstra	35	28
21	Henry Kampen (see listing under name of Anthony Escobar)		
22	L. Kauffman Company, Inc. (see listing under name of Lorraine K. Meyberg)		
24	Chige Kawaguchi and Masao Kawaguchi (Jun Fukushima, tenant)	4	4
25	King Kelley Marmalade Co. (see listing under name of Roberta M. Magnusson)		
27	Mrs. Paul Y. Homer (King)	17	14
28	Jacob R. Kimm and Bonnie Kimm	36	29

1	2 <u>Name</u>	Total Water <u>Right</u>	Allowed Pumping <u>Allocation</u>
3	Mrs. Oraan Kinne (Nicholaas J. Moons, tenant)	11	9
4	Morris P. Kirk & Son, Inc.	77	62
5	Jake Knevelbaard and Ana Knevelbaard	50	40
6	Willie Knevelbaard and Joreen Knevelbaard	1	1
7	Simon Knorringa	12	10
8	John Koetsier, Jr.	0	0
10	Myron D. Kolstad (see listing under name of Frank Bouma)		
11	Yoshio Kono and Barbara Kono (see listing under name of George Mimaki)		
12			
13	Louis Koolhaas	13	10
14	Simon Koolhaas and Sophie Grace Koolhaas	9	7
15	Pete Koopmans (see listing under name of Jack Gonsalves)		
16	Nick P. Koot (see listing under name of Mary Myrndahl)		
17			
18	Kotake, Inc. (Masao Kotake, Seigo Kotake, William Kotake, dba Kotake Bros., tenants)	83	66
19	Masao Kotake	0	0
20	Walter G. Kruse and Mrs. Walter G. Kruse, aka Vera M. Kruse	11	9
21	Laguna-Maywood Mutual Water Company No. 1	1,604	1,283
22	La Habra Heights Mutual Water Company	3,044	2,435
23	La Hacienda Water Company	46	37
24	Lakewood Pipe Co., a partnership composed of Robert G. Foreman, Frank W. Tybus and June E. Tybus (Lakewood Pipe Service Co., tenant)	12	10
25			
26			
27			
28			

1	2 <u>Name</u>	Total Water <u>Right</u>	Allowed Pumping <u>Allocation</u>
3	P. Basil Lambros (see listing under name of Nicholas C. Contreas)		
4	La Mirada Drive-in Theater (see listing under name of Cowlitz Amusements, Inc.)		
5	La Mirada Water Company	0	0
6	Calvin E. Langston and Edith Langston	1	1
7	S. M. Lanting and Alice Lanting	15	12
8	Henry Lautenbach and Nellie H. Lautenbach	16	13
9	Norman Lautrup, as Executor of the Estate of Nels Lautrup, deceased; and Minnie Margaret Lautrup	30	24
10	Frank C. Leal and Lois L. Leal (D. V. Dairy, tenant)	15	12
11	Eugene O. LeChasseur and Lillian P. LeChasseur (R. A. LeChasseur, tenant)	2	2
12	Lee Deane Products, Inc.	0	0
13	Harley Lee (see listing under name of Delbert G. Black)		
14	Le Fiell Manufacturing Company	0	0
15	Armand Lescoulie (see listing under name of Southern California Edison Company)		
16	Liberty Vegetable Oil Company	14	11
17	Little Lake Cemetery District	17	14
18	Little Lake School District	0	0
19	Loma Floral Company (see listing under name of George Mimaki)		
20	Melvin L. Long and Stella M. Long	2	2
21	Nick J. Loogman (see listing under name of William Smoorenburg)		
22	Frank Lorenz (see listing under name of Ralph Oosten)		
23			

1		Total	Allowed
2	<u>Name</u>	<u>Water</u>	<u>Pumping</u>
3		<u>Right</u>	<u>Allocation</u>
3	Los Angeles County Waterworks District No. 1 (Base Water Right 22)	113	90
4			
5	Los Angeles County Waterworks District No. 10	842	674
6	Los Angeles County Waterworks District No. 16	412	330
7			
8	Los Angeles Paper Box and Board Mills	321	257
9	Los Angeles Union Stockyards Company	0	0
10	Los Nietos Tract 6192 Water Co.	49	39
11	Alden Lourenco (see listing under name of A. C. Pinheiro)		
12	Lowell Joint School District	0	0
13	Joe Lucas (see listings under names of Mary A. Ferreira and Jack Gonsalves)		
14			
15	Luer Packing Co. (see listing under name of Sam Perricone)		
16	Jake J. Luetto (Orange County Nursery, Inc., tenant)	13	10
17	Lunday-Thagard Oil Co.	265	212
18			
19	Joe Luond (Frieda Roethlisberger, tenant as to portion of rights)	7	6
20	John Luscher and Frieda Luscher	13	10
21	Paul H. Lussman, Jr. and Ann Lussman, Siegfried Binggeli and Trina L. Binggeli (Paul's Dairy, tenant)	8	6
22			
23	Lynwood Gardens Mutual Water Company	205	164
24	Lynwood Park Mutual Water Company	278	222
25	Jerome D. Mack and Joyce Mack (see listing under name of D. S. Moss)		
26			
27	Roberta M. Magnusson (King Kelly Marmalade Co., tenant)	15	12
28	Anthony Mancebo	0	0

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
<u>Name</u>	<u>Total Water Right</u>	<u>Allowed Pumping Allocation</u>																									
Robert B. Marchbank and Ruby F. Marchbank (see listing under name of Jenkins Realty Mutual Water Co.)																											
Harold Marcroft and Marjorie Marcroft (Noble G. Daniels, tenant)	7	6																									
Floyd G. Marcusson (see listing under name of Sykes Realty Co.)																											
Walter Marlowe and Edna Marlowe	1	1																									
Marshburn, Inc. (see listing under name of Mel, Inc.)																											
The Martin Bros. Container & Timber Products Corp.	7	6																									
Mary Martin	35	28																									
Antonio Mathias and Mary Mathias	16	13																									
Mausoleum Park, Inc. and Sun Holding Corporation	4	4																									
Maywood Mutual Water Company No. 1	926	741																									
Maywood Mutual Water Company No. 2	1,007	806																									
Maywood Mutual Water Company No. 3	1,407	1,126																									
Mel, Inc. (Marshburn, Inc., tenant)	67	54																									
G. Mellano	12	10																									
Wilbur Mellema and Mary Mellema (see listing under name of Elmo D. Murphy)																											
Wilbur Mellema (see listing under name of Morris Weiss)																											
Memorial Parks, Inc.	42	34																									
Lyman B. Merrick and Gladys L. Merrick	17	24																									
Metropolitan State Hospital of the State of California Department of Mental Hygiene (see listing under name of State of California)																											
F. N. Metzger	0	0																									

	<u>Total Water Right</u>	<u>Allowed Pumping Allocatio.</u>
1		
2	<u>Name</u>	
3	Lorraine K. Meyberg (L. Kauffman Company, Inc., tenant)	81 65
4	Midland Park Water trust	71 57
5	Midway Gardens Mutual Association	59 47
6	Harry C. Miersma and Dorothy L. Miersma	12 10
7	Henry Miersma and Susan M. Miersma	7 6
8	Willis L. Miller	0 0
9	George Mimaki, Mitsuko Mimaki, Yoshio Kono and Barbara Kono (Loma Floral Company, tenant)	2 2
10	Ray Mitchell (see listing under name of Corporation of the Presiding Bishop of the Church of Jesus Christ of Latter Day Saints; and also listing under name of Frank Ruggieri)	
11	Fumiko Mitsuuchi, aka Mary Mitsuuchi (Z. Van Spanje, tenant as to one acre foot)	14 11
12	Yoneichi Miyasaki	0 0
13	Glenn Miyoshi, Yosaku Miyoshi, Masayo Miyoshi, Haruo Miyoshi, and Masaru Miyoshi, dba Miyoshi Bros.	10 8
14	Jean Mocho and Michel Plaa	11 9
15	Modern Imperial Company	71 57
16	Montebello Land and Water Company	1,990 1,592
17	Monterey Acres Mutual Water Company	128 102
18	Nicholaas J. Moons (see listing under name of Mrs. Oraan Kinne)	
19	Alexander Moore and Betty L. Moore	16 13
20	Neal Moore	0 0
21	Alyce Mooschekian	0 0
22	Reuben Mooschekian	15 12
23		
24		
25		
26		
27		
28		

1	2 <u>Name</u>	Total Water Right	Allowed Pumping Allocation
3	William R. Morris (see also listing under name of Associated Southern Investment Company)	1	1
5	D. S. Moss, Lillian Moss, Jerome D. Mack, and Joyce Mack	5	4
6	Mountain View Dairies, Inc.	68	54
7	Kiyoshi Murakawa and Shizuko Murakawa	0	0
8	Daisaku Murata, Fui Murata, Hatsuye Murata, Kenji Murata, Setsuko Murata, and Takeo Murata	15	12
10	Kenji Murata (see listing under name of Southern California Edison Company)		
12	Elmo D. Murphy and Evelene B. Murphy (Morris Weiss, Bessie Weiss, Wilbur Mellema, and Mary Mellema, tenants)	23	18
14	Murphy Ranch Mutual water company	576	461
15	Etta Murr	3	3
16	R. B. Murray and Gladys J. Murray	0	0
17	Tony G. Mussachia and Anna M. Mussachia	10	8
18	Mary Myrndahl (Nick P. Koot, tenant)	11	9
19	Sam Nakamura and Tokiko Nakamura	2	2
20	Leo Nauta (see listing under name of John Osinga)		
21	Pete Nauta (see listing under name of Jacob Vandenberg)		
23	Fred C. Nelles School for Boys of the State of California Department of the Youth Authority (see listing under name of State of California)		
25	Otelia Nelson and Robert Nelson (Shelter Superior Dairy, tenant)	14	11
26	Simon S. Niekerk and Rose Niekerk (Niekerk Hay Company, tenant)	3	3
28			

1		Total	Allowed
2	<u>Name</u>	<u>Water</u>	<u>Pumping</u>
3		<u>Right</u>	<u>Allocation</u>
3	Norris-Thermador Corporation	172	138
4	North Gate Gardens Water Co.	60	48
5	Norwalk-La Mirada City School District	360	288
6	Norwalk Mobile Lodge (see listing under name of Elizabeth Flesch)		
7	Mabel E. Nottingham (Leslie Nottingham, tenant)	25	20
9	William Offinga & Son, including Sidney Offinga (see listing under name of Henry Boer)		
10			
11	Olive Lawn Memorial Park, Inc.	14	11
12	John Oord	0	0
13	Marinus Oosten and Anthonia Oosten	16	13
14	Ralph Oosten and Caroline Oosten (Frank Lorenz, tenant as to 13 acre feet of water right and 10 acre feet of allowed pumping allocation)	51	41
15			
16	Orange County Nursery, Inc. (see also: listing under name of Ruth E. Dever; listing under name of Jake J. Luetto; and listing under name of Mary Ravera)	16	13
17			
18	Orchard Dale County Water District (Base Water Right - 1,382)	1,384	1,107
19			
20	Orchard Park Water Club, Inc.	50	40
21	Oriental Foods, Inc.	34	27
22			
23	Orla Company (John D. Westra, tenant)	7	6
24	Viva Ormonde (see listing under name of Hank Van Dam)		
25			
26	Pablo Oropeza and Aurelia G. Oropeza (Pablo Oropeza, Jr., tenant) (see also listing under name of Tarr and McComb Oil Company, Ltd.)		
27			
28	John Osinga (Leo Nauta, tenant)	6	5

	<u>Total Water Right</u>	<u>Allowed Pumping Allocation</u>
1		
2	<u>Name</u>	
3	Manuel B. Ourique (see listing under name of John Borges)	
4	Owl Constructors	20 16
5	Pacific Electric Railway Company (Gerrit Van Leeuwen of 15405 Shoemaker road, Norwalk, tenant as to 11 acre feet of right and 9 acre feet of allowed pumping allocation)	15 12
6	Packers Mutual Water Company	43 34
7	Edward G. Paddison and Grace M. Paddison	17 14
8	Paramount Farms (see listing under name of Harry N. Goedhart)	
9	Paramount County Water District	2,967 2,374
10	Paramount Unified School District	58 46
11	Park Water Company	24,592 19,674
12	W. J. Parsonson	0 0
13	Rudolph Pasma and Frances C. Pasma	10 8
14	Paul's Dairy (see listing under name of Paul H. Lussman, Jr.)	
15	Mrs. La Verne Payton	1 1
16	Peerless Land & Water Co., Inc.	1,232 986
17	J. C. Pereira, Jr. and Ezaura Pereira	34 27
18	Sam Perricone and Louis Romoff (Luer Packing Co., tenant)	107 86
19	Peterson Manufacturing Co., Inc.	73 58
20	Phelps Dodge Copper Products Corporation	390 312
21	Pico County Water District	3,741 2,993
22	Piedmont Heights Water Club	7 6
23	Lucille C. Pimental (Richard Pimental and Pimental Dairy, tenants)	16 13
24		
25		
26		
27		
28		

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	
	<u>Name</u>						<u>Total Water Right</u>		<u>Allowed Pumping Allocation</u>																			
	Joe Pine (see listing under name of A. C. Pinheiro)																											
	A. C. Pinheiro and Mary M. Pinheiro (Alden Lourenco, tenant as to 9 acre feet of water right and 7 acre feet of allowed pumping right; and Joe Pine, tenant as to 13 acre feet of water right and 10 acre feet of allowed pumping right)						128		102																			
	Fred Pinto and Mary Pinto						5		4																			
	Frank Pires (see listing under name of Frank Simas)																											
	Tony C. Pires and Laura C. Pires						31		25																			
	Michel Plaa (see listing under name of Jean Mocho)																											
	Donald R. Plunkett						53		42																			
	Pomering Tract Water Association						32		26																			
	Clarence Pool						24		19																			
	Garret Porte and Cecelia Porte						35		28																			
	Veronica Postma						16		13																			
	C. H. Powell						1		1																			
	Powerine Oil Company						784		627																			
	John Preem						0		0																			
	Ralph Pylman and Ida Pylman						13		10																			
	Quality Meat Packing Company						38		30																			
	Ralphs Grocery Company						0		0																			
	Arthur D. Ramsey and James A. Ramsey						5		4																			
	Rancho Santa Gertrudes Mutual Water System						48		38																			
	Mary Ravera (Orange County Nursery, Inc., tenant						39		31																			

1		Total	Allowed
2	<u>Name</u>	<u>Water</u>	<u>Pumping</u>
3		<u>Right</u>	<u>Allocatio.</u>
3	Zelma Ravera	2	2
4	Rawlins Investment Corporation (Rockview Milk Farms, Inc., tenant)	66	53
5	Hal Rees	0	0
6	Reeves Tract Water Company	36	29
7	Clarence Reinalda	0	0
8	Reliance Dairy Farms	122	98
9	Research Building Corporation (Dr. Russell B. Clark, tenant)	11	9
10	Richfield Oil Corporation	71	57
11	Richland Farm Water Company	216	173
12	George Rietkerk and Cornelia Rietkerk	7	6
13	Rio Hondo Country Club (see listing under name of James L. Stamps)		
14	Erasmio Rios (see listing under name of Esther Salcido)		
15	Jesus Rios (see listing under name of Esther Salcido)		
16	Frank J. Rocha, Jr. and Elsie M. Rocha	13	10
17	Rockview Milk Farms, Inc. (see listing under name of Rawlins Investment Corporation)		
18	John Rodrigues, Emily S. Rodrigues, and John Rodrigues, Jr. (see also below)	5	4
19	John Rodrigues and John Rodrigues Jr.	1	1
20	Frieda Roethlisberger (see listing under name of Joe Luond)		
21	Patricia L. Davis Rogers, aka Patricia L. Davis	2	2
22	The Roman Catholic Archbishop of Los Angeles, a corporation sole	426	341
23			

1		Total	Allowed
2	<u>Name</u>	<u>Water</u>	<u>Pumping</u>
3		<u>Right</u>	<u>Allocation</u>
3	Gladys Marie Romberg (see listing under name of Bernard William Bootsma)		
4	Alois M. Rombout	0	0
5	Louis Romoff (see listing under name of Sam Perricone)		
6			
7	Elvira C. Rosales	3	3
8	Frank J. Ross	2	2
9	Ernest D. Roth and Eva Roth (see listing under name of Elizabeth Flesch)		
10	Ed Roukema	0	0
11	Herbert N. Royden	31	25
12	Ruchti Brothers	31	25
13	Frank Ruggieri and Vada Ruggieri	1	1
14	(see additional listing below)		
15	Frank Ruggieri and Vada Ruggieri;		
16	David Seldeen and Fay Seldeen (Ray Mitchell, tenant)	23	18
17	Thomas S. Ryan and Dorothy J. Ryan	19	15
18	Sam Rypkema and Tena Rypkema	8	6
19	St. John Bosco School	53	42
20	James H. Saito and Yoshino Saito	2	2
21	Esther Salcido and Jesus Rios (Erasmus Rios, tenant)	3	3
22	San Gabriel Valley Water Company	6,828	5,462
23	Joe Santana and Palmira Santana	10	8
24	Sasaki Bros. Ranch, Inc.	32	26
25	Sativa L. A. County Water District	592	474
26	Ben Schilder, Jr. and Anna Schilder	28	22
27	Carl Schmid and Olga Schmid	18	14
28			

