Golden State
Water Company
A Subsidiary of American States Water Company

*Final Report*

# 2010 Urban Water Management Plan
## *South San Gabriel*


Corporate Office
630 E. Foothill Blvd.
San Dimas CA 91773

*August 2011*

**Kennedy/Jenks Consultants**

*Final Report*

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**Kennedy/Jenks Consultants**

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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 South San Gabriel System was held on July 19, 2011 at 6 p.m. at the San Dimas Community Center in San Dimas, California. Notice of this meeting was published in accordance with Section 6066 of the Government Code in the San Gabriel Valley Tribune on May 17, 22, and June 15, 2011.

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

Golden State Water Company, hereby, adopts the 2010 Urban Water Management Plan for the South San Gabriel System.

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

August 31, 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 |
| AWWA | American Water Works Association |
| BMPs | best management practices |
| Cal EMA | California Emergency Management Agency |
| CAL Green Code | California Green Building Standards Code |
| ccf | hundred cubic feet |
| CDPH | California Department of Public Health |
| CII | commercial, industrial, 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 |
| D/DBP | disinfectant/disinfection by-product |
| 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 |
| GAC | Granular Activated Carbon |
| 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 washers |
| HET | high-efficiency toilets |
| IRP | Integrated Resources Plan |
| 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 |
| MOU | memorandum of understanding (regarding urban water conservation in California) |
| msl | mean sea level |
| N/A | not available, not applicable |
| NAICS | North American Industry Classification System |
| O&M | operation and maintenance |
| OSY | operating safe yield |
| pCi/L | picoCuries per liter |
| RAP | Resource Action Programs |
| 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 |
| SWP | State Water Project |
| TAF | thousand acre-feet per year |
| ULFT | ultra-low-flush-toilet |
| Upper District | Upper San Gabriel Valley Municipal Water District |
| USEPA | U.S. Environmental Protection Agency |
| USGVMWD | Upper San Gabriel Valley Municipal Water District |
| UWMP | Urban Water Management Plan |
| VOCs | volatile organic compounds |
| WAP | Water Action Plan |
| WBIC | weather based irrigation controllers |
| WLCD | Water Loss Control Department |
| WRCC | Western Regional Climate Center |
| 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) South San Gabriel 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), the Water Conservation Act of 2009. The original bill requiring 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 water use of 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 South San Gabriel System in 1985, 1990, 1995, 2000, and 2005. This 2010 UWMP is an update to the 2005 plan.

GSWC water use targets for the South San Gabriel 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.*

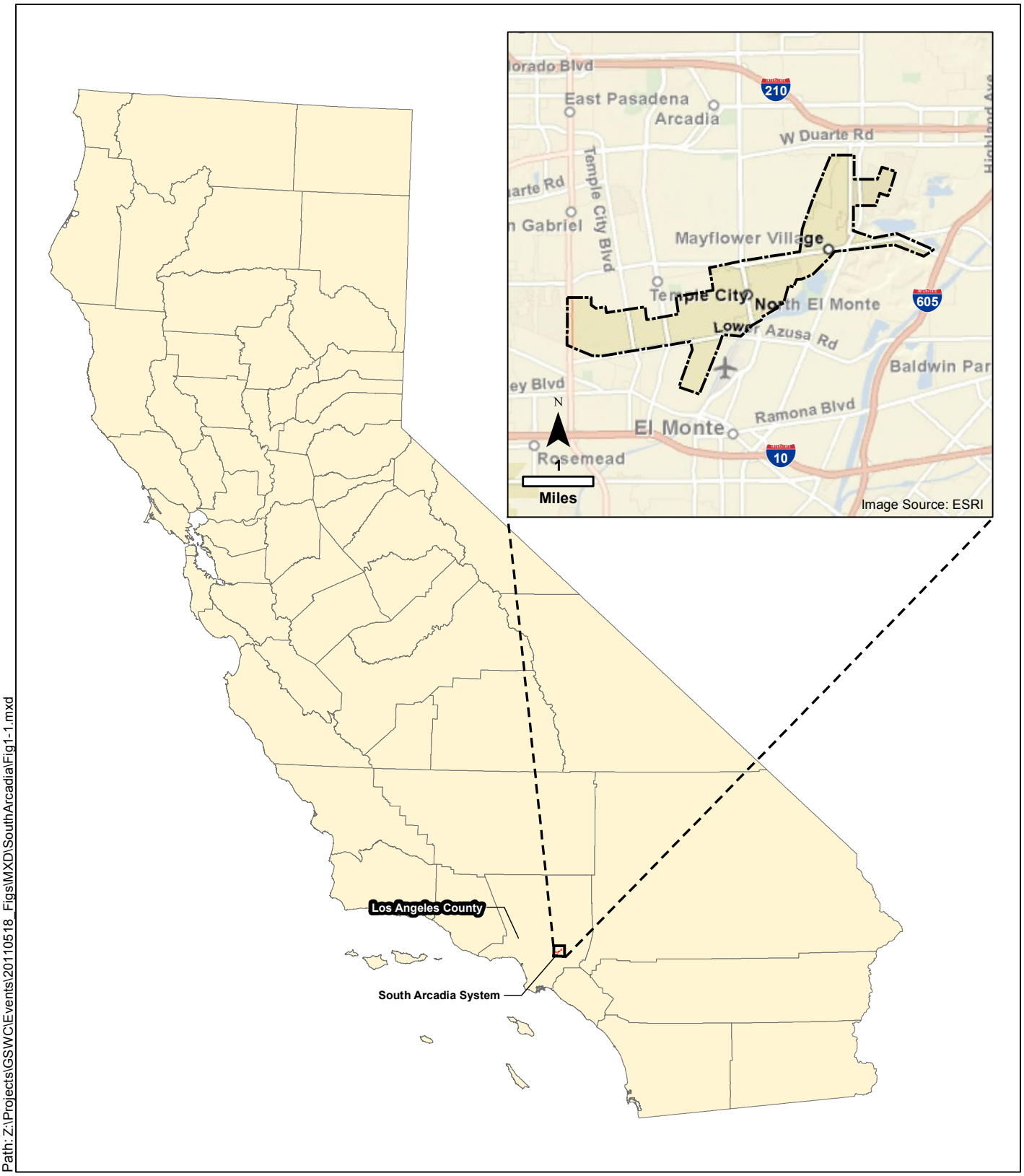
## 1.2 System Overview

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 South San Gabriel System.

Located in Los Angeles County, the South San Gabriel System serves half of the City of Rosemead, parts of the City of San Gabriel, the City of Monterey Park, and adjacent unincorporated areas of Los Angeles County. The service area is primarily characterized by residential and commercial areas. Figure 1-1 illustrates the location of the South San Gabriel 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**

South Arcadia Service Area

N

0 45 90

Miles

**Kennedy/Jenks Consultants**

Golden State Water Company
2010 Urban Water Management Plan

**South Arcadia System**
**Location Map**

K/J 1070001*00
August 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 Anaheim | ✓ | ✓ | | | | ✓ | |
| City of Monterey Park | ✓ | | | | | ✓ | |
| City of Rosemead | ✓ | | | | | ✓ | |
| City of San Gabriel | ✓ | ✓ | | | | ✓ | |
| Covina Irrigating Company | ✓ | ✓ | | | | ✓ | |
| County of Los Angeles | ✓ | | | | | ✓ | |
| Upper San Gabriel Valley 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 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 South San Gabriel System UWMP was held on July 19, 2011 at the San Dimas Community Center in San Dimas, 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 South San Gabriel 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 website posting of public hearing notice,
- Notifications and follow-up correspondence provided to cities and counties, and
- Meeting minutes from the public hearing 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 South San Gabriel 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 South San Gabriel 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) 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 Supply | 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 purchased 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, 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 South San Gabriel 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 10631*
>
> *(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 South San Gabriel System, located in Los Angeles County, serves half of the City of Rosemead, parts of City of San Gabriel, City of Monterey Park, and unincorporated area of Los Angeles County. The system is located in the westerly portion of the San Gabriel Valley and is divided by the San Bernardino Freeway. The service area is generally flat with some hills in the south part of the system. Figure 2-1 illustrates the service area of the South San Gabriel System. The service area is primarily characterized by residential and commercial areas.

## 2.2 Demographics

The City of Rosemead was chosen as demographically representative of the South San Gabriel System. According to 2000 U.S. Census Data, the median age of Rosemead's residents is 32.3 years. Rosemead has an average household size of 3.80 and a median household income of approximately $36,181 in 1999 dollars or $47,252 in 2010 dollars.

A General Plan or land use information is not available for the South San Gabriel System. Based on the San Gabriel 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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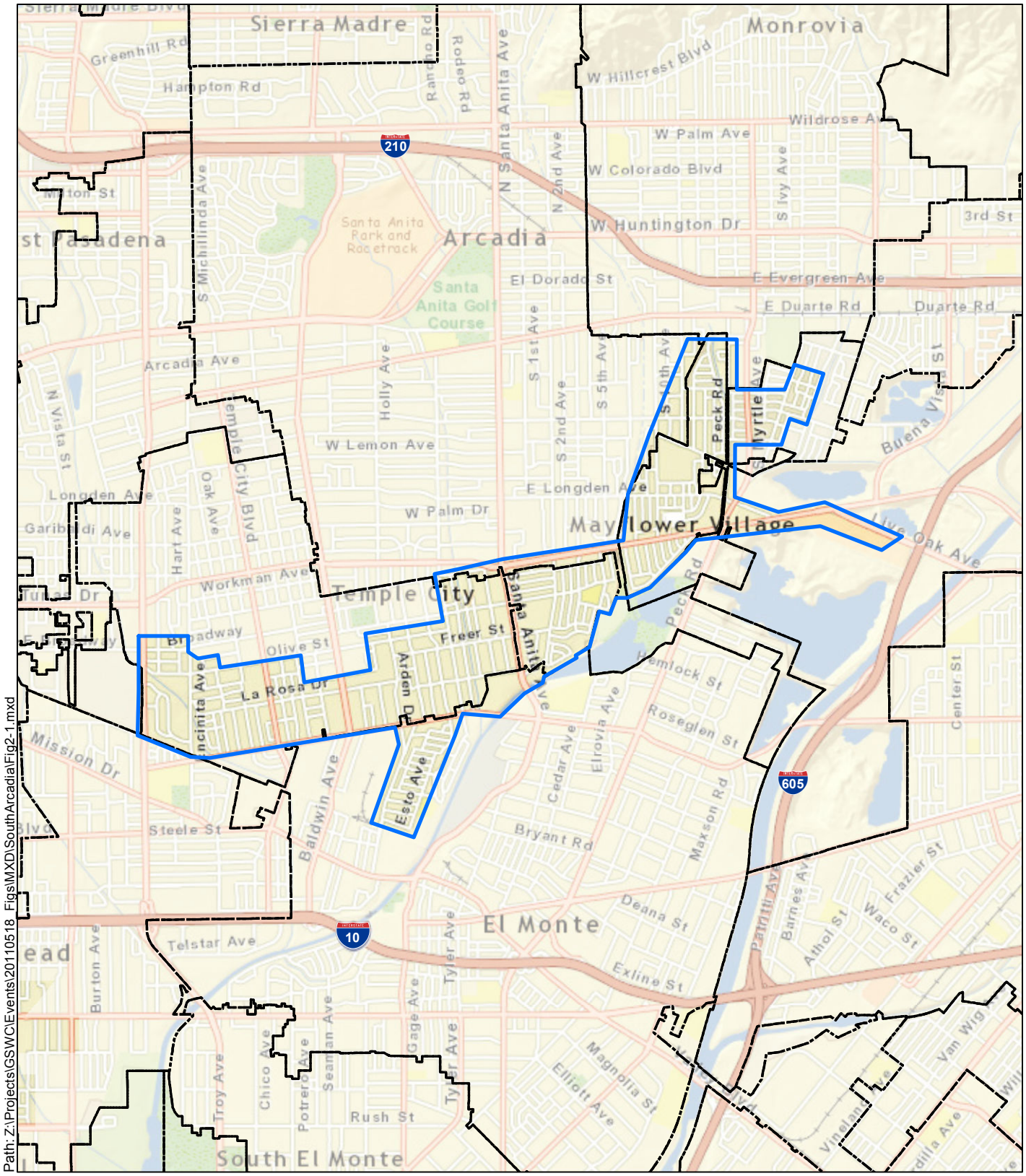


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Image Source: ESRI

**Legend**

- South Arcadia System Boundary
- City Boundary

N

0 2,500 5,000

Feet

**Kennedy/Jenks Consultants**

Golden State Water Company
2010 Urban Water Management Plan

**South Arcadia System Service Area**

K/J 1070001*00
August 2011

**Figure 2-1**

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## 2.3 Population, Housing and Employment

Population, housing, and employment projections were developed for the South San Gabriel System using the Southern California Association of Governments (SCAG) population, housing and employment data. SCAG last 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 South San Gabriel 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 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 South San Gabriel 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 for SCAG.

### 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 South San Gabriel 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 South San Gabriel 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 what percent of each tract lies within the South San Gabriel 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 all of the SCAG's historic and projected demographic data for each census tract number from 2015 through 2035. Figure 2-2 details the census tracts within the South San Gabriel 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. 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: South San Gabriel System Historical Population

| Year | Service Area Population |
|---|---|
| 1997 | 27,589 |
| 1998 | 27,513 |
| 1999 | 27,646 |
| 2000 | 27,545[1] |
| 2001 | 27,785 |
| 2002 | 27,855 |
| 2003 | 27,899 |
| 2004 | 28,038 |
| 2005 | 28,140 |
| 2006 | 28,317 |
| 2007 | 28,443 |
| 2008 | 28,608 |
| 2009 | 28,633 |
| 2010 | 28,715 |

Note:
1. Population for year 2000 from 2005 UWMP.