1	<u>Name</u>	<u>Total Water Right</u>	<u>Allowed Pumping Allocation</u>
2	Mrs. A. Schuur	0	0
3	John Schuurman and Isabel Schuurman (James Sieperda, tenant)	15	12
4	David Seldeen and Fay Seldeen (see listing under name of Frank Ruggieri)		
5	Maurice I. Sessler	8	6
6	Chris Shaffer and Celia I. Shaffer	8	6
7	Shayman & Wharram, a partnership, consisting of John W. Shayman and Francis O. Wharram	2	2
8	Shell Oil Company (see listing under name of Margaret F. Slusher)		
9	Shelter Superior Dairy (see listing under name of Otelia Nelson)		
10	Tadao Shiba and Harume Shiba, Susumu Shiba, and Mitsuko Shiba	7	6
11	Yahiko Shiozaki and Kiyoko Shiozaki; Ken Shiozaki and Grace Shiozaki	6	5
12	Shore-Plotkin Enterprises, Inc. (Shore-Calnevar, Inc., tenant)	0	0
13	J. E. Siemon	15	12
14	James Sieperda (see listing under name of John Schuurman)		
15	Sierra Restaurant Corporation	0	0
16	Frank Simas and Mabel Simas (Frank Pires, tenant)	11	9
17	Bennett E. Simmons and Alice Lorraine Simmons, George K. Simmons and Doris June Simmons (Bell Trailer City, tenant)	41	33
18	Margaret F. Slusher (Shell Oil Company, tenant)	7	6
19	Lester W. Smith and Donald E. Smith (Lester W. Smith Dairy, tenant)	20	16
20			

1	<u>Name</u>	<u>Total Water Right</u>	<u>Allowed Pumping Allocation</u>
3	Wirt Smith	14	11
4	William Smoorenborg and Nick J. Loogman (Smoorenborg & Loogman, a 5 partnership of William Smoorenborg 6 and Nick J. Loogman, operating well 7 facility)	21	17
7	Leo Snozzi and Sylvia Snozzi	52	42
8	Socony Mobil Oil Company, Inc.	172	138
9	Somerset Mutual Water Company	2,744	2,195
10	South Montebello Irrigation District	1,238	990
11	Southern California Edison Company 12 (Vernon Bacon; Chikami Bros. Farming, 13 consisting of Jack Chikami and 14 Shigeru Chikami; Louis F. De Martini; 15 Armand Lescoulie; C. D. Webster; Kenji 16 Murata; Glenn F. Spiller and Jean H. 17 Spiller; George Yamamoto and Alice 18 Yamamoto, conducting business as Fumi 19 Garden Farms, Inc.; and Salvatore 20 Gutierrez, tenants and licenses)	816	653
17	Southern California Water Company	18,937	15,150
18	Southern Service Company, Ltd.	81	65
19	Henrietta Southfield	4	4
20	John Southfield	0	0
21	Southwest Water Company	2,895	2,316
22	Manuel M. Souza, Sr.; Manuel M. 23 Souza, Jr.; Frank M. Souza and 24 Louie J. Souza (see listing under 25 name of Jack Gonsalves)		
24	Nelson Souza and Mary Souza	12	10
25	Glenn F. Spiller and Jean H. Spiller 26 (see also listing under name of 27 Southern California Edison company)	24	19
27	Farah Sprague	3	3
28			

1	<u>Name</u>	<u>Total Water Right</u>	<u>Allowed Pumping Allocation</u>
2	Herman F. Staat and Charlotte H. Staat	2	2
3	James L. Stamps, as to an undivided 80% interest; Addie L. Enfield, as to an undivided 20% interest (Rio Hondo Country Club, tenant	443	354
4	Standard Oil Company of California	118	94
5	J. F. Standley and Myrtle M. Standley	1	1
6	Star Dust Lands, Inc.	85	68
7	State of California (included herein are water rights of Fred C. Nelles School for Boys of the State of California Department of the Youth Authority; Metropolitan State Hospital of the State of California Department of Mental Hygiene; and District VII, Division of Highways of the State of California Department of Public Works)	757	606
8	Stauffer Chemical Company	181	145
9	John Steele and Clara D. Steele	4	4
10	Steve Stefani, Jr.	0	0
11	Steve Stefani, Sr., and Dora Stefani (Henry Baar and Fred Fekkes, tenants)	38	30
12	Andrew Stellingwerf	0	0
13	Henry Stellingwerf and Jeanette Stellingwerf	14	11
14	Henry Sterk and Betty S. Sterk	114	91
15	V. C. Stiefel	3	3
16	Sophia J. Stockmal and John F. Stockmal	3	3
17	William Thomas Stover and Gertrude D. Stover	3	3
18	Louis Struikman and Alice Struikman (Louise Struikman and Pete Struikman dba Louis Struikman and Son, tenants as to 43 acre feet of water right and 34 acre feet of allowed pumping allocation; and Sidney		

1	2 <u>Name</u>	3 <u>Total</u> 4 <u>Water</u> 5 <u>Right</u>	6 <u>Allowed</u> 7 <u>Pumping</u> 8 <u>Allocation</u>
3	Van Dyke, tenant as to 10 acre feet of 4 water right and 8 acre feet of allowed 5 pumping allocation) (see also below)	53	42
5	Louis Struikman and Peter Struikman	3	3
6	Cornelius Struikmans and Ida Struikmans	9	7
7	Henry Struikmans and Nellie Struikmans	13	10
8	Henry Struikmans, Jr.	0	0
9	Suburban Mutual Water Co.	0	0
10	Suburban Water Systems	3,666	2,933
11	Kazuo Sumida	2	2
12	Sun Coast Development Company	0	0
13	Sun Holding Corporation (see listing 14 under name of Mausoleum Park, Inc.)		
15	Sunnyside Mausoleum Company	60	48
16	Sunset Cemetery Association	26	21
17	E. A. Sutton and Ramona Sutton	39	31
18	Swift & Company	2,047	1,638
19	Roy Sybrandy and Anne Sybrandy	29	23
20	Sykes Realty Co., Floyd G. Marcusson 21 and Albert C. Sykes	2	2
22	Andy Sytsma and Dorothy Sytsma (Albert 23 Sytsma and Robert Sytsma, doing 24 business as Sytsma Bros., tenants)	20	16
25	Tarr and McComb Oil Company, Ltd. (Pablo 26 Oropeza, tenant)	86	69
27	Roy Tashima and Shigeo Tashima	1	1
28	Fay G. Tawzer and Lawrence R. Tawzer (see 29 listing under name of Fern Ethyl Gordon)		
30	Dorothy Taylor	0	0
31	Quentin D. Taylor	0	0

	<u>Total</u> <u>Water</u> <u>Right</u>	<u>Allowed</u> <u>Pumping</u> <u>Allocation</u>
1		
2	<u>Name</u>	
3	Carl Teixeira and Evelyn Teixeira	11 9
4	George S. Teixeira and Laura L. Teixeira	17 14
5	Harm Te Velde and Zwaantina Te Velde	253 202
6	Theo Hamm Brewing Co.	150 120
7	Thirty-Three Forty-Five East Forty-Fifth Street, Inc.	17 14
8	O. T. Thompson and Drusilla Thompson	20 16
9	Tract Number One Hundred and Eighty	
10	Water Company	1,526 1,221
11	Tract 349 Mutual Water Company	529 423
12	Fred Troost and Annie Troost	53 42
13	Frank W. Tybus and June E. Tybus (see listing under name of Lakewood Pipe Co.)	
14	Uehling Water Company, Inc.	846 677
15	Union Development Co., Inc.	12 10
16	Union Oil Company of California (see listing under name of Florence Hellman Ehrman)	
17	Union Pacific Railroad Company	656 525
18	Union Packing Company	100 80
19	United California Bank (see listing under name of Huntley L. Gordon)	
20	United Dairymen's Association	1 1
21	United States Gypsum Company	1,581 1,265
22	United States Rubber Company	820 656
23	United States Steel Corporation	176 141
24	Masaru Uyeda, Hajime Hirashima, and Tadashi Uyeda	12 10
25	G. A. Van Beek (see listing under name of Art Hop, Sr.)	
26		
27		
28		

1		Total	Allowed
2	<u>Name</u>	<u>Water</u>	<u>Pumping</u>
		<u>Right</u>	<u>Allocation</u>
3	Bas Van Dam (see listing under name of Gertrude Van Dam)		
4			
5	Carrie Agnes Van Dam (see listing under name of Bernard William Bootsma)		
6	Cornelius A. Van Dam and Florence Van Dam	24	19
7			
8	Dick Van Dam, Jr.	0	0
9	Gerrit Van Dam and Grace Van Dam (William De Kriek, tenant)	13	10
10	Gertrude Van Dam (Bas Van Dam, tenant as to 29 acre feet of water right and		
11	23 acre feet of allowed pumping right; and Henry Van Dam, tenant as to		
12	19 acre feet of water right and 15 acre feet of allowed pumping right)	48	38
13	Hank Van Dam and Jessie Van Dam (Viva Ormonde, tenant)	22	18
14	Henry Van Dam (see listing under name of Gertrude Van Dam)		
15	Jacob Vandenberg and Anna Vandenberg (Pete Nauta, tenant)	8	6
16	August Vandenburg, Ben W. Vandenburg, and Andrew W. Vandenburg (Jan Bokma, tenant)	6	5
17	John Van Den Raadt	4	4
18	M. Vander Dussen and Aletta C. Vander Dussen	12	10
19	Sybrand Vander Dussen and Johanna Vander Dussen	23	18
20	Helen Goedhart Van Eik (see listing under name of Harry N. Goedhart)		
21	Cornelius Vander Eyk, aka Case Vander Eyk, and Nelly Vander Eyk, aka Nellie Vander Eyk	7	6
22	George Van Der Ham and Alice Van Der Ham	10	8
23			
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28			

1	<u>Name</u>	<u>Total Water Right</u>	<u>Allowed Pumping Allocation</u>
3	Huibert Vander Ham and Henrietta Vander Ham	33	26
4	Joe Vanderham and Cornelia Vanderham	13	10
5	John Vanderham and Nell M. Vanderham	20	16
6	Charlie Vander Kooi and Lena Mae Vander Kooi (see also listing under name of Michel Bordato)	13	10
8	Pete Vander Kooi (see listing under name of Ed Haakma)		
10	Bert Vander Laan and Stella Vander Laan	10	8
11	Matt Vander Sys and Johanna Vander Sys	13	10
12	Bill Vander Vegt and Henny Vander Vegt	18	14
13	George Vander Vegt and Houjke Vander Vegt	12	10
14	Harry J. Vander Wall and Marian E. Vander Wall	12	10
15	Bert Vande Vegte and Lillian Vande Vegte	1	1
17	Anthony Van Diest	0	0
18	Jennie Van Diest, as to undivided 1/3 interest; Ernest Van Diest and Rena 19 Van Diest, as to undivided 1/3 interest; and Cornelius Van Diest and Anna Van 20 Diest, as to undivided 1/3 interest. (Van Diest Dairy, tenant)	20	16
21	Katrena Van Diest and/or Margaret 22 Van Diest	92	74
23	Henry W. Van Dyk (see listing under name of Henrietta Veenendaal)		
24	Wiechert Van Dyk and Jennie Van Dyk	13	10
25	Corty Van Dyke (see listing under name of Charles E. Adams)		
27	Sidney Van Dyke (see listing under name of Louis Struickman)		
28			

	<u>Total Water Right</u>	<u>Allowed Pumping Allocation</u>
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1		Total	Allowed
2	<u>Name</u>	<u>Water</u>	<u>Pumping</u>
3		<u>Right</u>	<u>Allocatio..</u>
3	Henry Veenendaal and Henrietta Veenendaal	8	6
4	Joe H. Veenendaal and Margie Veenendaal	34	27
5	John Veenendaal	0	0
6	Vehicle Maintenance & Painting Corporation		
7	(see listing under name of Nicholas C. Contreas)		
8	Salvador Velasco	16	13
9	Mike Veldhuis	0	0
10	Albert Veldhuizen and Helen Veldhuizen	23	18
11	Jack Verbree	0	0
12	Mrs. Klaasje Verburg (Leon Verburg		
13	to extent of interest under contract to purchase)	12	10
14	John C. Verhoeven and Sadie Verhoeven	25	20
15	Joseph C. Vierra and Caroline Vierra		
16	(Joseph C. Vierra and William J. Vierra, doing business as Vierra & Vierra, tenants)	13	10
17	Sieger Vierstra and Nellie G. Vierstra		
18	(Jacob J. Bosma, tenant)	12	10
19	Virginia Country Club of Long Beach	340	272
20	Roy Visbeek	0	0
21	Louis Visser	9	7
22	Vista Hill Psychiatric Foundation	39	31
23	Louie Von Ah	0	0
24	Walnut Irrigation District	154	123
25	Walnut Park Mutual Water Co.	1,245	996
26	C. D. Webster	1	1
27	(see also listing under name of Southern California Edison Company)		

28

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	
	<u>Name</u>																											
	Morris Weiss and Bessie Weiss (Wilbur Mellema, tenant)																											
	(also see listings under names of Elmo D. Murphy and Emma Engler)																											
	Wells Fargo Bank as Executor of Estate of Edward H. Heller, Deceased, and as Executor of Estate of Lloyd W. Dinkelspiel, Deceased, and as Trustee under Trust created by the Will of Florence H. Dinkelspiel, Deceased (see listing under name of Florence Hellman Ehrman)																											
	Jules Wesselink (see listing under name of Henry Van Ruiten)																											
	West Gateway Mutual Water Co.																											
	Henry Westra and Hilda Westra																											
	John D. Westra (see listing under name of Orla Company)																											
	Francis O. Wharram (see listing under name of Shayman & Wharram)																											
	Whittier Union High School District																											
	Arend Z. Wier																											
	H. Wiersema, aka Harm Wiersema and Pearl Wiersema																											
	William Wiersma and Elbra Wiersma																											
	Richard Wigboly (see listing under name of Central Manufacturing District, Inc.)																											
	Mary Wilcox (see listing under name of Jenkins Realty Mutual Water Co.)																											
	Ralph P. Williams and Mary Williams																											
	Wilshire Oil Company of California																											
	Melvin L. Wilson and Marie Wilson																											
	D. P. Winslow and Dorothy C. Winslow (Berton Elson, tenant)																											

	<u>Name</u>	<u>Total Water Right</u>	<u>Allowed Pumping (Allocation)</u>
1			
2	<u>Name</u>		
3	Helene K. Winters	1	1
4	Fred E. Wiseman and Grayce Ana Wiseman	2	2
5	Helen Wolfsberger and Christine Joseph	2	2
6	Volney Womack	0	0
7	Cho Shee Woo (Hong Woo and Ngorn Seung Woo, as agents of property for Cho 8 Shee Woo)	20	16
9	Gerrit Wybenga and Rena Wybenga	10	8
10	George Yamamoto and Alice Yamamoto, also known as Fumi Yamamoto (Fumi 11 Garden Farms, Inc., tenant) 12 (see also listing under name of Southern California Edison Company)	17	14
13	Paul N. Yokota and Miyo Yokota	4	4
14	Minoru Yoshijima (see listing under name of Kazuo Hatanaka)		
15	Frank Yoshioka	0	0
16	Maxine Young	3	3
17	Mrs. A. Zandvliet also known as Ana A. 18 Zandvliet	8	6
19	Arnold Zeilstra and Nellie Zeilstra	6	5
20	George Zivelonghi and Antonio Zivelonghi	121	97
21	Dick Zuidervaart and Janna Zuidervaart (Artesia Milling Company, tenant)	1	1
22	Andy Zylstra	0	0
23	Zylstra Bros. a partnership consisting 24 of Lammert Zylstra and William Zylstra (see listing under name of John H. Coito)		
25	John Zylstra and Leonard J. Zylstra, doing 26 business as The Zylstra Dairy	22	18
27	Leonard Zylstra (not the same person as Leonard J. Zylstra)	0	0
28			

1 4. Transition in Administrative Year - Application.
2 "Year" and "Administrative Year" as used throughout this judgment
3 shall mean the water year; provided that with the first fiscal
4 year (July 1 - June 30) commencing at least four months after the
5 "Amended Judgment" became final, and thereafter, said words shall
6 mean the fiscal year. Since this will provide a transitional
7 Administrative year of nine months, October 1 - June 30, ("short
8 year" hereafter), notwithstanding the finding and determinations
9 in the annual Watermaster report for the then last preceding
10 water year, the Allowed Pumping Allocations of the parties and
11 the quantity which Defendant City of Los Angeles is annually
12 permitted to extract from Central Basin for said short year shall
13 be based on three-quarters of the otherwise allowable quantity.
14 During said short year, because of hardships that might otherwise
15 result, any overextractions by a party shall be deemed pursuant
16 to paragraph 2, Subpart B of Part III of this judgment (p. 61),
17 and it shall be deemed that the Watermaster has made the
18 determination of unreasonable hardship to which reference is
19 therein made.

20 II. APPOINTMENT OF WATERMASTER; WATERMASTER ADMINI-
21 STRATION PROVISIONS. Department of Water Resources of the State
22 of California is hereby appointed Watermaster, for an indefinite
23 term, but subject to removal by the Court, to administer this
24 judgment and shall have the following powers, duties and
25 responsibilities:

26 1. Duties, Powers and Responsibilities of Watermaster.
27 In order to assist the Court in the administration and enforce-
28 ment of the provisions of this judgment and to keep the Court

1 fully advised in the premises, the Watermaster shall have the
2 following duties, powers and responsibilities in addition to
3 those before or hereafter provided in this judgment:

4 (a) Watermaster May Require Reports, Information and
5 Records. To require of parties the furnishing of such reports,
6 information and records as may be reasonably necessary to
7 determine compliance or lack of compliance by any party with the
8 provisions of this judgment.

9 (b) Requirement of Measuring Devices. To require all
10 parties or any reasonable classification of parties owning or
11 operating any facilities for the extraction of ground water from
12 Central Basin to install and maintain at all times in good
13 working order at such party's own expense, appropriate measuring
14 devices at such times and as often as may be reasonable under th
15 circumstances and to calibrate or test such devices.

16 (c) Inspections by Watermaster. To make inspections
17 of ground water production facilities and measuring devices at
18 such times and as often as may be reasonable under the circum-
19 stances and to calibrate or test such devices.

20 (d) Annual Report. The Watermaster shall prepare,
21 file with the Court and mail to each of the parties on or before
22 the 15th day of the fourth month following the end of the
23 preceding Administrative year, an annual report for such year,
24 the scope of which shall include but not be limited to the
25 following:

- 26 1. Ground Water Extractions
- 27 2. Exchange Pool Operation
- 28 3. Use of Imported Water

- 1 4. Violations of Judgment and Corrective Action Taken
- 2 5. Change of Ownership of Total Water Rights
- 3 6. Watermaster Administration Costs
- 4 7. Recommendations, if any.

5 (e) Annual Budget and Appeal Procedure in Relation
6 Thereeto. The Watermaster shall annually prepare a tentative
7 budget for each Administrative year stating the anticipated
8 expense for administering the provisions of this judgment. The
9 Watermaster shall mail a copy of said tentative budget to each of
10 the parties hereto at least 60 days before the beginning of each
11 Administrative year. For the first Administrative year of
12 operation under this judgment, if the Watermaster is unable to
13 meet the above time requirement, the Watermaster shall mail said
14 copies as soon as possible. If any party hereto has any
15 objection to said tentative budget, it shall present the same in
16 writing to the Watermaster within 15 days after the date of
17 mailing of said tentative budget by the Watermaster. If no
18 objections are received within said period, the tentative budget
19 shall become the final budget. If objections are received, the
20 Watermaster shall, within 10 days thereafter, consider such
21 objections, prepare a final budget and mail a copy thereof to
22 each party hereto, together with a statement of the amount
23 assessed to each party. Any party may apply to the Court within
24 15 days after the mailing of such final budget for a revision
25 thereof based on specific objections thereto. The parties hereto
26 shall make the payments otherwise required of them to the
27 Watermaster even though such a request for revision has been
28 filed with the Court. Upon any revision by the Court the

1 Watermaster shall either remit to the parties their prorata
2 portions of any reduction in the budget, or credit their accounts
3 with respect to their budget assessments for the next ensuing
4 Administrative year, as the Court shall direct.

5 The amount to be assessed to each party shall be
6 determined as follows: If that portion of the final budget to be
7 assessed to the parties is equal to or less than \$20.00 per party
8 then the cost shall be equally apportioned among the parties. If
9 that portion of the final budget to be assessed to parties is
10 greater than \$20.00 per party then each party shall be assessed a
11 minimum of \$20.00. The amount of revenue expected to be received
12 through the foregoing minimum assessments shall be deducted from
13 that portion of the final budget to be assessed to the parties
14 and the balance shall be assessed to the parties having Allowed
15 Pumping Allocations, such balance being divided among them
16 proportionately in accordance with their respective Allowed
17 Pumping Allocations.

18 Payment of the assessment provided for herein, subject
19 to adjustment by the Court as provided, shall be made by each
20 such party prior to beginning of the Administrative year to which
21 the assessment relates, or within 40 days after the mailing of
22 the tentative budget, whichever is later. If such payment by any
23 party is not made on or before said date, the Watermaster shall
24 add a penalty of 5% thereof to such party's statement. Payment
25 required of any party hereunder may be enforced by execution
26 issued out of the Court, or as may be provided by order herein-
27 after made by the court, or by other proceedings by the
28 Watermaster or by any party hereto on the Watermaster's behalf.

1 Any money unexpended at the end of any Administrative
2 year shall be applied to the budget of the next succeeding
3 Administrative year.

4 Notwithstanding the above, no part of the budget of the
5 Watermaster shall be assessed to the Plaintiff District or to any
6 party who has not extracted water from Central Basin for a period
7 of two successive Administrative years prior to the Administra-
8 tive year in which the tentative budget should be mailed by the
9 Watermaster under the provisions of this subparagraph (e).

10 (f) Rules. The Watermaster may adopt and amend
11 from time to time such rules as may be reasonably necessary to
12 carry out its duties, powers and responsibilities under the
13 provisions of this judgment. The rules shall be effective on
14 such date after the mailing thereof to the parties as is
15 specified by the Watermaster, but not sooner than 30 days after
16 such mailing.

17 2. Use of Facilities and Data Collected by Other
18 Governmental Agencies. The Watermaster is directed not to
19 duplicate the collection of data relative to conditions of the
20 Central Basin which is then being collected by one or more
21 governmental agencies, but where necessary the Watermaster may
22 collected supplemental data. Where it appears more economical to
23 do so, the Watermaster is directed to use such facilities of
24 other governmental agencies as are available to it under either
25 no cost or cost agreements with respect to the receipt of
26 reports, billings to parties, mailings to parties, and similar
27 matters.

1 3. Appeal from Watermaster Decisions Other Than With
2 Respect to Budget. Any party interested therein who has
3 objection to any rule, determination, order or finding made by
4 the Watermaster, may make objection thereto in writing delivered
5 to the Watermaster within 30 days after the date the Watermaster
6 mails written notice of the making of such rule, determination,
7 order or finding, and within 30 days after such delivery the
8 Watermaster shall consider said objection and shall amend or
9 affirm his rule, determination, order or finding and shall give
10 notice thereof to all parties. Any such party may file with the
11 Court within 30 days from the date of said notice any objection
12 to such rule, determination, order or finding of the Watermaster
13 and bring the same on for hearing before the Court at such time
14 as the Court may direct, after first having served said objection
15 upon all other parties. The Court may affirm, modify, amend or
16 overrule any such rule, determination, order or finding of the
17 Watermaster. The provisions of this paragraph shall not apply to
18 budgetary matters, as to which the appellate procedure has
19 heretofore been set forth. Any objection under this paragraph
20 shall not stay the rule, determination, order or finding of the
21 Watermaster. However, the Court, by ex parte order, may provide
22 for a stay thereof on application of any interested party on or
23 after the date that any such party delivers to the Watermaster
24 any written objection.

25 4. Effect of Non-Compliance by Watermaster With Time
26 Provisions. Failure of the Watermaster to perform any duty,
27 power or responsibility set forth in this judgment within the
28 time limitation herein set forth shall not deprive the

1 Watermaster of authority to subsequently discharge such duty,
2 power or responsibility, except to the extent that any such
3 failure by the Watermaster may have rendered some otherwise
4 required act by a party impossible.

5 III. PROVISIONS FOR PHYSICAL SOLUTION TO MEET THE WATER
6 REQUIREMENTS IN CENTRAL BASIN. In order to provide flexibility
7 to the injunction set forth in Part I of the judgment, and to
8 assist in a physical solution to meet water requirements in
9 Central Basin, the injunction so set forth is subject to the
10 following provisions.

11 A. Carryover of Portion of Allowed Pumping Allocation.

12 (1) Each party adjudged to have a Total Water
13 Right or water rights and who, during a particular
14 Administrative year, does not extract from Central Basin a
15 total quantity equal to such party's Allowed Pumping
16 Allocation for the particular Administrative year, less any
17 allocated subscriptions by such party to the Exchange Pool,
18 or plus any allocated requests by such party for purchase of
19 Exchange Pool water, is permitted to carry over (the "One
20 Year Carryover") from such Administrative year the right to
21 extract from Central Basin in the next succeeding
22 Administrative year so much of said total quantity as it did
23 not extract in the particular Administrative year, not to
24 exceed 20% of such party's Allowed Pumping Allocation, or 20
25 acre feet, whichever of said 20% or 20 acre feet is the
26 larger.

27 (2) Following the declaration of a Declared Water
28 Emergency and until the Declared Water Emergency ends either

1 by expiration or by resolution of the Board of Directors of
2 the Central and West Basin Water Replenishment District,
3 each party adjudged to have a Total Water Right or water
4 rights and who, during a particular Administrative year,
5 does not extract from Central Basin a total quantity equal
6 to such party's Allowed Pumping Allocation for the
7 particular Administrative year, less any allocated
8 subscriptions by such party to the Exchange Pool, or plus
9 any allocated requests by such party for purchase of
10 Exchange Pool water, is permitted to carry over (the
11 "Drought Carryover") from such Administrative year the right
12 to extract from Central Basin so much of said total quantity
13 as it did not extract during the period of the Declared
14 Water Emergency, to the extent such quantity exceeds the Or
15 Year Carryover, not to exceed an additional 35% of such
16 party's Allowed Pumping Allocation, or additional 35 acre
17 feet, whichever of said 35% or 35 acre feet is the larger.
18 Carryover amounts shall first be allocated to the One Year
19 Carryover and any remaining carryover amount for that year
20 shall be allocated to the Drought Carryover.

21 (3) No further amounts shall be added to the
22 Drought Carryover following the end of the Declared Water
23 Emergency, provided however that in the event another
24 Declared Water Emergency is declared, additional Drought
25 Carryover may be added, to the extent such additional
26 Drought Carryover would not cause the total Drought
27 Carryover to exceed the limits set forth above.
28

1 (4) The Drought Carryover shall be supplemental
2 to and shall not affect any previous drought carryover
3 acquired by a party pursuant to previous order of the court.

4 B. When Over-extractions May be Permitted.

5 1. Underestimation of Requirements for Water. Any
6 party hereto having an Allowed Pumping Allocation and not in
7 violation of any provision of this judgment may extract in an
8 Administrative year an additional quantity of water not to
9 exceed: (a) 20% of such party's Allowed Pumping Allocation or 20
10 acre feet, whichever is greater, and (b) any amount in addition
11 thereto which may be approved in advance by the Watermaster.

12 2. Reductions in Allowed Pumping Allocations in
13 Succeeding Years to Compensate for Permissible Overextractions.

14 Any such party's Allowed Pumping Allocation for the following
15 Administrative year shall be reduced by the amount over-extracted
16 pursuant to paragraph 1 above, provided that if the Watermaster
17 determines that such reduction in the party's Allowed Pumping
18 Allocation in one Administrative year will impose upon such a
19 party an unreasonable hardship, the said reduction in said
20 party's Allowed Pumping Allocation shall be prorated over a
21 period of five (5) Administrative years succeeding that in which
22 the excessive extractions by the party occurred. Application for
23 such relief to the Watermaster must be made not later than the
24 40th day after the end of the Administrative year in which such
25 excessive pumping occurred. Watermaster shall grant such relief
26 if such over-extraction, or any portion thereof, occurred during
27 a period of Declared Water Emergency.

1 3. Reductions in Allowed Pumping Allocations for the
2 Next Succeeding Administrative Year to Compensate for
3 Overpumping. Whenever a party over-extracts in excess of 20% of
4 such party's Allowed Pumping Allocation, or 20 acre feet,
5 whichever is greater, and such excess has not been approved in
6 advance by the Watermaster, then such party's Allowed Pumping
7 Allocation for the following Administrative year shall be reduced
8 by an amount equivalent to its total over-extractions in the
9 particular Administrative year in which it occurred.

10 4. Reports of Certain over-extractions to the Court.
11 Whenever a party over-extracts in excess of 20% of such party's
12 Allowed Pumping Allocation, or 20 acre feet, whichever is
13 greater, without having obtained prior approval of the
14 Watermaster, such shall constitute a violation of the judgment
15 and the Watermaster shall make a written report to the Court for
16 such action as the Court may deem necessary. Such party shall be
17 subject to such injunctive and other processes and action as the
18 Court might otherwise take with regard to any other violation of
19 such judgment.

20 5. Effect of Over-extractions on Rights. Any
21 party who over-extracts from Central Basin in any Administrative
22 year shall not acquire any additional rights by reason of such
23 over-extractions; nor, shall any required reductions in
24 extractions during any subsequent years reduce the Total Water
25 Right or water rights of any party to the extent said over-
26 extractions are in compliance with paragraph 1 above.

27 6. Pumping Under Agreement With Plaintiff During
28 Periods of Emergency. Plaintiff overlies Central Basin and

1 engages in activities of replenishing the ground waters thereof.
2 Plaintiff by resolution has appropriated for use during
3 emergencies the quantity of 17,000 acre feet of imported and
4 reclaimed water replenished by it into Central Basin, and
5 pursuant to such resolution Plaintiff reserves the right to use
6 or cause the use of such quantity during such emergency periods.

7 (a) Notwithstanding any other provision of this
8 judgment, parties who are water purveyors (including successors
9 in interest) are authorized to enter into agreements with
10 Plaintiff under which such water purveyors may exceed their
11 respective Allowed Pumping Allocations for the particular
12 administrative year when the following conditions are met:

13 (1) Plaintiff is in receipt of a resolution of the
14 Board of Directors of the Metropolitan Water District
15 of Southern California ("MWD") that there is an actual
16 or immediately threatened temporary shortage of MWD's
17 imported water supply compared to MWD's needs, or a
18 temporary inability to deliver MWD's imported water
19 supply throughout its area, which will be alleviated by
20 overpumping from Central Basin.

21 (2) The Board of Directors of both Plaintiff and
22 Central Basin Municipal Water District by resolutions
23 concur in the resolution of MWD's Board of Directors,
24 and the Board of Directors of Plaintiff finds in its
25 resolution that the average minimum elevation of water
26 surface among those wells in the Montebello Forebay of
27 the Central Basin designated as Los Angeles County
28 Flood Control District Wells Nos. 1601T, 1564P, 1641P,

1 and 1626L, is at least 43.7 feet above sea level. This
2 computation shall be based upon the most recent "static
3 readings" taken, which shall have been taken not more
4 than four weeks prior. Should any of the wells
5 designated above become destroyed or otherwise be in an
6 condition so that readings cannot be made, or the owner
7 prevent their use for such readings the Board of
8 Directors of the Plaintiff may, upon appropriate
9 engineering recommendation substitute such other well
10 or wells as it may deem appropriate.

11 (3) In said resolution, Plaintiff's Board of Directors
12 sets a public hearing, and notice of the time, place
13 and date thereof (which may be continued from time to
14 time without further notice) is given by First Class (
15 Mail to the current designees of the parties, filed and
16 served in accordance with Part V, paragraph 3 of this
17 Judgment. Said notice shall be mailed at least five
18 (5) days before the scheduled hearing date.

19 (4) At said public hearing, parties (including succes-
20 sors in interest) are given full opportunity to be
21 heard, and at the conclusion thereof the Board of
22 Directors of Plaintiff by resolution decides to proceed
23 with agreements under this Part III-B.

24 (5) For purposes of this Part III-B, "water purveyors"
25 mean those parties (and successors in interest) which
26 sell water to the public whether regulated public
27 utilities, mutual water companies or public entities,
28 which have a connection or connections for the taking

1 of imported water of MWD, or access to imported water
2 of MWD through a connection, and which normally supply
3 part of their customer's needs with such imported
4 water.

5 (b) All such agreements shall be subject to the fol-
6 lowing requirements, and such others as Plaintiff's Board of
7 Directors shall require:

8 (1) They shall be of uniform content except as to
9 quantity involved, and any special provisions
10 considered necessary or desirable with respect to local
11 hydrological conditions or good hydrologic practice.

12 (2) They shall be offered to all water purveyors,
13 excepting those which Plaintiff's Board of Directors
14 determine should not over pump because such over
15 pumping would occur in undesirable proximity to a sea
16 water barrier project designed to forestall sea water
17 intrusion, or within or in undesirable proximity to an
18 area within Central Basin wherein groundwater levels
19 are at an elevation where over pumping is under all the
20 circumstances then undesirable.

21 (3) The maximum terms for the agreements shall be four
22 months, which agreements shall commence on the same
23 date and end on the same date (and which may be
24 executed at any time within the four month period),
25 unless an extension thereof is authorized by the Court,
26 under Part IV of this judgment.

27 (4) They shall contain provisions that the water
28 purveyor executing the agreement pay to the Plaintiff a

1 pice in addition to the applicable replenishment
2 assessment determined on the following formula. The
3 normal price per acre-foot of Central Basin Municipal
4 Water District's (CBMWD) treated domestic and municipal
5 water, as "normal" price of such category of water is
6 defined in Part C, paragraph 10 (price to be paid for
7 Exchange Pool Water) as of the beginning of the
8 contract term less the deductions set forth in said
9 paragraph 10 for the administrative year in which the
10 contract term commences. The agreement shall provide
11 for adjustments in the first of said components for any
12 proportional period of the contract term during which
13 the CBMWD said normal price is changed, and if the
14 agreement straddles two administrative years, the said
15 deductions shall be adjusted for any proportionate
16 period of the contract term in which the amount thereof
17 or of either subcomponent changes for purposes of said
18 paragraph 10. Any price for a partial acre-foot shall
19 be computed prorata. Payments shall be due and payable
20 on the principle that over extractions under the
21 agreement are of the last water pumped in the fiscal
22 year, and shall be payable as the agreement shall
23 provide.

24 (5) They shall contain provisions that:

25 (a) All of such agreements (but not less than all)
26 shall be subject to termination by Plaintiff if, in the
27 Judgment of Plaintiff's Board of Directors, the
28 conditions or threatened conditions upon which they

1 were based have abated to the extent over extractions
2 are no longer considered necessary; and (b) that any
3 individual agreement or agreements may be terminated if
4 the Plaintiff's Board of Directors finds that adverse
5 hydrologic circumstances have developed as a result of
6 over extractions by any water purveyor or purveyors
7 which have executed said agreements, or for any other
8 reason that Plaintiff's Board of Directors finds good
9 and sufficient.

10 (c) Other matters applicable to such agreements and
11 over pumping thereunder are as follows, without need for express
12 provisions in the agreements;

13 (1) The quantity of over pumping permitted shall be
14 additional to that which the water purveyor could
15 otherwise over pump under this Judgment.