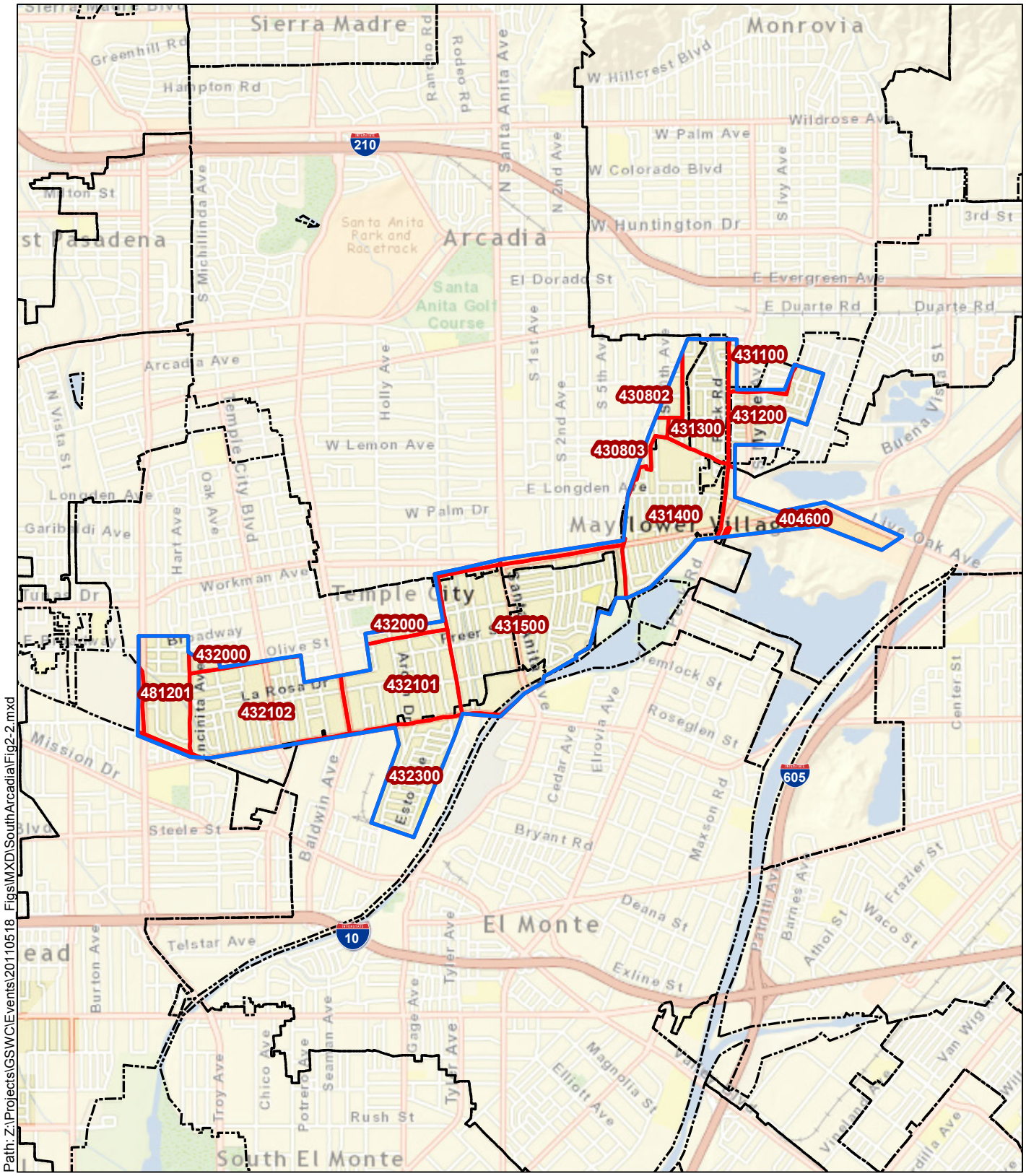


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Image Source: ESRI

**Legend**

- South Arcadia System Boundary
- Census Tract Boundary within Service Area
- City Boundary

N

0 2,500 5,000

Feet

**Kennedy/Jenks Consultants**

Golden State Water Company
2010 Urban Water Management Plan

**South Arcadia System Service Area with Census Tract Boundary**

K/J 1070001*00
August 2011

**Figure 2-2**

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As concluded from analysis of SCAG demographic data, the South San Gabriel System had an estimated population of 28,715 people in 2010 and is expected to reach 31,932 by 2035. A summary of historic and projected population, households, and employment within the South San Gabriel 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.

Table 2-2: South San Gabriel System Historical and Projected Population

| Year | Service Area Population | Service Area Household | Service Area Employment | Data Source |
|---|---|---|---|---|
| 2005 | 28,140 | 6,758 | 4,428 | GSWC(3) |
| 2010 | 28,715 | 6,945 | 4,610 | GSWC(3) |
| 2015 | 29,414 | 7,187 | 4,752 | SCAG |
| 2020 | 30,065 | 7,420 | 4,841 | SCAG |
| 2025 | 30,710 | 7,604 | 4,947 | SCAG |
| 2030 | 31,332 | 7,780 | 5,059 | SCAG |
| 2035 | 31,932 | 7,925 | 5,166 | 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 South San Gabriel population increased 2 percent, which is a growth rate of approximately 0.5 percent per year. By 2035, population is expected to increase by a total of 11 percent, from 28,715 in 2010 to 31,932 in 2035, which is a 0.5 percent growth rate per year. The number of households is expected to grow 14 percent during the same period, which equates to an annual household growth rate of 0.6 percent. Employment is expected to grow 12 percent during the same period, which equates to an annual employment growth rate of 0.5 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. As discussed in demographic section, new development and redevelopment projects in the South San Gabriel System may contribute to future growth.