16 (2) The total quantity of permitted over pumping under
17 all said agreements during said four months shall not
18 exceed Seventeen thousand (17,000) acre feet, but the
19 individual water purveyor shall not be responsible or
20 affected by any violation of this requirement. That
21 total is additional to over extractions otherwise
22 permitted under this Judgment.

23 (3) Only one four month period may be utilized by
24 Plaintiff in entering into such agreements, as to any
25 one emergency or continuation thereof declared by MWD's
26 Board of Directors under paragraph 6(a).

27 (4) Plaintiff may utilize the ex parte provisions of
28 Part IV of this Judgment in lieu of the authority

1 contained herein (which ex parte provisions are not
2 limited as to time, nature of relief, or terms of any
3 agreements), but neither Plaintiff nor any other party
4 shall utilize both as to any one such emergency or
5 continuation thereof.

6 (5) If any party claims it is being damaged or
7 threatened with damage by the over extractions by an
8 party to such an agreement, the first party or the
9 Watermaster may seek appropriate action of the Court
10 for termination of any such agreement upon notice of
11 hearing to the party complaining, to the party to said
12 agreement, to the plaintiff, and to any parties who
13 have filed a request for special notice. Any
14 termination shall not affect the obligation of the (
15 party to make payments under the agreement for over
16 extractions which did occur thereunder.

17 (6) Plaintiff shall maintain separate accounting of
18 the proceeds from payments made pursuant to agreements
19 entered into under this part. Said fund shall be
20 utilized solely for purposes of replenishment in
21 replacement of waters in Central Basin and West Basin.
22 Plaintiff shall as soon as practicable cause replenish-
23 ment in Central Basin by the amounts to be overproduced
24 pursuant to this Paragraph 6 commencing at Page 63,
25 whether through spreading, injection, or in lieu
26 agreements.

27 (7) Over extractions pursuant to the agreements shall
28 not be subject to the "make up" provisions of the

1 Judgment as amended, provided that if any party fails
2 to make payment as required by the agreement,
3 Plaintiff may require such "make up" under Paragraph 3,
4 Subpart B, Part III of the Judgment (Page 62).

5 (8) Water Purveyor under any such agreement may, and
6 is encouraged to enter into appropriate arrangements
7 with customers who have water rights in Central Basin
8 under or pursuant to this Judgment whereby the Water
9 Purveyor will be assisted in meeting the objectives of
10 the agreement.

11 (9) Nothing in this Paragraph 6 limits the exercise of
12 the reserved jurisdiction of the court except as
13 provided in subparagraph (c) (4) above.

14 7. Exemption for Extractors of Contaminated
15 Groundwater. Any party herein may petition the Replenishment
16 District for a Non-consumptive Water Use Permit as part of a
17 project to remedy or ameliorate groundwater contamination. If
18 the petition is granted as set forth in this part, the petitioner
19 may extract the groundwater as permitted hereinafter, without the
20 production counting against the petitioner's production rights.

21 (a) If the Board of the Replenishment District
22 determines by Resolution that there is a problem of groundwater
23 contamination that a proposed program will remedy or ameliorate,
24 an operator may make extractions of groundwater to remedy or
25 ameliorate that problem without the production counting against
26 the petitioner's production rights if the water is not applied to
27 beneficial surface use, its extractions are made in compliance
28 with all the terms and conditions of the Board Resolution, and

1 the Board has determined in the Resolution either of the
2 following:

3 (1) The groundwater to be extracted is unusable and
4 cannot be economically treated or blended for use with
5 other water.

6 (2) The proposed program involves extraction of usable
7 water in the same quantity as will be returned to the
8 underground without degradation of quality.

9 (b) The Resolution may provide those terms and
10 conditions the Board deems appropriate, including, but not
11 limited to, restrictions on the quantity of the extractions to be
12 so exempted, limitations on time, periodic reviews, requirement
13 of submission of test results from a Board-approved laboratory,
14 and any other relevant terms or conditions.

15 (c) Upon written notice to the operator involved, the
16 Board may rescind or modify its Resolution. The rescission or
17 modification of the Resolution shall apply to groundwater
18 extractions occurring more than ten days after the rescission or
19 modification. Notice of rescission or modification shall be
20 either mailed first class mail, postage prepaid, at least two
21 weeks prior to the meeting of the Board at which the rescission
22 or modification will be made to the address of record of the
23 operator or personally delivered two weeks prior to the meeting.

24 (d) The Board's decision to grant, deny, modify or
25 revoke a permit or to interrupt or stop a permitted project may
26 be appealed to this court within thirty days of the notice
27 thereof to the applicant and upon thirty days notice to the
28 designees of all parties herein.

1 (e) The Replenishment District shall monitor and
2 periodically inspect the project for compliance with the terms
3 and conditions for any permit issued pursuant to these
4 provisions.

5 (f) No party shall recover costs from any other party
6 herein on connection with determinators made with respect to this
7 part.

8 C. Exchange Pool Provisions.

9 (1) Definitions.

10 For purposes of these Exchange Pool provisions, the
11 following words and terms have the following meanings:

12 (a) "Exchange Pool" is the arrangement hereinafter set
13 forth whereby certain of the parties, ("Exchangees") may,
14 notwithstanding the other provisions of the judgment, extract
15 additional water from Central Basin to meet their needs, and
16 certain other of the parties ("Exchangors"), reduce their
17 extractions below their Allowed Pumping Allocations in order to
18 permit such additional extractions by others.

19 (b) "Exchangor" is one who offers, voluntarily or
20 otherwise, pursuant to subsequent provisions, to reduce its
21 extractions below its Allowed Pumping Allocation in order to
22 permit such additional extractions by others.

23 (c) "Exchangee" is one who requests permission to
24 extract additional water from Central Basin.

25 (d) "Undue hardship" means unusual and severe economic
26 or operational hardship, other than that arising (i) by reason of
27 any differential in quality that might exist between water
28 extracted from Central Basin and water available for importation

1 or (ii) by reason of any difference in cost to a party in
2 subscribing to the Exchange Pool and reducing its extractions of
3 water from Central Basin in an equivalent amount as opposed to
4 extracting any such quantity itself.

5 2. Parties who May Purchase Water Through the Exchange
6 Pool. Any party not having existing facilities for the taking of
7 imported water as of the beginning of any Administrative year,
8 and any party having such facilities as of the beginning of any
9 Administrative year who is unable, without undue hardship, to
10 obtain, take, and put to beneficial use, through its distribution
11 system or systems existing as of the beginning of the particular
12 Administrative year, imported water in a quantity which, when
13 added to its Allowed Pumping Allocation for that particular
14 Administrative year, will meet its estimated needs for that
15 particular Administrative year, may purchase water from the
16 Exchange Pool, subject to the limitations contained in this
17 Subpart C of this Part III (Subpart "C" hereinafter).

18 3. Procedure of Purchasing Exchange Pool Water. Not
19 later than the 40th day following the commencement of each
20 Administrative year, each such party desiring to purchase water
21 from the Exchange Pool shall file with the Watermaster a request
22 to so purchase, setting forth the amount of water in acre feet
23 that such party estimates that it will require during the then
24 current Administrative year in excess of the total of:

25 (a) Its Allowed Pumping Allocation for that particular
26 Administrative year; and

27 (b) The imported water, if any, which it estimates it
28 will be able, without undue hardship, to obtain, take and put to

1 beneficial use, through its distribution system or systems
2 existing as of the beginning of that particular Administrative
3 year.

4 Any party who as of the beginning of any Administrative
5 year has existing facilities for the taking of imported water and
6 who makes a request to purchase from the Exchange Pool must
7 provide with such request substantiating data and other proof,
8 which, together with any further data and other proof requested
9 by the Watermaster, establishes that such party is unable without
10 undue hardship, to obtain, take and put to beneficial use through
11 its said distribution system or systems a sufficient quantity of
12 imported water which, when added to its said Allowed Pumping
13 Allocation for the particular Administrative year, will meet its
14 estimated needs. As to any such party, the Watermaster shall
15 make a determination whether the party has so established such
16 inability, which determination shall be subject to review by the
17 court under the procedure set forth in Part II of this judgment.
18 Any party making a request to purchase from the Exchange Pool
19 shall either furnish such substantiating data and other proof, or
20 a statement that such party had no existing facilities for the
21 taking of imported water as of the beginning of that
22 Administrative year, and in either event a statement of the basis
23 for the quantity requested to be purchased.

24 4. Subscriptions to Exchange Pool.

25 (a) Required Subscription. Each party having existing
26 facilities for the taking of imported water as of the beginning
27 of any Administrative year hereby subscribed to the Exchange Pool
28 for purposes of meeting Category (a) requests thereon, as more

1 particularly defined in paragraph 5 of this Subpart C, twenty
2 percent (20%) of its Allowed Pumping Allocation, or the quantity
3 of imported water which it is able, without undue hardship, to
4 obtain, take and put to beneficial use through its distribution
5 system or systems existing as of the beginning of the particular
6 Administrative year in addition to such party's own estimated
7 needs for imported water during that water year, whichever is the
8 lesser. A party's subscription under this subparagraph (a) and
9 subparagraph (b) of this paragraph 4 is sometimes hereinafter
10 referred to as a 'required subscription'.

11 (b) Report to Watermaster by Parties with Connections
12 and Unable to Subscribe 20%. Any party having existing
13 facilities for the taking of imported water and estimating that
14 it will be unable, without undue hardship, in that Administrati
15 year to obtain, take and put to beneficial use through its
16 distribution system or systems existing as of the beginning of
17 that Administrative year, sufficient imported water to further
18 reduce its extractions from the Central Basin by twenty percent
19 (20%) of its Allowed Pumping Allocation for purposes of providing
20 water to the Exchange Pool must furnish not later than the 40th
21 day following the commencement of such Administrative year sub-
22 stantiating data and other proof which, together with any further
23 data and other proof requested by the Watermaster, establishes
24 said inability or such party shall be deemed to have subscribed
25 twenty percent (20%) of its Allowed Pumping Allocation for the
26 purpose of providing water to the Exchange Pool As to any such
27 party so contending such inability, the Watermaster shall make a
28 determination whether the party has so established such

1 inability, which determination shall be subject to review by the
2 Court under the procedure set forth in Part II of this judgment.

3 (c) Voluntary Subscriptions. Any party, whether or
4 not having facilities for the taking of imported water, who
5 desires to subscribe to the Exchange Pool a quantity or further
6 quantity of its Allowed Pumping Allocation, may so notify the
7 Watermaster in writing of the quantity of such offer on or prior
8 to the 40th day following the commencement of the particular
9 Administrative year. Such subscriptions are referred to
10 hereinafter as "voluntary subscriptions." Any Exchangor who
11 desires that any part of its otherwise required subscription not
12 needed to fill Category (a) requests shall be available for
13 Category (b) requests may so notify the Watermaster in writing on
14 or prior to said 40th day. If all of that Exchangor's otherwise
15 required subscription is not needed in order to fill Category (a)
16 requests, the remainder of such required subscription not so
17 used, or such part thereof as such Exchangor may designate, shall
18 be deemed to be a voluntary subscription.

19 5. Limitations on Purchases of Exchange Pool Water and
20 Allocation of Requests to Purchase Exchange Pool Water Among
21 Exchangors.

22 (a) Categories of Requests. Two categories of
23 Exchange Pool requests are established as follows:

24 (1) Category (a) requests. The quantity requested by
25 each Exchangee, whether or not that Exchangee has an Allowed
26 Pumping Allocation, which quantity is not in excess of 150% of
27 its Allowed Pumping Allocation, if any, or 100 acre feet,
28 whichever is greater. Requests or portions thereof within the

1 above criteria are sometimes hereinafter referred to as "Category
2 "a) requests."

3 (2) Category (b) requests. The quantity requested by
4 each Exchangee having an Allowed Pumping Allocation to the extent
5 the request is in excess of 150% of that Allowed Pumping Alloca-
6 tion or 100 acre feet, whichever is greater, and the quantity
7 requested by each Exchangee having no Allowed Pumping Allocation
8 to the extent the request is in excess of 100 acre feet.

9 Portions of requests within the above criteria are sometimes
10 hereinafter referred to as "Category (b) requests."

11 (b) Filling of Category (a) Requests. All Exchange
12 Pool subscriptions, required and voluntary, shall be available to
13 fill Category (a) requests. Category (a) requests shall be
14 filled first from voluntary subscriptions, and if voluntary
15 subscriptions should be insufficient to fill all Category (a)
16 requests required subscriptions shall be then utilized to fill
17 Category (a) requests. All Category (a) requests shall be first
18 filled before any Category (b) requests are filled.

19 (c) Filling of Category (b) Requests. To the extent
20 that voluntary subscriptions have not been utilized in filling
21 Category (a) requests, Category (b) requests shall be filled only
22 out of any remaining voluntary subscriptions. Required subscrip-
23 tions will then be utilized for the filling of any remaining
24 Category (b) requests.

25 (d) Allocation of Requests to Subscriptions When
26 Available Subscriptions Exceed Requests. In the event the
27 quantity of subscriptions available for any category of requests
28 exceeds those requests in that category, or exceeds the remainder

1 of those requires in that category, such requests shall be filled
2 out of such subscriptions proportionately in relation to the
3 quantity of each subscription.

4 (e) Allocation of Subscriptions to Category (b)
5 Requests in the Event of Shortage of Subscriptions. In the event
6 available subscriptions are insufficient to meet Category (b)
7 requests, available subscriptions shall be allocated to each
8 request in the proportion that the particular request bears to
9 the total requests of the particular category.

10 6. Additional Voluntary Subscriptions. If subscrip-
11 tions available to meet the requests of Exchangees are insuffi-
12 cient to meet all requests, additional voluntary subscriptions
13 may be solicited and received from parties by the Watermaster.
14 Such additional subscriptions shall be allocated first to
15 Category (a) requests to the extent unfilled, and next to
16 Category (b) requests to the extent unfilled. All allocations
17 are to be otherwise in the same manner as earlier provided in
18 paragraph 5 (a) through 5 (e) inclusive.

19 7. Effect if Category (a) Requests Exceed Available
20 Subscriptions, Both Required and Voluntary. In the event that
21 the quantity of subscriptions available to fill Category (a)
22 requests is less than the total quantity of such requests, the
23 Exchangees may, nonetheless, extract the full amount of their
24 Category (a) requests otherwise approved by the Watermaster as if
25 sufficient subscriptions were available. The amounts received by
26 the Watermaster on account of that portion of the approved
27 requests in excess of the total quantities available from
28 Exchangors shall either be paid by the Watermaster to Central &

1 West Basin Water Replenishment District in trust for the purpose
2 of purchasing imported water and spreading the same in Central
3 Basin for replenishment thereof, or credited to an account of
4 said Plaintiff District on the books of the Watermaster, at the
5 option of said Plaintiff District. Thereafter said Plaintiff
6 District may, at any time, withdraw said funds or any part
7 thereof so credited in trust for the aforesaid purpose, or may by
8 the 40th day of any Administrative year notify the Watermaster
9 that it desires all or any portion of said funds to be expended
10 by the Watermaster for the purchase of water available from
11 subscriptions by Exchangors in the event the total quantity of
12 such subscriptions exceeds the total quantity of approved
13 requests by parties to purchase Exchange Pool water. To the
14 extent that there is such an excess of available subscriptions (
15 over requests and to the extent that the existing credit in favor
16 of Plaintiff District is sufficient to purchase such excess
17 quantity at the price established for Exchange Pool purchases
18 during that Administrative year, the account of the Plaintiff
19 District shall be debited and the money shall be paid to the
20 Exchangors in the same manner as if another party had made such
21 purchase as an Exchangee. The Plaintiff District shall not
22 extract any such Exchange Pool water so purchased.

23 8. Additional Pumping by Exchangees Pursuant to
24 Exchange Pool Provisions. An Exchangee may extract from Central
25 Basin in addition to its Allowed Pumping Allocation for a
26 particular Administrative year that quantity of water which it (
27 has requested to purchase from the Exchange Pool during that
28 Administrative year and which has been allocated to it pursuant

1 to the provisions of paragraphs 5, 6 and 7. The first pumping by
2 an Exchangee in any Administrative year shall be deemed to be
3 pumping of the party's allocation of Exchange Pool water.

4 9. Reduction in Pumping by Exchangors. Each Exchangor
5 shall in each Administrative year reduce its extractions of water
6 from Central Basin below its Allowed Pumping allocation for the
7 particular year in a quantity equal to the quantity of Exchange
8 Pool requests allocated to it pursuant to the provisions of
9 paragraphs 4, 5, 6 and 7 of this Subpart C.

10 10. Price to be Paid for Exchange Pool Water. The
11 price to be paid by Exchangees and to be paid to Exchangors per
12 acre foot for required and voluntary subscriptions of Exchangors
13 utilized to fill requests on the Exchange Pool by Exchangees
14 shall be the dollar amount computed as follows by the Watermaster
15 for each Administrative year. The "normal" price as of the
16 beginning of the Administrative year charged by Central Basin
17 Municipal Water District (CBMWD) for treated MWD (Metropolitan
18 Water District of Southern California) water used for domestic
19 and municipal purposes shall be determined, and if on that date
20 there are any changes scheduled during that Administrative year
21 in CBMWD's "normal" price for such category of water, the
22 weighted daily "normal" CBMWD price shall be determined and used
23 in lieu of the beginning such price; and there shall be deducted
24 from such beginning or weighted price, as the case may be, the
25 "incremental cost of pumping water in Central Basin" at the
26 beginning of the Administrative year and any then current rate or
27 rates, of assessments levied on the pumping of ground water in
28 Central Basin by Plaintiff District and any other governmental

1 agency. The "normal" price charged by CBMWD shall be the highest
2 price of CBMWD for normal service excluding any surcharge or
3 higher rate for emergency deliveries or otherwise failing to
4 comply with CBMWD rates and regulations relating to earlier
5 deliveries. The "incremental cost of pumping water in Central
6 Basin" as of the beginning of the Administrative year shall be
7 deemed to be the Southern California Edison Company Schedule No.
8 PA-1 rate per kilowatt-hour, including all adjustments and all
9 uniform authorized additions to the basic rate, multiplied by 560
10 kilowatt-hours per acre-foot, rounded to the nearest dollar
11 (which number of kilowatt-hours has been determined to represent
12 the average energy consumption to pump an acre-foot of water in
13 Central Basin). In applying said PA-1 rate the charge per
14 kilowatt-hour under the schedule shall be employed and if there
15 are any rate blocks then the last rate block shall be employed.
16 Should a change occur in Edison schedule designations, the
17 Watermaster shall employ that applicable to motors used for
18 pumping water by municipal utilities.

19 11. Carry-over of Exchange Pool Purchases by
20 Exchangees. An Exchangee who does not extract from Central Basin
21 in a particular Administrative year a quantity of water equal to
22 the total of (a) its Allowed Pumping Allocation for that
23 particular Administrative year, reduced by any authorized amount
24 of carry-over into the next succeeding Administrative year
25 pursuant to the provisions of Subpart A of Part III of this
26 judgment, and (b) the quantity that it purchased from the
27 Exchange Pool for that particular Administrative year, may carry
28 over into the next succeeding Administrative year the right to

1 extract from Central Basin a quantity equal to the difference
2 between said total and the quantity actually extracted in that
3 Administrative year, but not exceeding the quantity purchased
4 from the Exchange Pool for that Administrative year. Any such
5 carry-over shall be in addition to that provided in said Subpart
6 A of Part III.

7 If the 'Basinwide Average Exchange Pool Price' in
8 the next succeeding Administrative year exceeds the 'Exchange
9 Pool Price' in the previous Administrative year any such
10 Exchangee exercising such carry-over rights hereinabove provided
11 shall pay to the Watermaster, forthwith upon the determination of
12 the 'Exchange Pool Price' in said succeeding Administrative year,
13 and as a condition to such carry-over rights, an additional
14 amount determined by multiplying the number of acre feet of
15 carry-over by the difference in 'Exchange Pool Price' as between
16 the two Administrative years. Such additional payment shall be
17 miscellaneous income to the Watermaster which shall be applied by
18 him against that share of the Watermaster's budget to be paid by
19 the parties to this Agreement for the second Administrative year
20 succeeding that in which the Exchange Pool water was so
21 purchased.

22 12. Notification by Watermaster to Exchangors and
23 Exchangees of Exchange Pool Requests and Allocations Thereof and
24 Price of Exchange Pool Water. Not later than the 65th day after
25 the commencement of each Administrative year, the Watermaster
26 shall determine and notify all Exchangors and Exchangees of the
27 total of the allocated requests for Exchange Pool water and shall
28 provide a schedule divided into categories of requests showing

1 the quantity allocated to each Exchangee and a schedule of the
2 allocation of the total Exchange Pool requirements among the
3 Exchangors. Such notification shall also advise Exchangors and
4 Exchangees of the prices to be paid to Exchangors for
5 subscriptions utilized and the Exchange Pool Price for that
6 Administrative year as determined by the Watermaster. The
7 determinations of the Watermaster in this regard shall be subject
8 to review by the Court in accordance with the procedure set forth
9 in Part II of this judgment.

10 13. Payment by Exchangees. Each Exchangee shall, on
11 or prior to last day of the third month of each Administrative
12 year, pay to the Watermaster one-quarter of said price per acre-
13 foot multiplied by the number of acre feet of such party's
14 approved request and shall, on or before the last day of each of
15 the next succeeding three months, pay a like sum to the
16 Watermaster. Such amounts must be paid by each Exchangee
17 regardless of whether or not it in fact extracts or uses any of
18 the water it has requested to purchase from the Exchange Pool.

19 14. Payments to Exchangors. As soon as possible after
20 receipt of moneys from Exchangees, the Watermaster shall remit to
21 the Exchangors their prorata portions of the amount so received
22 in accordance with the provisions of paragraph 10 above.

23 15. Delinquent Payments. Any amounts not paid on or
24 prior to any due date above shall carry interest at the rate of
25 1% per month or any part of a month. Any amounts required to be
26 so paid may be enforced by the equitable powers of the Court,
27 including, but not limited to, the injunctive process of the
28 Court. In addition thereto, the Watermaster, as Trustee for the

1 Exchangors, may enforce such payment by an appropriate legal
2 action, and shall be entitled to recover as additional damages
3 reasonable attorneys' fees incurred in connection therewith. If
4 any Exchangee shall fail to make any payments required of it on
5 or before 30 days after the last payment is due, including any
6 accrued interest, said party shall thenceforward not be entitled
7 to purchase water from the Exchange Pool in any succeeding
8 Administrative year except upon order of the Court, upon such
9 conditions as the Court may impose.

10 IV. CONTINUING JURISDICTION OF THE COURT.

11 The Court hereby reserves continuing jurisdiction and
12 upon application of any interested party, or upon its own motion,
13 may review and redetermine the following matters and any matters
14 incident thereto:

15 (a) Its determination of the permissible level of
16 extractions from Central Basin in relation to achieving a
17 balanced basin and an economic utilization of Central Basin for
18 ground water storage, taking into account any then anticipated
19 artificial replenishment of Central Basin by governmental
20 agencies for the purpose of alleviating what would otherwise be
21 annual overdrafts upon Central Basin and all other relevant
22 factors.

23 (b) Whether in accordance with applicable law any
24 party has lost all or any portion of his rights to extract ground
25 water from Central Basin and, if so, to ratably adjust the
26 Allowed Pumping Allocations of the other parties and ratably
27 thereto any remaining Allowed Pumping Allocation of such party.

1 (c) To remove any Watermaster appointed from time to
2 time and appoint a new Watermaster; and to review and revise the
3 duties, powers and responsibilities of the Watermaster and to
4 make such other and further provisions and orders of the Court
5 that may be necessary or desirable for the adequate admini-
6 stration and enforcement of the judgment.

7 (d) To revise the price to be paid by Exchangees and
8 to Exchangors for Exchange Pool purchases and subscriptions.

9 (e) In case of emergency or necessity, to permit
10 extractions from Central Basin for such periods as the Court may
11 determine: (i) ratably in excess of the Allowed Pumping
12 Allocations of the parties; or (ii) on a non-ratable basis by
13 certain parties if either compensation or other equitable
14 adjustment for the benefit of the other parties is provided. ()
15 Such overextractions may be permitted only for emergency and
16 necessity arising within Central Basin area, but to assist the
17 remainder of the areas within The Metropolitan Water District of
18 Southern California in the event of temporary shortage or
19 threatened temporary shortage of its imported water supply, or
20 temporary inability to deliver the same throughout its area, but
21 only if the court is reasonably satisfied that no party will be
22 irreparably damaged thereby. Increased energy cost for pumping
23 shall not be deemed irreparable damage. Provided, however, that
24 the provisions of this subparagraph will apply only if the
25 temporary shortage, threatened temporary shortage, or temporary
26 inability to deliver was either not reasonably avoidable by the
27 Metropolitan Water District, or if reasonably avoidable, good
28 reason existed for not taking the steps necessary to avoid it.

1 (f) To review actions of the Watermaster.

2 (g) To assist the remainder of the areas within The
3 Metropolitan Water District of Southern California within the
4 parameter set forth in subparagraph (e) above.

5 (h) To provide for such other matters as are not
6 contemplated by the judgment and which might occur in the future,
7 and which if not provided for would defeat any or all of the
8 purposes of this judgment to assure a balanced Central Basin
9 subject to the requirements of Central Basin Area for water
10 required for its needs, growth and development.

11 The exercise of such continuing jurisdiction shall be
12 after 30 days notice to the parties, with the exception of the
13 exercise of such continuing jurisdiction in relation to
14 subparagraphs (e) and (g) above, which may be ex parte, in which
15 event the matter shall be forthwith reviewed either upon the
16 Court's own motion or the motion of any party upon which 30 days
17 notice shall be so given. Within ten (10) days of obtaining any
18 ex parte order, the party so obtaining the same shall mail notice
19 thereof to the other parties. If any other party desires Court
20 review thereof, the party obtaining the ex parte order shall bear
21 the reasonable expenses of mailing notice of the proceedings, or
22 may in lieu thereof undertake the mailing. Any contrary or
23 modified decision upon such review shall not prejudice any party
24 who relied on said ex parte order.

25 V. GENERAL PROVISIONS.

26 1. Judgment Constitutes Inter Se Adjudication. This
27 judgment constitutes an inter se adjudication of the respective
28 rights of all parties, except as may be otherwise specifically

1 indicated in the listing of the rights of the parties at pages 12
2 through 52 of this judgment, or in Appendix "2" hereof.

3 2. Assignment, Transfer, Etc., of Rights. Subject to
4 the other provision of this judgment, and any rules and
5 regulations of the Watermaster requiring reports relative
6 thereto, nothing herein contained shall be deemed to prevent any
7 party hereto from assigning, transferring, licensing or leasing
8 all or any portion of such water rights as it may have with the
9 same force and effect as would otherwise be permissible under
10 applicable rules of law as exist from time to time.

11 3. Service Upon and Delivery to Parties of Various
12 Papers. Service of the judgment on those parties who have
13 executed that certain Stipulation and Agreement for Judgment or
14 who have filed a notice of election to be bound by the Exchange (
15 Pool provisions shall be made by first class mail, postage
16 prepaid, addressed to the designee and at the address designated
17 for that purpose in the executed and filed Counterpart of the
18 Stipulation and Agreement for Judgment or in the executed and
19 filed "Notice of Election to be Bound by Exchange Pool
20 Provisions", as the case may be, or in any substitute designation
21 filed with the Court.

22 Each party who has not heretofore made such a
23 designation shall, within 30 days after the judgment shall have
24 been served upon that party, file with the Court, with proof of
25 service of a copy upon the Watermaster, a written designation of
26 the person to whom and the address at which all future notices,
27 determinations, requests, demands, objections, reports and other
28

1 papers and processes to be served upon that party or delivered
2 that party are to be so served or delivered.

3 A later substitute designation filed and served in the
4 same manner by any party shall be effective from the date of
5 filing as to the then future notices, determinations, requests,
6 demands, objections, reports and other papers and processes to be
7 served upon or delivered to that party.

8 Delivery to or service upon any party by the
9 Watermaster, by any other party, or by the Court, or any item
10 required to be served upon or delivered to a party under or
11 pursuant to the judgment may be by deposit in the mail, first
12 class, postage, prepaid, addressed to the designee and at the
13 address in the latest designation filed by that party.

14 4. Judgment Does Not Affect Rights, Powers, Etc., of
15 Plaintiff District. Nothing herein constitutes a determination
16 or adjudication which shall foreclose Plaintiff District from
17 exercising such rights, powers, privileges and prerogatives as it
18 may now have or may hereafter have by reason of provisions of
19 law.

20 5. Continuation of Order Under Interim Agreement. The
21 order of Court made pursuant to the "Stipulation and Interim
22 Agreement and Petition for Order" shall remain in effect through
23 the water year in which this judgment shall become final (subject
24 to the reserved jurisdiction of the Court).

25 6. Effect of: Extractions by Exchangees; Reductions
26 in Extractions. With regard to Exchange Pool purchases, the
27 first extractions by each Exchangee shall be deemed the
28 extractions of the quantities of water which that party is

1 entitled to extract pursuant to his allocation from the Exchange
2 Pool for that Administrative year. Each Exchangee shall be
3 deemed to have pumped his Exchange Pool request so allocated for
4 and on behalf of each Exchangor in proportion to each Exchangor's
5 subscription to the Exchange Pool which is utilized to meet
6 Exchange Pool requests. No Exchangor shall ever be deemed to
7 have relinquished or lost any of its rights determined in this
8 judgment by reason of allocated subscriptions to the Exchange
9 Pool. Each Exchangee shall be responsible as between Exchangors
10 and that Exchangee, for any tax or assessment upon the production
11 or ground water levied for replenishment purposes by the Central
12 and West Basin Water Replenishment District or by any other
13 governmental agency with respect to water extracted by such
14 Exchangee by reason of Exchange Pool allocations and purchases. (
15 No Exchangor or Exchangee shall acquire any additional rights,
16 with respect to any party to this action, to extract waters from
17 Central Basin pursuant to Water Code Section 1005.1 by reason of
18 the obligations pursuant to and the operation of the Exchange
19 Pool.

20 7. Judgment Binding on Successors, Etc. This judgment
21 and all provisions thereof are applicable to and binding upon not
22 only the parties to this action, but as well to their respective
23 heirs, executors, administrators, successors, assigns, lessees,
24 licensees and to the agents, employees and attorneys in fact of
25 any such persons.

26 8. Costs. No party shall recover its costs herein as
27 against any other party.
28

1 c. Intervention of Successors in Interest and New
2 Parties. Any person who is not a party (including but not
3 limited to successors or parties who are bound by this judgment)
4 and who proposes to produce water from the basin or exercise
5 water rights of a predecessor may seek to become a party to this
6 Judgment through a Stipulation in Intervention entered into with
7 the Plaintiff. Plaintiff may execute said Stipulation on behalf
8 of the other parties herein, but such Stipulation shall not
9 preclude a party from opposing such intervention at the time of
10 the court hearing thereon. Said Stipulation for Intervention
11 must thereupon be filed with the Court, which will consider an
12 order confirming said intervention following thirty (30) days
13 notice to the parties. Thereafter, if approved by the Court,
14 such intervenor shall be a party bound by this Judgment and
15 entitled to the rights and privileges accorded under the physical
16 solution herein.

17 10. Effect of this Amended Judgment on Orders Filed
18 Herein. This Second Amended Judgment shall not abrogate such
19 rights of additional carry-over of unused water rights as may
20 otherwise exist pursuant to orders herein filed June 2, 1977 and
21 September 29, 1977.

22 THE CLERK WILL ENTER THIS SECOND AMENDED JUDGMENT FORTHWITH.

23

24 DATED: May 6, 1991

25

26

/s/ Florence T. Packard
Judge of the Superior Court

27

28

That certain area in the County of Los Angeles, State of California, situated within the following exterior boundaries:

1. Commencing at the southernmost corner of the basin at a point on the Los Angeles-Orange County boundary 2,000 feet, more or less, northeasterly of the intersection of the center line of Pacific Coast Highway with said County boundary;

2. Thence in a straight line along the trace of the Reservoir Hill Fault to a point about 650 feet north and about 700 feet east of the intersection of Anaheim Street and Ximeno Avenue;

3. Thence in a straight line along the trace of said Reservoir Hill Fault to a point on the center line of Pacific Coast Highway, 650 feet west of the intersection of the center lines of said Pacific Coast Highway and Lakewood Boulevard;

4. Thence westerly along the center line of said Pacific Coast Highway to a point 300 feet west of its intersection with the center line of Obispo Avenue;

5. Thence in a straight line to a point about 400 feet east of the intersection of the center lines of Walnut and Creston Avenues;

6. Thence in a straight line along the escarpment of the Cherry Hill Fault to a point about 750 feet west and about 730 feet south of the intersection of Wardlow Road and Long Beach Boulevard;

7. Thence in a straight line to a point about 100 feet north and about 100 feet west of the intersection of Bixby Road and Del Mar Avenue;

8. Thence in a straight line extending through a point in the center line of Del Amo Boulevard about 900 feet west of the center line of the Pacific

APPENDIX "1"

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Electric Railway to a point in the center line of Alameda Street about 2, 900 feet north of Del Amo Boulevard, the latter distance measured along the center line of Alameda Street;

9. Thence in a straight line along the crest of the Dominguez Hills to a point about 1, 300 feet north and about 850 feet west of the intersection of the center lines of Central Avenue and Victoria Street;

10. Thence in a straight line along the escarpment of the Avalon-Compton Fault to a point about 700 feet west of the intersection of the center lines of Avalon Boulevard and Rosecrans Avenue;

11. Thence in a straight line to a point 400 feet north of the intersection of El Segundo Boulevard and Vermont Avenue and continuing in another straight line to a point 2, 400 feet south and 1, 000 feet east of the intersection of the center lines of Crenshaw and Century Boulevards, the latter point being the approximate southeasterly end of the escarpment of the Potrero Fault;

12. Thence in a straight line along the escarpment of the Potrero Fault and continuing to a point on Northridge Drive about 200 feet northeasterly of its intersection with Marvale Drive, measured along the center line of Northridge Drive;

13. Thence in a straight line to a point on the center line of Stocker Street 1, 800 feet, more or less, northeasterly of the intersection of the center lines of Stocker Street and La Brea Avenue, measured along the center line of Stocker Street;

14. Thence easterly along said last mentioned center line and continuing along said center line, following the same in all its various courses and curves to its first intersection with the boundary line of said City of Los Angeles, being a boundary line in that certain annexation to the City of Los Angeles on April 22, 1948, designated Angeles Mesa Addition No. 5;

15. Thence southeasterly along said boundary line of the City of Los Angeles and continuing along the boundary line of said City of Los Angeles, following the same in all its various courses and curves, to an angle point in said boundary line of the City of Los Angeles being also an angle point in the boundary line of that certain territory annexed to the City of Los Angeles September 18, 1946 and known as Mesa Addition No. 3, said angle point being at the intersection of the southeasterly line of Stocker Avenue, 80 feet wide, as said Stocker Avenue is described in deed to the County of Los Angeles, recorded in Book 13445, page 197, of Official Records, in the office of said Recorder, with the westerly boundary line of that certain territory annexed to the City of Los Angeles July 27, 1922 and known as the Angeles Mesa Addition;