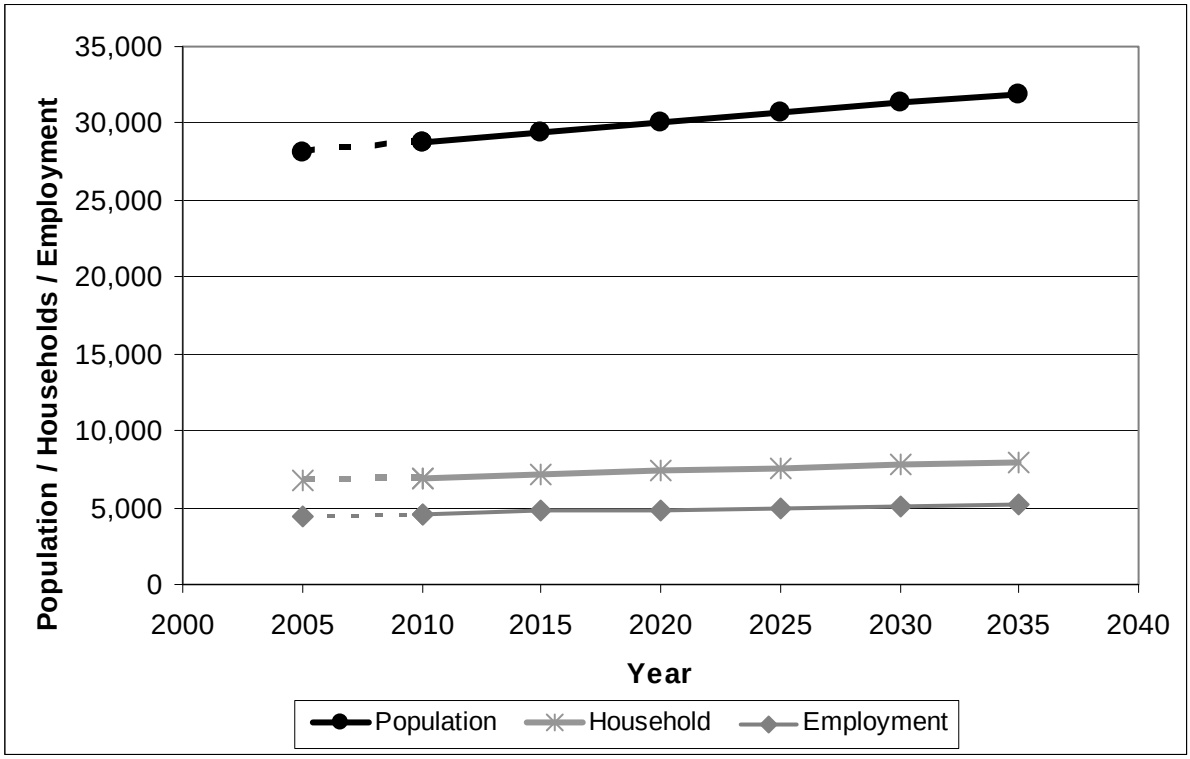


Figure 2-3: Historical and Projected Population, Household and Employment Growth within the South San Gabriel System

## 2.4 Climate

South San Gabriel System has cool, humid winters and warm, dry summers. Western Regional Climate Center (WRCC) has maintained 30-year historic climate data for selected cities throughout the West. The WRCC's website (www.wrcc.dri.edu) maintains climate records for the past 70 years for the San Gabriel Station. Table 2-3 presents the average climate summary based on the 70-year historical climate data for South San Gabriel System.

In the winter, the lowest average monthly temperature is approximately 42 degrees Fahrenheit. The highest average monthly temperature reaches approximately 90 degrees Fahrenheit in the summer. Figure 2-4 presents the monthly average precipitation based on 30-year historical data. The rainy season is typically from November to March. Monthly precipitation during the winter months ranges from 2 to 4 inches. Low humidity occurs in the summer months from May to October. The moderately hot and dry weather during the summer months typically results in moderately high water demand.

Similar to the WRCC in the South San Gabriel area, the California Irrigation Management Information System (CIMIS) website (http://www.cimis.water.ca.gov) tracks and maintains records of ETo for selected cities. ETo statistics used for this system come from the Monrovia station, which is the closest station (6 miles) to the South San Gabriel System. ETo is a standard measurement of environmental parameters that affect the water use of plants. ETo 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 ETo is presented in inches 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 South San Gabriel System

| Month | Standard Monthly Average ETo[1] (inches) | Average Total Rainfall (inches) | Average Temperature (degrees Fahrenheit) | |
|---|---|---|---|---|
| | | | Max | Min |
| January | 2.2 | 3.70 | 69.1 | 41.8 |
| February | 2.3 | 3.98 | 70.2 | 43.6 |
| March | 3.8 | 3.00 | 71.7 | 45.9 |
| April | 4.2 | 1.21 | 75.2 | 49.1 |
| May | 5.3 | 0.28 | 77.7 | 53.5 |
| June | 5.8 | 0.09 | 82.5 | 57.2 |
| July | 6.9 | 0.02 | 88.8 | 61.1 |
| August | 6.4 | 0.07 | 89.7 | 61.5 |
| September | 5.1 | 0.35 | 88.1 | 59.4 |
| October | 3.4 | 0.56 | 82.2 | 53.8 |
| November | 2.5 | 1.64 | 75.3 | 46.4 |
| December | 2.0 | 2.35 | 69.8 | 41.9 |

Note:
1. Evapotranspiration (ETo) from http://www.cimis.water.ca.gov/cimis/welcom.jsp.

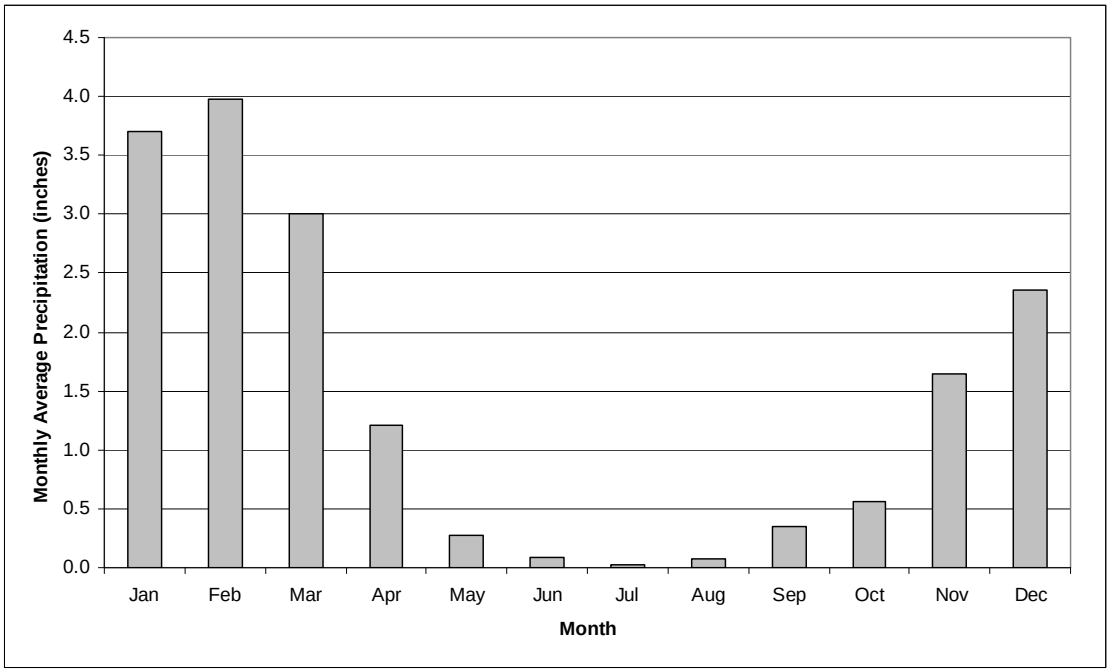


Figure 2-4: Monthly Average Precipitation in South San Gabriel System Based on 70-Year Historical Data

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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 South San Gabriel 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. SBX7-7 amends the Act and requires statewide urban demand reduction 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 South San Gabriel 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 South San Gabriel System. Figure 3-1 shows the historical number of metered service connections and water use for the South San Gabriel System from 1994 through 2010.

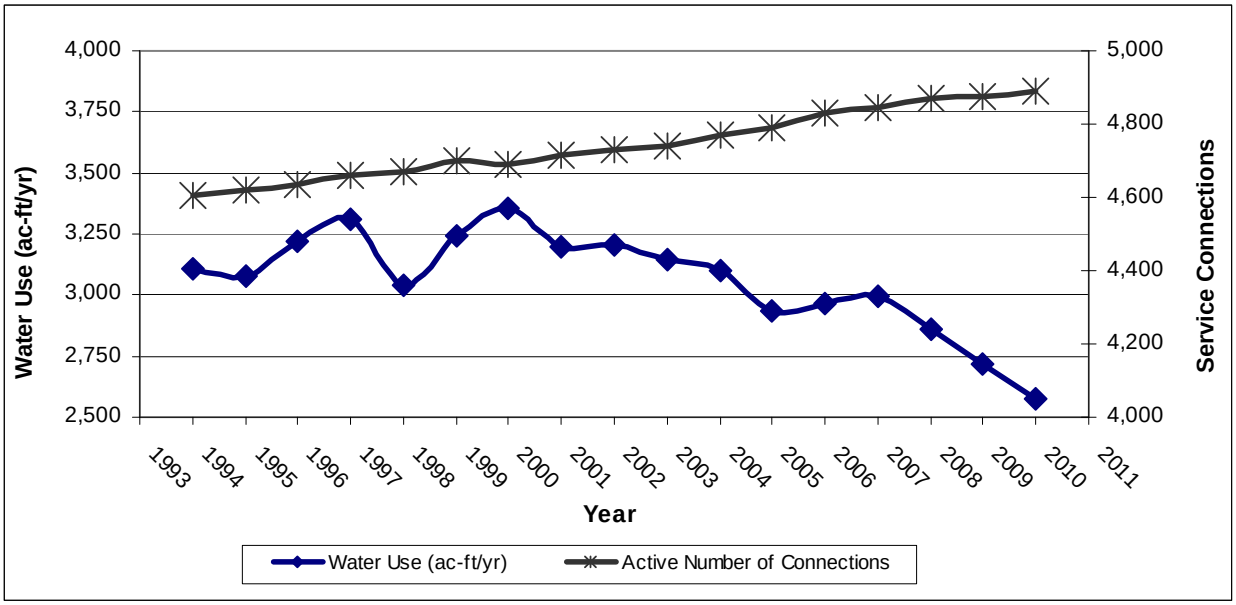


Figure 3-1: Historical Number of Metered Service Connections and Water Use

Figure 3-1 shows a decline in water use beginning in 2007 with an approximate 11 percent decline from 2008 to 2010. Review of similar data from other systems suggests the recent decline in water use has been widespread and is not isolated to the South San Gabriel System. The decline in water use 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 seven categories: single-family, multi-family, industrial, commercial, institutional/government, landscape, 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 | Commercial | Industrial | Institutional/ Government | Landscape | Multi-Family | Other | Single-Family | Total |
|---|---|---|---|---|---|---|---|---|
| 1994 | 271 | 7 | 129 | 64 | 887 | 0 | 1,747 | 3,105 |
| 1995 | 305 | 4 | 96 | 72 | 927 | 0 | 1,673 | 3,077 |
| 1996 | 319 | 3 | 111 | 81 | 991 | 0 | 1,717 | 3,222 |
| 1997 | 353 | 5 | 140 | 86 | 1,007 | 0 | 1,722 | 3,313 |
| 1998 | 347 | 3 | 111 | 65 | 995 | 0 | 1,521 | 3,042 |
| 1999 | 422 | 2 | 158 | 114 | 1,058 | 0 | 1,489 | 3,243 |
| 2000 | 469 | 5 | 162 | 123 | 1,136 | 0 | 1,457 | 3,352 |
| 2001 | 451 | 5 | 162 | 94 | 1,097 | 4 | 1,387 | 3,200 |
| 2002 | 423 | 6 | 136 | 103 | 1,097 | 5 | 1,437 | 3,207 |
| 2003 | 491 | 6 | 125 | 74 | 1,062 | 6 | 1,382 | 3,146 |
| 2004 | 465 | 4 | 124 | 85 | 1,043 | 6 | 1,372 | 3,099 |
| 2005 | 429 | 3 | 114 | 90 | 978 | 6 | 1,315 | 2,935 |
| 2006 | 408 | 3 | 126 | 94 | 991 | 6 | 1,338 | 2,966 |
| 2007 | 403 | 4 | 124 | 87 | 986 | 5 | 1,385 | 2,994 |
| 2008 | 371 | 3 | 128 | 84 | 935 | 5 | 1,337 | 2,863 |
| 2009 | 368 | 2 | 105 | 90 | 887 | 4 | 1,262 | 2,718 |
| 2010 | 379 | 2 | 101 | 64 | 836 | 3 | 1,190 | 2,575 |

## 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 such targets have been required to be documented. 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 – which is 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 the responsibility 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, service area population within the South San Gabriel System was estimated and compared to actual water use records. The following three baseline gpcd calculations identified in SBX7-7 were evaluated for the South San Gabriel 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 South San Gabriel system does not currently receive 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 | 3,096 | Ac-ft |
| | 2008 total volume of delivered recycled water | 0 | Ac-ft |
| | 2008 recycled water as a percent of total deliveries | 0 | Percent |
| | Number of years in base period | 10 | Years |
| | Year beginning base period range | 1997 | |
| | Year ending base period range | 2006 | |
| 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.

| Table 3-3: 1997-2010 Base Daily Use Calculation | | | |
|---|---|---|---|
| **Calendar Year** | **Distribution System Population** | **Gallons / Day** | **Daily per Capita Water Use, gpcd** |
| 1997 | 27,589 | 3,299,623 | 120 |
| 1998 | 27,513 | 3,091,203 | 112 |
| 1999 | 27,646 | 3,173,668 | 115 |
| 2000 | 27,545 | 3,260,774 | 118 |
| 2001 | 27,785 | 3,113,270 | 112 |
| 2002 | 27,855 | 3,080,299 | 111 |
| 2003 | 27,899 | 3,021,992 | 108 |
| 2004 | 28,038 | 3,067,966 | 109 |
| 2005 | 28,140 | 2,864,906 | 102 |
| 2006 | 28,317 | 3,023,029 | 107 |
| 2007 | 28,443 | 2,863,002 | 101 |
| 2008 | 28,608 | 2,763,565 | 97 |
| 2009 | 28,633 | 2,575,696 | 90 |
| 2010 | 28,715 | 2,400,543 | 84 |

Note:
Table format based on DWR Guidebook Tables 14 and 15.

The 10-year averages are presented in Table 3-4; and the 5-year averages are shown in Table 3-5. The 1997-2006 10-year and 2003-2007 5-year average base daily usages of 111 and 105 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) |
|---|---|
| 1997-2006 | 111 |
| 1998-2007 | 110 |
| 1999-2008 | 108 |
| 2000-2009 | 105 |
| 2001-2010 | 102 |

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 | 105 |
| 2004-2008 | 103 |
| 2005-2009 | 99 |
| 2006-2010 | 96 |

### 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 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 reduction of 22 gpcd by 2020, as shown in Table 3-6. The 2015 interim target would be 100 gpcd with a 2020 water use target of 89 gpcd.

Table 3-6: 2020 Water Use Target Method 1 Calculation Summary

| Description | Baseline | 2015 Interim Target | 2020 Compliance Target |
|---|---|---|---|
| Per Capita Water Use (gpcd) | 111 | 100 | 89 |
| 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 South San Gabriel 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. Since the baseline of 111 gpcd is lower 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 South San Gabriel 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) | 111 | 126 | 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 South San Gabriel System is 100 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) | 105 | 103 | 100 |

### 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 South San Gabriel System, which in turn triggered the minimum reduction target since the Method 3 hydrologic region target (142 gpcd) is greater than the Minimum 100 gpcd. As a result, Table 3-9 shows the 2020 SBX7-7 compliance target for the South San Gabriel System is 100 gpcd and the 2015 interim water use target is 103 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 |
|---|---|---|
| 111 | 103 | 100 |

## 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 South San Gabriel 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 South San Gabriel System from 1994 through 2035. Figure 3-3 shows the historical and projected water use for the South San Gabriel System from 1994 until 2035.