16. Thence northeasterly in a direct line to the intersection of the center line of Stocker Avenue, 80 feet wide, as shown on map of Tract No. 10023, recorded in Book 150, page 46, of Maps, in the office of said Recorder, with that certain center line of Crenshaw Boulevard, formerly Angeles Mesa Drive, 60 feet wide, shown on said map of Tract No. 10023 as the center line of Angeles Mesa Drive per book 6053, page 120, of Deeds;

17. Thence northerly along said certain center line of Crenshaw Boulevard, formerly Angeles Mesa Drive, 60 feet wide, to the southerly line of the northerly 30 feet of Santa Barbara Avenue, 75 feet wide, shown on said map of Tract No. 10023 as the line described in deed recorded in Book 347, page 35, of Official Records;

18. Thence easterly along said line shown on said map of Tract No. 10023 as the line described in deed recorded in Book 347, page 35, of Official Records, to the easterly terminus thereof as shown on said map;

19. Thence northerly in a direct line to the southwesterly corner of Lot 273, Tract No. 809, as shown on map recorded in Book 16, page 74, of Maps, in the office of said Recorder, said southwesterly corner of Lot 273 being a point on the northerly line of the north roadway, 30 feet wide, of Santa Barbara Avenue, as shown on said last mentioned map;

20. Thence easterly along said northerly line of the north roadway, 30 feet wide, of Santa Barbara Avenue, to the southeasterly corner of Lot 52 of said Tract No. 809;

21. Thence in a direct line to the southwesterly corner of Lot 280, Tract No. 4463, as shown on map recorded in Book 48, page 31, of Maps, in the office of said Recorder, said southwesterly corner of Lot 280 being a point in the northerly line of the north roadway of Santa Barbara Avenue as shown on said last mentioned map;

22. Thence easterly along said northerly line of the north roadway of Santa Barbara Avenue to the southeasterly corner of Lot 39 of said Tract No. 4463;

23. Thence continuing easterly along said northerly line of the north roadway of Santa Barbara Avenue to the westerly line of Western Avenue, 60 feet wide, as shown on said map of Tract No. 4463;

24. Thence easterly in a direct line to the intersection of the easterly line of Western Avenue, 60 feet wide, with the northerly line of the north roadway of Santa Barbara Avenue, as said intersection is shown on map of Tract No. 2583, recorded in Book 32, page 58, of Maps, in the office of said Recorder;

25. Thence easterly along said northerly line of the north roadway of Santa Barbara Avenue to its intersection with the westerly line of Denker Avenue, 60 feet wide, as shown on said map of Tract No. 2583;

26. Thence easterly in a direct line to the southwesterly corner of Lot 7 of Dalton Avenue Square as shown on map recorded in Book 14, page 116, of Maps, in the office of said Recorder, said southwesterly corner being a point in the northerly line of the north roadway, 20 feet wide, of Santa Barbara Avenue, as shown on said last mentioned map;

27. Thence easterly along said northerly line of the north roadway, 20 feet wide, of Santa Barbara Avenue, to the southeasterly corner of Lot 56 of said Dalton Avenue Square;

28. Thence easterly in a direct line to the intersection of the center line of Normandie Avenue, 60 feet wide, with the southerly line of the northerly 30 feet of the north roadway, 45 feet wide, of Santa Barbara Avenue, as said intersection is shown on map of Tract No. 11593, recorded in Book 247, page 42, of Maps, in the office of said Recorder;

29. Thence easterly along said southerly line of the northerly 30 feet of the north roadway, 45 feet wide, of Santa Barbara Avenue to the center line of Vermont Avenue, 80 feet wide, as shown on said map of Tract No. 11593;

30. Thence easterly in a direct line to the southwesterly corner of Lot 10, Tract No. 2411, as shown on map recorded in Book 26, Page 77, of Maps, in the office of said Recorder, said southwesterly corner of Lot 10 being a point on the northerly line of the north roadway of Santa Barbara Avenue, as shown on said last mentioned map;

31. Thence easterly along said northerly line of the north roadway of Santa Barbara Avenue to the southeasterly corner of Lot 7 of said Tract No. 2411;

32. Thence easterly in a direct line to the southwesterly corner of Lot 1, Block A of Tract No. 4719, as shown on map recorded in Book 52, page 48, of Maps, in the office of said Recorder, said southwesterly corner of Lot 1, Block A, being a point on the northerly line of the north roadway of Santa Barbara Avenue as shown on said last mentioned map;

33. Thence easterly along said northerly line of the north roadway of Santa Barbara Avenue to the southeasterly corner of Lot 1, Block B, of said Tract No. 4719;

34. Thence southeasterly in a direct line to the intersection of the center line of Figueroa Street, 100 feet wide, with the center line of Santa Barbara Avenue, 60 feet wide, as said intersection is shown on Map of Bowen and Chamberlin's Main and Figueroa Street Tract No. 2, recorded in Book 7, page 5, of Maps, in the office of said Recorder;

35. Thence easterly along said center line of Santa Barbara Avenue, 60 feet wide, as shown on said map of Bowen and Chamberlin's Main and Figueroa Street Tract No. 2, to the center line of Broadway Place, formerly Moneta Avenue, 76 feet wide, as shown on said last mentioned map;

36. Thence easterly along the northerly line of the southerly 30 feet of Santa Barbara Avenue as shown on map of Main Street Boulevard Tract, recorded in Book 5, page 32, of Maps, in the office of said Recorder, to the center line of Main Street, 80 feet wide, as shown on said last mentioned map;

37. Thence easterly along the center line of Santa Barbara Avenue, 60 feet wide, as shown on Map of South Woodlawn, recorded in Book 4, page 5, of Maps, in the office of said Recorder, to the southeasterly line of the northwesterly 40 feet of San Pedro Street, as shown on said last mentioned Map;

38. Thence along said southeasterly line of the northwesterly 40 feet of San Pedro Street as shown on said Map of South Woodlawn to the center line of Santa Barbara Avenue, formerly Defiance Street, 60 feet wide, as shown on map of the Mettler Tract, recorded in Book 6, page 50, of Maps, in the office of said Recorder;

39. Thence easterly along said center line of Santa Barbara Avenue, formerly Defiance Street, 60 feet wide, to the center line of Griffith Avenue, 60 feet wide, as said Griffith Avenue is shown on said map of the Mettler Tract;

40. Thence southeasterly in a direct line to the point of intersection of the westerly line of McKinley Avenue, formerly Eureka Street, with the westerly prolongation of the center line of Santa Barbara Avenue, formerly Reno Street, 60 feet wide, as said streets are shown on Map of the Nadeau Orange Tract, recorded in Book 25, page 34, of Miscellaneous Records, in the office of said Recorder;

41. Thence easterly along said westerly prolongation and along said center line of Santa Barbara Avenue, formerly Reno Street, 60 feet wide, as said street is shown on said Map of the Nadeau Orange Tract, and continuing easterly along the easterly prolongation of said center line to the easterly line of Central Avenue, 80 feet wide, as shown on Map of Lienau's

Cottage Home Tract, recorded in Book 28, page 48, of Miscellaneous Records, in the office of said Recorder;

42. Thence northerly along said easterly line of Central Avenue, 80 feet wide, as shown on said map of Lienau's Cottage Home Tract, to the northwesterly corner of Lot 11, Block 1, of said Lienau's Cottage Home Tract, said northwesterly corner of Lot 11 being a point on the southerly line of Santa Barbara Avenue, formerly Herbert Street, as shown on said last mentioned map;

43. Thence easterly along said southerly line of Santa Barbara Avenue, formerly Herbert Street, to the northeasterly corner of Lot 1, Block 1, of said Lienau's Cottage Home Tract;

44. Thence easterly in a direct line to the northwesterly corner of Lot 1 of the Oakley's Home Tract, as shown on map recorded in Book 5, page 18, of Maps, in the office of said Recorder, said northwesterly corner of Lot 1 being a point on the southerly line of Santa Barbara Avenue, formerly 36th Street, 60 feet wide, as shown on said last mentioned map;

45. Thence easterly along said southerly line of Santa Barbara Avenue, formerly 36th Street, 60 feet wide, as shown on said map of Oakley's Home Tract and continuing easterly along the easterly prolongation of said southerly line to the westerly line of that certain tract of land shown on Plat Showing the Property of George Stephenson, recorded in Book 53, page 31, of Miscellaneous Records, in the office of said Recorder;

46. Thence southerly along said westerly line of said certain tract of land shown on Plat Showing the Property of George Stephenson to the southerly line of said certain tract of land, said southerly line being shown on said Plat as having a bearing of S 81° E and a distance of 7.03 chains;

47. Thence easterly along said southerly line of said certain tract of land to the southeasterly line of said certain tract of land, said southeasterly line being shown on said Plat as having a bearing of N 25° E and a distance of 18.84 chains;

48. Thence northeasterly along said southeasterly line of said certain tract of land, being also along the northwesterly line of Compton Avenue, formerly Orange Street, 60 feet wide, as shown on said Plat, to the westerly prolongation of the center line of Santa Barbara Avenue, formerly 30th Street, 60 feet wide, as shown on map of the Deeble Tract, recorded in Book 9, page 188, of Maps, in the office of said Recorder;

49. Thence easterly along said westerly prolongation and along said center line of Santa Barbara Avenue, formerly 30th Street, 60 feet wide, as

shown on said map of the Deeble Tract, to the westerly line of The Morgan Tract, as shown on map recorded in Book 5, page 5, of Maps, in the office of said Recorder;

50. Thence easterly in a direct line to the point of intersection of the easterly line of said Morgan Tract with the center line of Santa Barbara Avenue, formerly 30th Street, 50 feet wide, as said street is shown on Map of East Jefferson Street Tract No. 2, recorded in Book 7, page 92, of Maps, in the office of said Recorder;

51. Thence easterly along said center line of Santa Barbara Avenue, formerly 30th Street, 50 feet wide, and continuing easterly along the easterly prolongation of said center line of Santa Barbara Avenue to the east line of the west roadway, 40 feet wide, of Long Beach Avenue as shown on said map of East Jefferson Street Tract No. 2;

52. Thence easterly in a direct line to the point of intersection of the westerly line of the east roadway, 40 feet wide, of Long Beach Avenue as shown on Map of East Jefferson Street Tract No. 1, recorded in Book 7, page 113, of Maps, in the office of said Recorder, with the westerly prolongation of the center line of Santa Barbara Avenue, formerly 30th Street, 50 feet wide, as said street is shown on said last mentioned Map;

53. Thence easterly along said westerly prolongation and along said center line of Santa Barbara Avenue, formerly 30th Street, 50 feet wide, and continuing easterly along the easterly prolongation of said center line to the first intersection with the boundary line of the City of Los Angeles, said intersection being in Alameda Street;

54. Thence northerly and easterly along said boundary line of the City of Los Angeles to the easterly line of Alameda Street, 80 feet wide, as shown on map of Huntington Industrial Tract recorded in Book 6, page 10, of Maps, in the office of said Recorder;

55. Thence northerly along said easterly line of Alameda Street, 80 feet wide, as shown on said map of Huntington Industrial Tract to the north-westerly corner of Block A of said Huntington Industrial Tract;

56. Thence in a direct line to the southeasterly corner of Lot 73 of the Weiss Tract No. 2, as shown on map recorded in Book 2, page 42, of Maps, in the office of said Recorder, said southeasterly corner of Lot 73 being a point on the westerly line of Alameda Street, 80 feet wide, as shown on said last mentioned map;

57. Thence northerly along said westerly line of Alameda Street, 80 feet wide, to the northeasterly corner of Lot 62 of said Weiss Tract No. 2.

58. Thence northerly in a direct line to the southeasterly corner of Lot 189, Block A, of the Meade and Dalton Tract, as shown on map recorded in Book 37, page 50, of Miscellaneous Records, in the office of said Recorder, said southeasterly corner of Lot 189 being a point on the westerly line of Alameda Street, 80 feet wide, as shown on said last mentioned map;

59. Thence northerly along said westerly line of Alameda Street, 80 feet wide, to the northeasterly corner of Lot 1, Block A, of said Meade and Dalton Tract;

60. Thence easterly along the easterly prolongation of the northerly line of said Lot 1, Block A, of the Meade and Dalton Tract to the easterly line of Alameda Street, 80 feet wide, as shown on map of the Central Industrial Tract, recorded in Book 4, page 21, of Maps, in the office of said Recorder;

61. Thence northerly along said easterly line of Alameda Street, 80 feet wide, to the northwesterly corner of said Central Industrial Tract;

62. Thence continuing northerly along the easterly line of Alameda Street, 80 feet wide, as shown on map of the Hughes Manufacturing Co.'s Tract, recorded in Book 7, page 105, of Maps, in the office of said Recorder, to the southwesterly corner of Lot 7, Block A, of Ninth Street Tract Extension, as shown on map recorded in Book 55, page 89, of Miscellaneous Records, in the office of said Recorder;

63. Thence continuing northerly along the easterly line of Alameda Street as shown on said map of Ninth Street Tract Extension to northwesterly corner of Lot 1, Block A, of said Ninth Street Extension, said northwesterly corner of Lot 1 being a point on the easterly line of Alameda Street as shown on map of H. N. Elliott's Ninth Street Tract, recorded in Book 53, page 98, of Miscellaneous Records, in the office of said Recorder;

64. Thence continuing northerly along said easterly line of Alameda Street as shown on said map of H. N. Elliott's Ninth Street Tract and continuing northerly along the northerly prolongation of said easterly line to that certain line designated City Engineer's center line of Olympic Boulevard on map of Tract No. 11512, recorded in Book 221, page 29, of Maps, in the office of said Recorder;

65. Thence easterly along said certain line designated City Engineer's center line of Olympic Boulevard to the intersection with the center line of **Mateo Street**, as shown on said map of Tract No. 11512, said intersection being also shown on map of Tract No. 10068, recorded in Book 141, page 44, of Maps, in the office of said Recorder, as the intersection of the city center lines of Mateo Street, 60 feet wide, and Olympic Boulevard, formerly Ninth Street, 80 feet wide;

66. Thence continuing easterly along said city center line of Olympic Boulevard, formerly Ninth Street, 80 feet wide, to the intersection with the westerly prolongation of that certain center line of Olympic Boulevard shown on map filed in Book 52, page 5, of Record of Surveys, in the office of said Recorder, as having a bearing of North $89^{\circ} 33' 00''$ West;

67. Thence easterly along said westerly prolongation and continuing easterly along said certain center line of Olympic Boulevard, shown on said map filed in Book 52, page 5, of Record of Surveys, as having a bearing of North $89^{\circ} 33' 00''$ West, to the westerly line of the Official Bed of the Los Angeles River, as shown on said last mentioned map;

68. Thence easterly in a direct line to a point on the easterly line of the Official Bed of the Los Angeles River as shown on map of Tract No. 12316, recorded in Book 263, page 5, of Maps, in the office of said Recorder, said point being at the westerly terminus of that certain course of the center line of Olympic Boulevard shown on said last mentioned map as having a bearing of North $89^{\circ} 21'$ West and a distance of 214.13 feet;

69. Thence easterly along said center line of Olympic Boulevard and continuing easterly along the center line of Olympic Boulevard as shown on said map of Tract No. 12316 to the intersection with the center line of that portion of Rio Vista Avenue, 60 feet wide, extending northerly from said Olympic Boulevard, as shown on said map of Tract No. 12316, said intersection being also shown on map of Tract No. 6783 recorded in Book 99, page 77, of Maps, in the office of said Recorder, as the intersection of Olympic Boulevard, formerly Ninth Street, 100 feet wide, with said center line of Rio Vista Avenue;

70. Thence southeasterly along said center line of Olympic Boulevard, formerly Ninth Street, 100 feet wide, and continuing southeasterly along said center line to the intersection with the center line of Mines Avenue, as shown on said map of Tract No. 6783;

71. Thence easterly along said center line of Olympic Boulevard to the intersection with the center line of Lorena Street, 82.50 feet wide, as shown on said map of Tract No. 6783;

72. Thence easterly in a direct line to the most westerly corner of Lot 636 of Tract No. 941, as shown on map recorded in Book 16, pages 194 and 195, of Maps, in the office of said Recorder, said most westerly corner being a point on the southerly boundary line of said Tract No. 941;

73. Thence easterly along said southerly boundary line of Tract No. 941 to the most easterly corner of Lot 480 of said Tract No. 941;

74. Thence easterly in a direct line to the intersection of the northeasterly line of Hollenbeck Avenue, 82.50 feet wide, as shown on said map of Tract No. 941, with the southerly boundary line of said Tract No. 941;

75. Thence easterly along said last mentioned southerly boundary line of Tract No. 941 to the boundary line of the City of Los Angeles;

76. Thence northerly and easterly along the boundary line of the City of Los Angeles to an angle point in the boundary line, said point also being a point in the boundary of the City of Monterey Park, at the northwest corner of Section 29, Township 1 South, Range 12 West, S.B.B. & M.;

77. Thence southerly along the boundary line of said City of Monterey Park and continuing along the boundary line of said City of Monterey Park, following all its various courses and curves, to its first intersection with the boundary line of the City of Montebello, said intersection being in Pomona Boulevard (formerly Third Street) between Gerhart Avenue and Bradshaw Avenue, at the north quarter section corner of fractional Section 4, Township 2 South, Range 12 West, S.B.B. & M., as shown on map of the Repetto Rancho recorded in Book 759, pages 21 and 22, of Deeds, in the Office of the Recorder of the County of Los Angeles;

78. Thence easterly along the common boundary line of said City of Monterey Park and said City of Montebello to the easterly terminus of said common boundary line, said easterly terminus being at the intersection of said common boundary line with the southwesterly line of Rancho La Merced, as shown on map recorded in Book 13, page 24, of Patents, in the office of said Recorder, and being in the south line of Township 1 South, Range 12 West, S.B.B. & M.;

79. Thence easterly along the boundary line of said City of Monterey Park and said south line of Township 1 South, Range 12 West, S.B.B. & M., to an angle point in said boundary line of the City of Monterey Park;

80. Thence easterly along said south line of Township 1 South, Range 12 West, S.B.B. & M., to the easterly line of Tract No. 10063 as shown on map recorded in Book 179, pages 32 to 34, inclusive, of Maps, in the office of said Recorder;

81. Thence southerly along said easterly line of Tract No. 10063 to its first intersection with the boundary line of said City of Montebello;

82. Thence easterly along the boundary line of said City of Montebello and continuing along the boundary line of said City of Montebello, following all its various courses and curves, to its intersection with the Compromised Dividing Line between the Rancho Paso de Bartolo on the South Side and the Ranchos La Puente, Potrero de Felipe Lugo and La Merced on the North Side, as shown on map filed in Book 1, page 73, Record of Surveys, in the office of said Recorder;

83. Thence easterly along said Compromised Dividing Line to a point thereon, distant 1068.62 feet westerly, measured along said Compromised Dividing Line, from the center line of Cate Road (now Durfee Avenue), 40 feet wide, as described in deed to the County of Los Angeles, recorded in Book 1207, page 74, of Deeds, in the office of said Recorder;

84. Thence easterly in a direct line to the point of intersection of said center line of Cate Road (now Durfee Avenue), with a line bearing South $86^{\circ} 40' 44''$ West from a point in the northwesterly line of Lot 12, Tract No. 688, as shown on map recorded in Book 15, page 171, of Maps, in the office of said Recorder, said last mentioned point being distant North $24^{\circ} 55' 13''$ East 556.72 feet, measured along said northwesterly line of Lot 12, from the southwesterly corner of said Lot 12;

85. Thence North $86^{\circ} 40' 44''$ East 2759.06 feet, more or less, to the northwesterly prolongation of the northeasterly line of Parcel 1 of land described in deed to Walter G. Kruse, et ux., recorded in Book 25982, page 70, of Official Records, in the office of said Recorder;

86. Thence easterly in a direct line to an angle point in the southerly line of Lot 11, of aforementioned Tract No. 688, from which angle point the most westerly corner of said Lot 11 is shown on said map of Tract No. 688 to be distant 453.30 feet S. $68^{\circ} 51'-1/2'$ W., measured along said southerly line of Lot 11;

87. Thence southerly in a direct line to an angle point in the northwesterly line of Lot 1, Cohn's Partition of Lots 26, 27, 29 and 32 as shown on map recorded in Book 60, pages 3 and 4, of Miscellaneous Records, in the office of said Recorder, said last mentioned angle point being shown on said map of Cohn's Partition of Lots 26, 27, 29 and 32 to be located as follows:

Beginning at the most westerly corner of said Lot 1; thence, N. 49° 52' E. 9.00 chains; thence N. 23° 13' E. 5.09 chains to said last mentioned angle point;

88. Thence southwesterly along said northwesterly line of Lot 1 to said most westerly corner of Lot 1, said most westerly corner also being the most northerly corner of Lot 2 of said Cohn's Partition of Lots 26, 27, 29 and 32;

89. Thence southwesterly along the northwesterly line of said Lot 2 and continuing along the line of said Lot 2, following all its various courses, to the most westerly corner of Lot 7, of said Cohn's Partition of Lots 26, 27, 29 and 32;

90. Thence southerly along the westerly line of said Lot 7 and continuing along the southerly prolongation of said westerly line of Lot 7 to the easterly prolongation of the center line of Guirado Street, 40 feet wide, (now Pioneer Boulevard) as shown on map of Tract No. 3584, recorded in Book 38, page 70, of Maps, in the office of said Recorder;

91. Thence along said easterly prolongation of the center line of Guirado Street, 40 feet wide, (now Pioneer Boulevard), to the center line of Workman Mill Road as described in deed to the County of Los Angeles recorded in Book 12367, page 75, of Official Records, in the office of said Recorder;

92. Thence southerly along said center line of Workman Mill Road, following all its various courses and curves, to the northerly terminus of that certain course having a bearing of N. 6° 10' 15" E. in the center line of Workman Mill Road, as shown on map of Tract No. 6041 recorded in Book 180, pages 12 to 14, inclusive, of Maps, in the office of said Recorder;

93. Thence southerly along the center line of Workman Mill Road as shown on said map of Tract No. 6041 and as shown on map of Tract No. 14971, recorded in Book 341, pages 5 to 10 inclusive, of Maps, in the office of said Recorder, to the westerly prolongation of the northerly line of Lot 3, shown on said map of Tract No. 14971 as having a bearing and length of S. 83° 49' 45" E., 221.86 feet, said northerly line of Lot 3 also being in the northerly boundary line of said Tract 14971;

94. Thence easterly along said westerly prolongation, said northerly line of Lot 3 and said northerly boundary line of Tract No. 14971 and continuing along the boundary line of said Tract No. 14971, following all its various courses, to the westerly line of Lot 24, of Cohn's Partition of Lot 31, as shown on map recorded in Book 60, page 6, of Miscellaneous Records, in the office of said Recorder;

95. Thence northerly along said westerly line of Lot 24 to the westerly prolongation of the north line of Section 16, Township 2 South, Range 11 West, S.B.B. U M.;

96. Thence easterly along said westerly prolongation and along the north line of said Section 16, to the northeast corner of said Section 16;

97. Thence southerly in a direct line to the northeasterly corner of the City of Whittier, said northeasterly corner being also the northeasterly corner of that certain annexation to said City of Whittier designated Annexation of 1907;

98. Thence southerly along the boundary line of said City of Whittier to its intersection with the north line, or its westerly prolongation, of Section 22, said last mentioned Township and Range;

99. Thence easterly along said north line of Section 22, or along said westerly prolongation and said north line of Section 22, to the northeast corner of said Section 22;

100. Thence southerly along the east line of said Section 22 to the west quarter corner of Section 23, said last mentioned Township and Range;

101. Thence easterly along the east and west quarter section lines of said Section 23 to the east quarter corner of said Section 23;

102. Thence southerly along the east line of said Section 23 to the northwest corner of Section 25, said last mentioned Township and Range;

103. Thence easterly along the north line of said Section 25 to the westerly line of Tract No. 2390 as shown on map recorded in Book 23, page 29, of Maps, in the office of said Recorder;

104. Thence northerly along said westerly line of Tract No. 2390, to the northwesterly corner of said Tract;

105. Thence easterly along the northerly line of said Tract No. 2390 to the northeasterly corner of said Tract;

106. Thence southerly along the easterly line of said Tract No. 2390 to the southeasterly corner of said Tract, said corner also being in northerly line of Lot 3 of the New England Oil Company Tract, as shown on map recorded in Book 17, page 131, of Maps, in the office of said Recorder;

107. Thence easterly and southerly along the northerly and easterly lines of said Lot 3 to the southeasterly corner of said Lot 3, said corner also being in the southerly line of said New England Oil Company Tract;

108. Thence easterly and northerly along the southerly and easterly lines of said New England Oil Company Tract to the northeasterly corner of Lot 13 of said last mentioned Tract, said northeasterly corner also being in the southerly line of Lot 5, Tract No. 4380, as shown on map recorded in Book 48, pages 46 and 47, of Maps, in the office of said Recorder;

109. Thence easterly along said southerly line of Lot 5 to the southeasterly corner of said Lot 5;

110. Thence easterly in a direct line to the southwesterly corner of Lot 2, Tract No. 3422, as shown on map recorded in Book 37, page 51, of Maps, in the office of said Recorder;

111. Thence easterly along the southerly line of said Lot 2, to the easterly line of Rancho La Habra, as shown on map recorded in Book 1, pages 275 and 276, of Patents, in the office of said Recorder;

112. Thence southerly along said easterly line of Rancho La Habra to its intersection with the southerly boundary line of the County of Los Angeles;

113. Thence westerly along said southerly boundary line of the County of Los Angeles and continuing along the boundary line of said County of Los Angeles, following all its various courses and curves to the point of beginning.

The boundary line of the County of Los Angeles and the boundary line of the City of Los Angeles referred to herein, except where otherwise expressly designated, are such boundary lines as the same existed at 12:00 noon on October 31, 1958.

Appendix G

Summary of Population Based on Census Data

Appendix G-1: Census Tracts within the Artesia System

County	Subregion	City	Census Tract	Percentage of Tract in System
Orange	Orange County	Los Alamitos city	110117	4%
Los Angeles	Gateway Cities	Cerritos city	554515	4%
Los Angeles	Gateway Cities	Artesia city	554801	72%
Los Angeles	Gateway Cities	Artesia city	554802	100%
Los Angeles	Gateway Cities	Artesia city	554900	86%
Los Angeles	Gateway Cities	Lakewood city	555001	100%
Los Angeles	Gateway Cities	Lakewood city	555002	100%
Los Angeles	Gateway Cities	Hawaiian Gardens city	555102	100%
Los Angeles	Gateway Cities	Lakewood city	555102	100%
Los Angeles	Gateway Cities	Lakewood city	555103	100%
Los Angeles	Gateway Cities	Unincorporated	555103	100%
Los Angeles	Gateway Cities	Hawaiian Gardens city	555104	100%
Los Angeles	Gateway Cities	Lakewood city	555104	100%
Los Angeles	Gateway Cities	Long Beach city	555202	42%
Los Angeles	Gateway Cities	Hawaiian Gardens city	555211	100%
Los Angeles	Gateway Cities	Hawaiian Gardens city	555212	100%

Urban Water Management Plan
Artesia System

Table G-2: Population, Household and Employment Projections for Artesia System

Census Tract	County	Subregion	City	Population							Percentage of Tract in System
				2005	2010	2015	2020	2025	2030	2035	
110117	Orange	Orange County	Los Alamitos city	117	123	124	125	126	127	127	4%
554515	Los Angeles	Gateway Cities	Cerritos city	3,877	3,877	3,879	3,886	3,893	3,899	3,904	4%
554801	Los Angeles	Gateway Cities	Artesia city	3,816	3,826	3,831	3,838	3,844	3,850	3,856	72%
554802	Los Angeles	Gateway Cities	Artesia city	6,632	6,801	6,864	6,935	7,002	7,065	7,125	100%
554900	Los Angeles	Gateway Cities	Artesia city	6,907	6,907	6,911	6,931	6,949	6,966	6,982	86%
555001	Los Angeles	Gateway Cities	Lakewood city	5,860	5,917	5,938	5,942	5,943	5,943	5,943	100%
555002	Los Angeles	Gateway Cities	Lakewood city	3,667	3,701	3,713	3,715	3,716	3,716	3,716	100%
555102	Los Angeles	Gateway Cities	Hawaiian Gardens city	2,249	2,289	2,317	2,348	2,379	2,408	2,436	100%
555102	Los Angeles	Gateway Cities	Lakewood city	4,751	4,821	4,845	4,850	4,850	4,851	4,851	100%
555103	Los Angeles	Gateway Cities	Lakewood city	5,093	5,150	5,171	5,175	5,176	5,176	5,176	100%
555103	Los Angeles	Gateway Cities	Unincorporated	1	1	2	3	4	5	6	100%
555104	Los Angeles	Gateway Cities	Hawaiian Gardens city	1,959	2,008	2,041	2,076	2,110	2,143	2,175	100%
555104	Los Angeles	Gateway Cities	Lakewood city	2,550	2,570	2,577	2,579	2,579	2,579	2,580	100%
555202	Los Angeles	Gateway Cities	Long Beach city	3,538	3,634	3,732	3,834	3,934	4,030	4,121	42%
555211	Los Angeles	Gateway Cities	Hawaiian Gardens city	6,829	7,000	7,115	7,238	7,357	7,471	7,581	100%
555212	Los Angeles	Gateway Cities	Hawaiian Gardens city	4,775	4,891	4,969	5,053	5,134	5,212	5,286	100%
Total Population Based on SCAG				54,699	55,530	55,981	56,409	56,807	57,185	57,548	
SCAG Growth Rate						1%	1%	1%	1%	1%	

Census Tract	County	Subregion	City	Households							Percentage of Tract in System
				2005	2010	2015	2020	2025	2030	2035	
110117	Orange	Orange County	Los Alamitos city	36	36	36	36	36	36	36	4%
554515	Los Angeles	Gateway Cities	Cerritos city	1,068	1,070	1,073	1,076	1,078	1,080	1,082	4%
554801	Los Angeles	Gateway Cities	Artesia city	776	787	798	811	820	829	837	72%
554802	Los Angeles	Gateway Cities	Artesia city	1,708	1,734	1,757	1,783	1,803	1,822	1,838	100%
554900	Los Angeles	Gateway Cities	Artesia city	2,050	2,086	2,119	2,153	2,180	2,206	2,227	86%
555001	Los Angeles	Gateway Cities	Lakewood city	1,542	1,563	1,581	1,596	1,602	1,610	1,614	100%
555002	Los Angeles	Gateway Cities	Lakewood city	1,129	1,150	1,166	1,182	1,185	1,194	1,198	100%
555102	Los Angeles	Gateway Cities	Hawaiian Gardens city	652	667	682	698	711	723	733	100%
555102	Los Angeles	Gateway Cities	Lakewood city	1,251	1,273	1,291	1,306	1,311	1,320	1,324	100%
555103	Los Angeles	Gateway Cities	Lakewood city	1,461	1,486	1,506	1,524	1,529	1,539	1,544	100%
555103	Los Angeles	Gateway Cities	Unincorporated	0	0	0	0	1	1	1	100%
555104	Los Angeles	Gateway Cities	Hawaiian Gardens city	468	479	489	500	508	516	523	100%
555104	Los Angeles	Gateway Cities	Lakewood city	853	865	876	885	888	894	896	100%
555202	Los Angeles	Gateway Cities	Long Beach city	1,164	1,189	1,222	1,255	1,281	1,306	1,327	42%
555211	Los Angeles	Gateway Cities	Hawaiian Gardens city	1,287	1,314	1,339	1,366	1,386	1,406	1,422	100%
555212	Los Angeles	Gateway Cities	Hawaiian Gardens city	1,179	1,204	1,227	1,252	1,271	1,290	1,305	100%
Total Population Based on SCAG				14,385	14,639	14,869	15,099	15,243	15,402	15,518	
SCAG Growth Rate						2%	2%	1%	1%	1%	

Census Tract	County	Subregion	City	Employment							Percentage of Tract in System
				2005	2010	2015	2020	2025	2030	2035	
110117	Orange	Orange County	Los Alamitos city	15	16	16	19	19	19	19	4%
554515	Los Angeles	Gateway Cities	Cerritos city	825	850	870	883	898	914	929	4%
554801	Los Angeles	Gateway Cities	Artesia city	1,495	1,538	1,572	1,594	1,620	1,648	1,675	72%
554802	Los Angeles	Gateway Cities	Artesia city	1,992	2,057	2,109	2,142	2,181	2,222	2,262	100%
554900	Los Angeles	Gateway Cities	Artesia city	2,310	2,380	2,435	2,470	2,511	2,556	2,598	86%
555001	Los Angeles	Gateway Cities	Lakewood city	262	276	289	297	307	318	329	100%
555002	Los Angeles	Gateway Cities	Lakewood city	304	306	307	308	308	309	310	100%
555102	Los Angeles	Gateway Cities	Hawaiian Gardens city	1,255	1,305	1,346	1,375	1,410	1,447	1,482	100%
555102	Los Angeles	Gateway Cities	Lakewood city	582	611	634	646	660	675	690	100%
555103	Los Angeles	Gateway Cities	Lakewood city	139	152	162	168	174	181	187	100%
555103	Los Angeles	Gateway Cities	Unincorporated	69	76	81	85	89	93	98	100%
555104	Los Angeles	Gateway Cities	Hawaiian Gardens city	406	413	419	422	426	431	435	100%
555104	Los Angeles	Gateway Cities	Lakewood city	304	310	314	316	319	322	325	100%
555202	Los Angeles	Gateway Cities	Long Beach city	264	285	301	311	323	336	348	42%
555211	Los Angeles	Gateway Cities	Hawaiian Gardens city	765	800	825	840	857	875	892	100%
555212	Los Angeles	Gateway Cities	Hawaiian Gardens city	341	358	371	379	387	396	405	100%
Total Population Based on SCAG				9,626	9,973	10,245	10,417	10,616	10,832	11,039	
SCAG Growth Rate						3%	2%	2%	2%	2%	

Appendix H

Documentation of submittal to Library, Cities and Counties



**Golden State
Water Company**

A Subsidiary of American States Water Company

September 30, 2011

Peter Brostrom, Department of Water Resources
Statewide Integrated Water Management
Water Use and Efficiency Branch
901 P Street
Sacramento, CA 95814

Subject: Submittal of the Golden State Water Company (GSWC) 2010 Urban Water Management Plans (UWMPs) – Artesia, Norwalk, Bell-Bell Gardens, Florence Graham, and Claremont Systems

Dear Mr. Brostrom:

This transmittal letter submits the GSWC 2010 UWMPs for the following systems: – Artesia, Norwalk, Bell-Bell Gardens, Florence Graham, and Claremont

GSWC prepared these UWMPs consistent with the Water Conservation Act of 2009 (Water Code sections 10608.12 to 10608.64) and the Urban Water Management Planning Act (Water Code sections 10610 to 10656).

GSWC adopted the UWMPs on August 31, 2011. Pursuant to California Water Code Sections 10620(d) and 10644, enclosed are one hard copy and one PDF version of the GSWC 2010 UWMPs for the – Artesia, Norwalk, Bell-Bell Gardens, Florence Graham, and Claremont Systems.