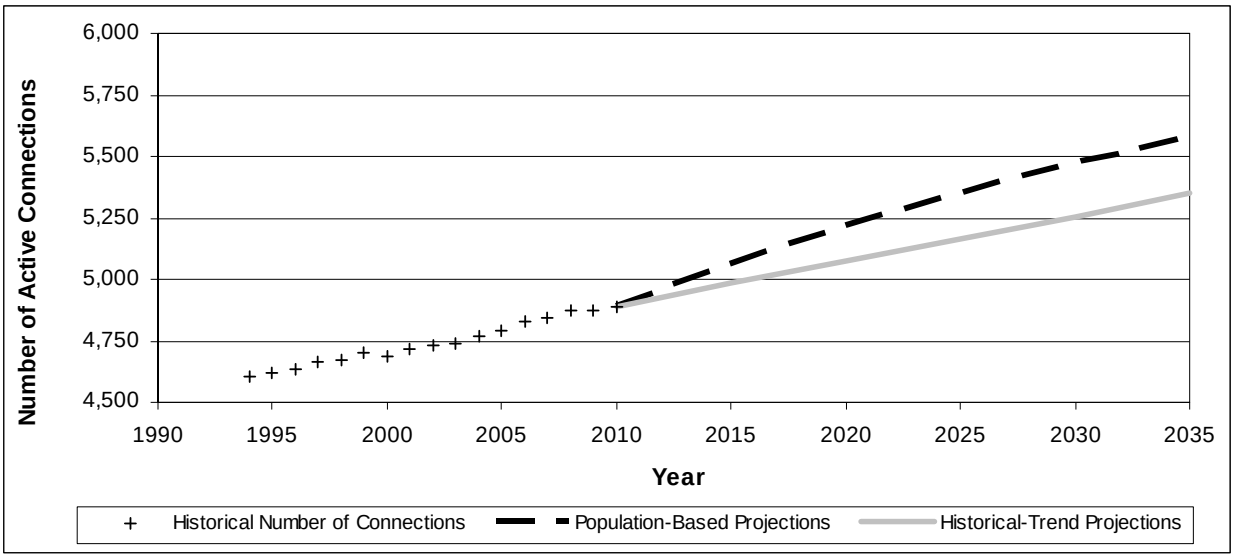


Figure 3-2: Historical and Projected Number of Metered Service Connections

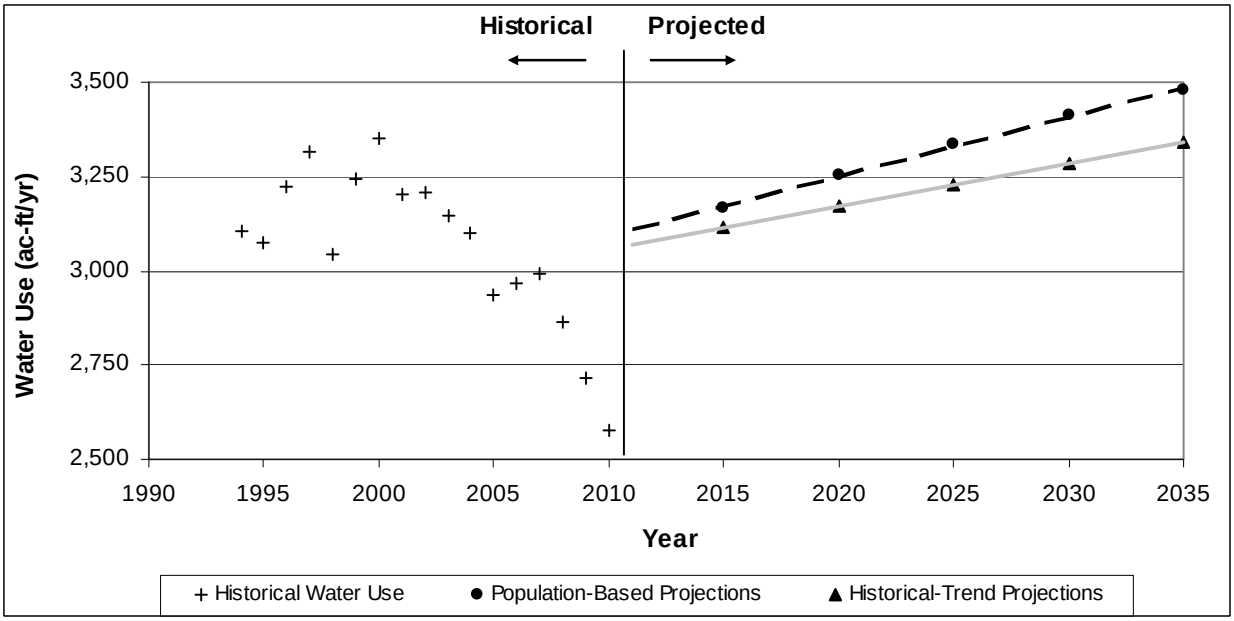


Figure 3-3: Historical Water Use and Future Water Use Projections

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.

Table 3-10: Water Use Factors for the South San Gabriel System

| | Account Category | | | | | | |
|---|---|---|---|---|---|---|---|
| | Single-Family | Multi-family | Commercial | Industrial | Institutional/ Government | Landscape | Other[2] |
| Water Use Factor[1] | 0.40 | 0.95 | 1.96 | 0.61 | 1.72 | 2.31 | 1.34 |

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 2000 to obtain a projection of the number of connections in the year 2015. Similarly, employment growth projections were used to determine the growth for commercial, industrial, institutional/government, and landscape 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.