Please contact me at (916) 853-3612 or at eagisler@gswater.com with any questions on the 2010 GSWC Urban Water Management Plans.

Very truly yours,

GOLDEN STATE WATER COMPANY

Ernest A. Gisler
Planning Manager



**Golden State
Water Company**

A Subsidiary of American States Water Company

September 30, 2011

California State Library
Government Publications Section
900 N Street
Sacramento, CA 95814

Subject: Submittal of the Golden State Water Company (GSWC) 2010 Urban Water Management Plans (UWMPs) — Artesia, Norwalk, Bell-Bell Gardens, Florence Graham, and Claremont Systems

To Whom It May Concern:

This transmittal letter submits the GSWC 2010 UWMPs for the – Artesia, Norwalk, Bell-Bell Gardens, Florence Graham, and Claremont Systems

GSWC prepared these UWMPs consistent with the Water Conservation Act of 2009 (Water Code sections 10608.12 to 10608.64) and the Urban Water Management Planning Act (Water Code sections 10610 to 10656).

GSWC adopted the UWMPs on August 31, 2011. Pursuant to California Water Code Sections 10620(d) and 10644, enclosed is one PDF version of the GSWC 2010 UWMPs for Artesia, Norwalk, Bell-Bell Gardens, Florence Graham, and Claremont Systems.

Please contact me at (916) 853-3612 or at eagisler@gswater.com with any questions on the 2010 GSWC Urban Water Management Plans.

Very truly yours,

GOLDEN STATE WATER COMPANY

Ernest A. Gisler
Planning Manager



**Golden State
Water Company**

A Subsidiary of American States Water Company

September 30, 2011

City of Hawaiian Gardens
Joseph Colombo
Planning & Community Development Director
21815 South Pioneer Blvd.
Hawaiian Gardens, CA 90716

RE: Golden State Water Company- 2010 Urban Water Management Plan

Golden State Water Company (GSWC) adopted the 2010 Urban Water Management Plan (UWMP) following a public hearing on September 14, 2011. The 2010 UWMP was adopted, September 26, 2011, in accordance with the Urban Water Management Planning Act and filed with DWR and the California State Library.

Pursuant to Section 10644(a) of the California Water Code, GSWC is required to file a copy of the adopted 2010 UWMP with any city or county within which GSWC provided water. Enclosed for your files is one copy of GSWC's adopted 2010 UWMP. It is also on our website at www.gswater.com.

If you have any questions you can contact me at (916) 853-3612.

Sincerely,
GOLDEN STATE WATER COMPANY

Ernest A. Gisler
Planning Manager

Enclosure



**Golden State
Water Company**

A Subsidiary of American States Water Company

September 30, 2011

City of Artesia
Okina Dor
Redevelopment & Planning Director
18747 Clarksdale Avenue
Artesia, CA 90701

RE: Golden State Water Company- 2010 Urban Water Management Plan

Golden State Water Company (GSWC) adopted the 2010 Urban Water Management Plan (UWMP) following a public hearing on September 14, 2011. The 2010 UWMP was adopted, September 26, 2011, in accordance with the Urban Water Management Planning Act and filed with DWR and the California State Library.

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If you have any questions you can contact me at (916) 853-3612.

Sincerely,
GOLDEN STATE WATER COMPANY

Ernest A. Gisler
Planning Manager

Enclosure



Golden State Water Company

A Subsidiary of American States Water Company

September 30, 2011

City of Lakewood
Sonia Southwell
Planning Department Director
5050 Clark Avenue
Lakewood, CA 90712

RE: Golden State Water Company- 2010 Urban Water Management Plan

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If you have any questions you can contact me at (916) 853-3612.

Sincerely,
GOLDEN STATE WATER COMPANY

Ernest A. Gisler
Planning Manager

Enclosure



Golden State
Water Company

A Subsidiary of American States Water Company

September 30, 2011

City of La Mirada
Rubin Arceo
Director of Community Development
13700 La Mirada Blvd.
La Mirada, CA 90638

RE: Golden State Water Company- 2010 Urban Water Management Plan

Golden State Water Company (GSWC) adopted the 2010 Urban Water Management Plan (UWMP) following a public hearing on September 14, 2011. The 2010 UWMP was adopted, September 26, 2011, in accordance with the Urban Water Management Planning Act and filed with DWR and the California State Library.

Pursuant to Section 10644(a) of the California Water Code, GSWC is required to file a copy of the adopted 2010 UWMP with any city or county within which GSWC provided water. Enclosed for your files is one copy of GSWC's adopted 2010 UWMP. It is also on our website at www.gswater.com.

If you have any questions you can contact me at (916) 853-3612.

Sincerely,
GOLDEN STATE WATER COMPANY

Ernest A. Gisler
Planning Manager

Enclosure



**Golden State
Water Company**

A Subsidiary of American States Water Company

September 30, 2011

City of Long Beach
Suzanne Frick
Building and Planning Director
1800 E. Wardlow Road
Long Beach, CA 90807

RE: Golden State Water Company- 2010 Urban Water Management Plan

Golden State Water Company (GSWC) adopted the 2010 Urban Water Management Plan (UWMP) following a public hearing on September 14, 2011. The 2010 UWMP was adopted, September 26, 2011, in accordance with the Urban Water Management Planning Act and filed with DWR and the California State Library.

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If you have any questions you can contact me at (916) 853-3612.

Sincerely,
GOLDEN STATE WATER COMPANY

Ernest A. Gisler
Planning Manager

Enclosure



Golden State
Water Company

A Subsidiary of American States Water Company

September 30, 2011

City of Norwalk
Kurt Anderson
Community Development Director
12650 Imperial Highway
Norwalk, CA 90650

RE: Golden State Water Company- 2010 Urban Water Management Plan

Golden State Water Company (GSWC) adopted the 2010 Urban Water Management Plan (UWMP) following a public hearing on September 14, 2011. The 2010 UWMP was adopted, September 26, 2011, in accordance with the Urban Water Management Planning Act and filed with DWR and the California State Library.

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If you have any questions you can contact me at (916) 853-3612.

Sincerely,
GOLDEN STATE WATER COMPANY

Ernest A. Gisler
Planning Manager

Enclosure



**Golden State
Water Company**

A Subsidiary of American States Water Company

September 30, 2011

City of Santa Fe Springs
Robert Orpin
Director of Planning and Development
11710 Telegraph Road
Santa Fe Springs, CA 90670

RE: Golden State Water Company- 2010 Urban Water Management Plan

Golden State Water Company (GSWC) adopted the 2010 Urban Water Management Plan (UWMP) following a public hearing on September 14, 2011. The 2010 UWMP was adopted, September 26, 2011, in accordance with the Urban Water Management Planning Act and filed with DWR and the California State Library.

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If you have any questions you can contact me at (916) 853-3612.

Sincerely,
GOLDEN STATE WATER COMPANY

Ernest A. Gisler
Planning Manager

Enclosure



Golden State
Water Company

A Subsidiary of American States Water Company

September 30, 2011

Country of Los Angeles
Richard Brudckner
Director Department of Regional Planning
320 West Temple Street
Los Angeles, CA 90012

RE: Golden State Water Company- 2010 Urban Water Management Plan

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Pursuant to Section 10644(a) of the California Water Code, GSWC is required to file a copy of the adopted 2010 UWMP with any city or county within which GSWC provided water. Enclosed for your files is one copy of GSWC's adopted 2010 UWMP. It is also on our website at www.gswater.com.

If you have any questions you can contact me at (916) 853-3612.

Sincerely,
GOLDEN STATE WATER COMPANY

Ernest A. Gisler
Planning Manager

Enclosure



**Golden State
Water Company**

A Subsidiary of American States Water Company

September 30, 2011

City of Santa Fe Springs
Robert Orpin
Director of Planning and Development
11710 Telegraph Road
Santa Fe Springs, CA 90670

RE: Golden State Water Company- 2010 Urban Water Management Plan

Golden State Water Company (GSWC) adopted the 2010 Urban Water Management Plan (UWMP) following a public hearing on September 14, 2011. The 2010 UWMP was adopted, September 26, 2011, in accordance with the Urban Water Management Planning Act and filed with DWR and the California State Library.

Pursuant to Section 10644(a) of the California Water Code, GSWC is required to file a copy of the adopted 2010 UWMP with any city or county within which GSWC provided water. Enclosed for your files is one copy of GSWC's adopted 2010 UWMP. It is also on our website at www.gswater.com.

If you have any questions you can contact me at (916) 853-3612.

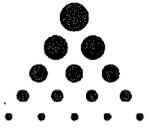
Sincerely,
GOLDEN STATE WATER COMPANY

Ernest A. Gisler
Planning Manager

Enclosure

Appendix I

Documentation of Water Use Projections Submittal



Golden State
Water Company
A Subsidiary of American States Water Company

11 February 2011

Mr. Dave Hill
Water Resource Manager
Central Basin Municipal Water District
6252 Telegraph Road
Commerce, CA 90040

Subject: Golden State Water Company - Artesia, Bell - Bell Gardens, Florence - Graham, Norwalk, and Southwest System
2010 Urban Water Management Plan Preparation Notification and Supply Reliability Information Request

Dear Mr. Hill:

Golden State Water Company (GSWC) is currently preparing its 2010 Urban Water Management Plan (UWMP) for the Artesia, Bell - Bell Gardens, Florence - Graham, Norwalk, and Southwest System as required by the Urban Water Management Planning Act (Act). Since Central Basin Municipal Water District is a wholesale water supplier to GSWC, water use projections through 2035 are enclosed (Table 1) pursuant to §10631(k) of the Act. We would like to request confirmation of the anticipated water supply reliability, water supply sources, and other information as described below. This information may be provided by either (a) providing a copy of your Draft UWMP if all requested information is included or, (b) completing the enclosed tables and providing any additional documents as required.

1. Supply projections to 2035 (Table 2)
2. Single Dry Year Reliability to 2035 (Table 3)
3. Normal, single dry, and multiple dry year reliability (Table 4)
4. Basis of water year data (Table 5)
5. Factors resulting in inconsistency of supply (Table 6)
6. Assumptions used to determine retail agency supply projections, including conservation.
7. Recycled water projections to the Artesia, Bell - Bell Gardens, Florence - Graham, Norwalk, and Southwest service area (if applicable) (Table 7)
8. Describe any regional desalination opportunities, if any for the Artesia, Bell - Bell Gardens, Florence - Graham, Norwalk, and Southwest system (if applicable)

We appreciate your timely attention to the information requested above and ask you provide a response no later than **18 February 2011**. Kennedy/Jenks Consultants is assisting GSWC with preparation of the 2010 UWMP and will be contacting you directly within the next week to follow up on this request. In the meantime, should you have any questions or concerns please feel free to contact me at (916) 853-3612.

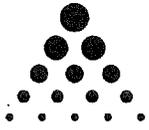
Very truly yours,

GOLDEN STATE WATER COMPANY


Ernest Gisler
Planning Manager

Enclosures

cc: Sean Maguire, Kennedy/Jenks Consultants
3035 Prospect Park Drive, Ste. 60, Rancho Cordova, CA 95670
Tel: (916) 853-3600 Fax: (916) 852-0171 www.aswater.com



Golden State
Water Company
A Subsidiary of American States Water Company

11 February 2011

Mr. Torrey Contreras
Assistant City Manager/Community Development
City of Cerritos
18125 Bloomfield Ave
Cerritos, CA 90703

Subject: Golden State Water Company - Artesia System
2010 Urban Water Management Plan Preparation Notification and Supply Reliability Information
Request

Dear Mr. Contreras:

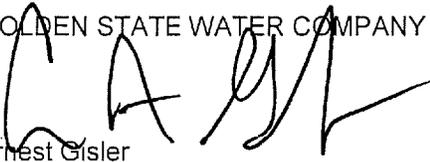
Golden State Water Company (GSWC) is currently preparing its 2010 Urban Water Management Plan (UWMP) for the Artesia System as required by the Urban Water Management Planning Act (Act). Since City of Cerritos is a wholesale water supplier to GSWC, water use projections through 2035 are enclosed (Table 1) pursuant to §10631(k) of the Act. We would like to request confirmation of the anticipated water supply reliability, water supply sources, and other information as described below. This information may be provided by either (a) providing a copy of your Draft UWMP if all requested information is included or, (b) completing the enclosed tables and providing any additional documents as required.

1. Supply projections to 2035 (Table 2)
2. Single Dry Year Reliability to 2035 (Table 3)
3. Normal, single dry, and multiple dry year reliability (Table 4)
4. Basis of water year data (Table 5)
5. Factors resulting in inconsistency of supply (Table 6)
6. Assumptions used to determine retail agency supply projections, including conservation.
7. Recycled water projections to the Artesia service area (if applicable) (Table 7)
8. Describe any regional desalination opportunities, if any for the Artesia system (if applicable)

We appreciate your timely attention to the information requested above and ask you provide a response no later than **18 February 2011**. Kennedy/Jenks Consultants is assisting GSWC with preparation of the 2010 UWMP and will be contacting you directly within the next week to follow up on this request. In the meantime, should you have any questions or concerns please feel free to contact me at (916) 853-3612.

Very truly yours,

GOLDEN STATE WATER COMPANY


Ernest Gisler
Planning Manager

Enclosures

cc: Sean Maguire, Kennedy/Jenks Consultants

Appendix J

Urban Water Management Plan Checklist

Table I-2 Urban Water Management Plan checklist, organized by subject

No.	UWMP requirement ^a	Callif. Water Code reference	Additional clarification	UWMP location	Page Number
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(c)(2)		1.6	1-7
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)		1.6	1-7
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)		1.6	1-7
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)	Appendix H		
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		1.6	1-7
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		Page vii	Vii
57	Provide supporting documentation that the plan has been adopted as prepared or modified.	10642		1.6	1.7
58	Provide supporting documentation as to how the water supplier plans to implement its plan.	10643		1.8	1-8

No.	UWMP requirement ^a	Calif. Water Code reference	Additional clarification	UWMP location	Page Number
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)		1.7 Appendix H	1-8
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		1.7	1-8
SYSTEM DESCRIPTION					
8	Describe the water supplier service area.	10631(a)		2.1	2-1
9	Describe the climate and other demographic factors of the service area of the supplier	10631(a)		2.2 & 2.4	2-1 & 2-10
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.	2.3	2-5
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.	2.3.2	2-5
12	Describe other demographic factors affecting the supplier's water management planning.	10631(a)		2.2 & 2.4	2-1 & 2-10
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)		3.2	3-3

No.	UWMP requirement ^a	Calif. Water Code reference	Additional clarification	UWMP location	Page Number
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	4.6	4-9
3	Report progress in meeting urban water use targets using the standardized form.	10608.40		Not Applicable	
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.	3.3	3-9
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.	3.7 Appendix I	3-15
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)		3.8	3-16
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.	4.1	4-2

No.	UWMP requirement ^a	Calif. Water Code reference	Additional clarification	UWMP location	Page Number
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.	4.3	4-4
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)		4.3	4-4
16	Describe the groundwater basin.	10631(b)(2)		4.3	4-4
17	Indicate whether the groundwater basin is adjudicated? Include a copy of the court order or decree.	10631(b)(2)		4.3 & Appendix F	4-4
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)		4.3	4-4
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)		Not Applicable	
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)		4.3	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.	4.3	4-4
24	Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.	10631(d)		4.4	4-8

No.	UWMP requirement ^a	Calif. Water		UWMP location	Page Number
		Code reference	Additional clarification		
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)		4.5	4-8
31	Describe desalinated water project opportunities for long-term supply, including, but not limited to, ocean water, brackish water, and groundwater.	10631(i)		4.7	4-10
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		4.8	4-11
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)		4.8.2	4-13
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)		4.8.2	4-13
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)		4.8.2	4-13
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)		4.8.3	4-14
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)		4.8	4-11
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)		4.8.4	4-16

No.	UWMP requirement ^a	Calif. Water Code reference	UWMP location	Additional clarification	Page Number
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)	4.8.4		4-16
WATER SHORTAGE RELIABILITY AND WATER SHORTAGE CONTINGENCY PLANNING ^p					
5	Describe water management tools and options to maximize resources and minimize the need to import water from other regions.	10620(f)	1.10		1-10
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)	6.1		6-1
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)	6.1.4		6-7
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)	8.1		8-1
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)	8.2		8-3
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)	8.3		8-4
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)	8.4		8-6
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)	8.4		8-6
40	Indicated penalties or charges for excessive use, where applicable.	10632(f)	8.4		8-6

No.	UWMP requirement ^a	Calif. Water Code reference	Additional clarification	UWMP location	Page Number
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)		8.5	8-8
42	Provide a draft water shortage contingency resolution or ordinance.	10632(h)		8.4 & Appendix D	8-6
43	Indicate a mechanism for determining actual reductions in water use pursuant to the urban water shortage contingency analysis.	10632(i)		8.6	8-9
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	5	5-1
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)		6.2 – 6.4	6-8
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.	7.1	7-2
27	Describe the methods the supplier uses to evaluate the effectiveness of DMMs implemented or described in the UWMP.	10631(f)(3)		7.1	7-2
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)		7.2	7-4

No.	UWMP requirement ^a	Calif. Water Code reference	UWMP location	Page Number
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)	7.2 & Appendix D	7-4
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)	N/A	

a The UWMP Requirement descriptions are general summaries of what is provided in the legislation. Urban water suppliers should review the exact legislative wording prior to submitting its UWMP.

b The Subject classification is provided for clarification only. It is aligned with the organization presented in Part I of this guidebook. A water supplier is free to address the UWMP Requirement anywhere with its UWMP, but is urged to provide clarification to DWR to facilitate review.