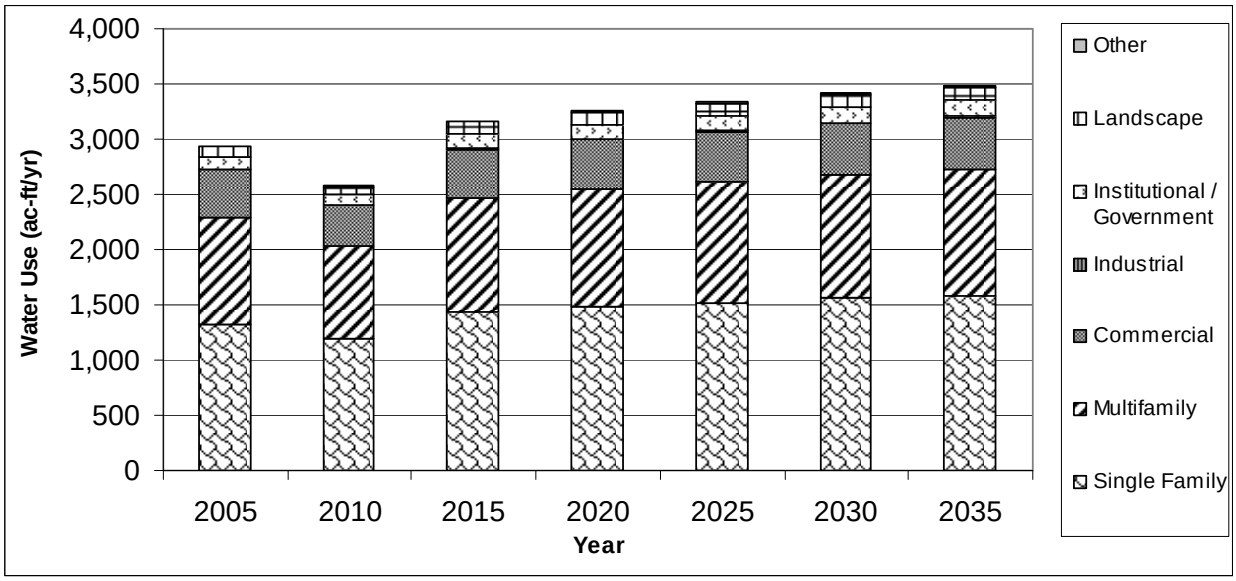


Figure 3-4: Projected Water Use by Customer Type

| Table 3-11: Projections of the Number of Metered Service Connections and Water Use for the South San Gabriel System | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Accounts by Type | | | | | | | |
| Year | Projection Type | Single-Family | Multi-family | Commercial | Industrial | Institutional/ Government | Landscape | Other[3] | Total |
| 2005[2] | *No. of Accounts* | 3,395 | 1,053 | 220 | 6 | 75 | 39 | 4 | 4,792 |
| | *Water Use (ac-ft)* | 1,315 | 978 | 429 | 3 | 114 | 90 | 6 | 2,935 |
| 2010 | *No. of Accounts* | 3,492 | 1,047 | 218 | 7 | 75 | 45 | 5 | 4,889 |
| | *Water Use (ac-ft)* | 1,190 | 836 | 379 | 2 | 101 | 64 | 3 | 2,575 |
| 2015 | *No. of Accounts* | 3,614 | 1,084 | 225 | 8 | 78 | 47 | 6 | 5,062 |
| | *Water Use (ac-ft)* | 1,438 | 1,030 | 440 | 5 | 134 | 109 | 8 | 3,164 |
| 2020 | *No. of Accounts* | 3,731 | 1,119 | 229 | 8 | 79 | 48 | 6 | 5,220 |
| | *Water Use (ac-ft)* | 1,485 | 1,063 | 448 | 5 | 136 | 111 | 8 | 3,256 |
| 2025 | *No. of Accounts* | 3,824 | 1,147 | 234 | 8 | 81 | 49 | 6 | 5,349 |
| | *Water Use (ac-ft)* | 1,522 | 1,090 | 458 | 5 | 139 | 113 | 8 | 3,335 |
| 2030 | *No. of Accounts* | 3,912 | 1,173 | 240 | 8 | 83 | 50 | 6 | 5,472 |
| | *Water Use (ac-ft)* | 1,556 | 1,115 | 470 | 5 | 142 | 116 | 8 | 3,412 |
| 2035 | *No. of Accounts* | 3,985 | 1,195 | 245 | 8 | 85 | 51 | 6 | 5,575 |
| | *Water Use (ac-ft)* | 1,586 | 1,136 | 479 | 5 | 146 | 118 | 8 | 3,478 |

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 sales to other agencies for the South San Gabriel 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 South San Gabriel 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 South San Gabriel System, from 1997 through 2010, system water losses have averaged approximately 8 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 South San Gabriel 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] | 274 | 114 | 246 | 253 | 260 | 266 | 271 |
| **Total** | 274 | 114 | 246 | 253 | 260 | 266 | 271 |

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 South San Gabriel System. Although there are no other water uses contributing to the total water demand in the South San Gabriel 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 SBX7-7 compliance are also provided in Table 3-14 for reference purposes; assuming full compliance with the SBX7-7 interim and 2020 water use reduction targets. 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[2] | 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 | 2,935 | 274 | 3,209 | 0 | n/a |
| 2010 | 2,575 | 114 | 2,689 | 0 | n/a |
| 2015 | 3,164 | 246 | 3,410 | 17 | 3,394 |
| 2020 | 3,256 | 253 | 3,509 | 141 | 3,368 |
| 2025 | 3,335 | 260 | 3,595 | 155 | 3,440 |
| 2030 | 3,412 | 266 | 3,678 | 168 | 3,510 |
| 2035 | 3,478 | 271 | 3,748 | 172 | 3,577 |

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

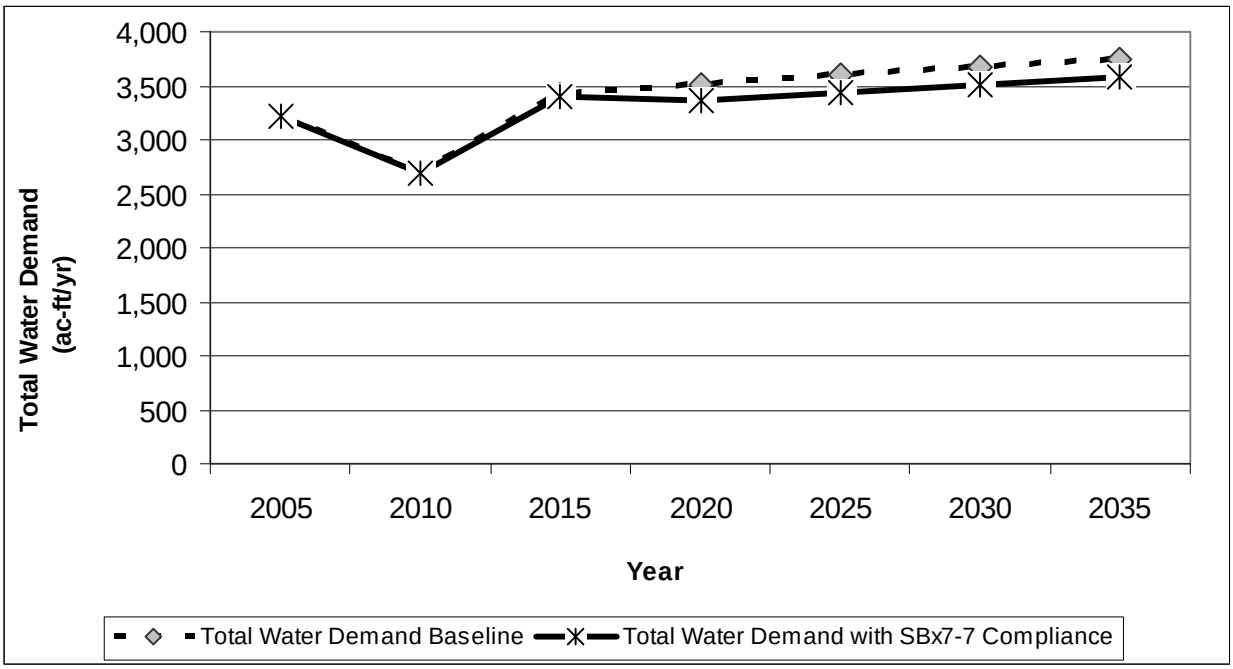


Figure 3-5: Total Water Demand

## 3.7 Data Provided to Wholesale Agency

GSWC provided the following projected water use data to the Upper San Gabriel Valley Municipal Water District (USGVMWD, Upper District), the wholesale water supplier for the South San Gabriel System, as summarized in Table 3-15. Since the preliminary projections were submitted in 2010, GSWC has refined projections by integrating actual 2010 water usage 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.

Table 3-15: Summary of South San Gabriel System Data Provided to USGVMWD in ac-ft/yr

| Wholesaler | Contracted Volume | 2010 | 2015 | 2020 | 2025 | 2030 | 2035 |
|---|---|---|---|---|---|---|---|
| USGVMWD | N/A | 2,896 | 3,200 | 3,500 | 3,745 | 3,969 | 4,044 |

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 South San Gabriel service area. For this reason, it is not possible to 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. 40 percent was used to estimate the lower income demand projections as shown in Table 3-16 below.

Table 3-16: Low-Income Projected Water Demands in ac-ft/yr

| | 2015 | 2020 | 2025 | 2030 | 2035 |
|---|---|---|---|---|---|
| Single-Family Residence | 101 | 119 | 134 | 148 | 160 |
| Multi-Family Residence | 78 | 92 | 102 | 112 | 121 |
| Total | 179 | 211 | 237 | 261 | 281 |

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:

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

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

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

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

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

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

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

*(1) An average water year.*

*(2) A single dry water year.*

*(3) Multiple dry water years.*

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

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

*(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 South San Gabriel System. The following chapter provides details in response to those requirements of this portion of the Act.

## 4.1 Water Sources

GSWC obtains its water supply for the South San Gabriel System from two primary sources: imported water and GSWC-operated groundwater wells. Imported water is purchased from the Upper San Gabriel Valley Municipal Water District (USGVMWD), also called the Upper District. The Upper District obtains its imported water supply from the Metropolitan Water District of Southern California (Metropolitan).

As described in Section 4.3.1, below, the groundwater rights for the South Arcadia System and the South San Gabriel System are shared and are not preferential to either system. GSWC manages the allocation between the two systems. South Arcadia does not have any water supply from purchased sources, and therefore is 100 percent reliant upon groundwater supply from the Main San Gabriel Basin. If demands increase beyond the allocated OSY shared water right for the South Arcadia or South San Gabriel systems, GSWC can either find additional water rights or purchase replenishment water. Water rights may be obtained by purchasing or leasing existing rights from other producers in the basin. Groundwater pumping in excess of the OSY and any additional purchased or leased rights is permitted when replaced in kind with available replenishment water that is purchased from the Basin's responsible agency. The Upper District is the responsible agency for the portion of the Basin from which groundwater is pumped from the South Arcadia and South San Gabriel Systems.

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 39 percent from 2010 to 2035 to meet the projected water demands, with most of this increased demand being met by imported water from the Upper District. Water demand projections are documented in Chapter 3.

Table 4-1: Current and Planned Water Supplies for the South San Gabriel System in ac-ft/yr

| Source | 2010 | 2015 | 2020 | 2025 | 2030 | 2035 |
|---|---|---|---|---|---|---|
| Purchased water from USGVMWD | 338 | 2,097 | 2,375 | 2,604 | 2,828 | 3,015 |
| Groundwater(1) | 2,352 | 1,313 | 1,134 | 991 | 850 | 733 |
| Recycled water | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 2,689 | 3,410 | 3,509 | 3,595 | 3,678 | 3,748 |

Notes:

1. Based on projected use in the Main San Gabriel Groundwater Basin. 2015-2035 groundwater projections assume a long-term average OSY of 190,000 ac-ft.
2. 2010 water supplies are based on actual production records.
3. Table format based on DWR Guidebook Table 16.

This water supply summary is based on GSWC's groundwater management strategy for the South San Gabriel and South Arcadia Systems, and data provided by the Upper District. In the future, GSWC expects to use its Main Basin groundwater rights to supply the South Arcadia System, and shift the South San Gabriel System to rely more heavily on the Upper District imported water supply.

There is no recycled water supply planned for this system. The potential for future recycled water use is described in Section 4.8. Details of the water supply are presented in the following section, while water supply reliability is discussed in Chapter 6.

## 4.2 Purchased Water

The Upper District is a member agency of the Metropolitan, providing treated water to several agencies, including GSWC. Additional details regarding Upper District's imported water supply can be found in the Upper District's 2010 UWMP. The South San Gabriel System has one connection through which it receives water from the Upper District, named the USG-1 connection, with a capacity of 3,375 gallons per minute (gpm).

In addition, the South San Gabriel System has an emergency connection with the City of Monterey Park, with a capacity of 1,500 gpm. Two reservoirs with a total volume of 0.52 million gallons serve as storage in the South San Gabriel System.

## 4.3 Groundwater

This section provides a brief description of the Main San Gabriel Groundwater Basin, including the groundwater supplies available to GSWC. More detailed information can be found in the references cited in these sections.

Groundwater supplying GSWC's South San Gabriel System is pumped from a total of three active groundwater wells in the Main San Gabriel Basin, which has a surface area of approximately 154,000 acres (241 square miles). These wells have a current total normal year active capacity of 4,356 ac-ft/yr. Between 1999 and 2010, the actual production averaged 2,836 ac-ft/yr.

The Main San Gabriel Basin is bounded by the Raymond fault and the contact between Quaternary sediments and consolidated basement rocks of the San Gabriel Mountains on the north, by the Repetto, Merced, and Puente Hills on the south and west, and by the Chino and San Jose faults on the east.

Water-bearing units in the Main San Gabriel Basin are recent alluvium and the San Pedro Formation. The alluvium consists of Pleistocene and Holocene deposits with a total thickness ranging from 40 feet to over 4,000 feet. The Holocene alluvium consists of alluvial fans and stream deposits approximately 100 feet in thickness (DWR, 2004). The Pleistocene alluvium is composed of unsorted, angular to sub-rounded sedimentary deposits ranging from gravels near the San Gabriel Mountains to sands and silts in the central and western parts of the basin. These Pleistocene alluvium deposits constitute the most of the productive water-bearing units in the basin (DWR, 2004). The Pleistocene alluvium varies in thickness from 40 feet in the north to 4,100 feet in the central portion of the basin (DWR, 2004). The San Pedro formation also bears fresh water and consists of interbedded marine sand, gravel, and silt. The maximum thickness of the San Pedro formation is approximate 2,000 feet (DWR, 2004)

Estimates of the hydraulic conductivities in the Basin range from 270 feet per day (ft/d) for gravel to 0.001 ft/d for clay (CH2M HILL, 1986). Sand and gravel units were estimated to have a hydraulic conductivity of 135 ft/d and sandy clay estimated at 10 ft/d (CH2M HILL, 1986). These values of hydraulic conductivities are an estimate based on aquifer test and boring log descriptions of the sediments.

Groundwater levels have historically fluctuated in the basin. Since 1993, the water levels for the Baldwin Park Key Well have varied about from an elevation high of 272 feet to a historic low in 2009 of 189.2 feet (Upper District, 2010). The Watermaster reported in 2010 that the groundwater levels in the Baldwin Park Key Well have been just above the lower value of the operating range of storage for the groundwater basin at 204.2 feet as of June 26, 2010. One foot of elevation change of the Key Well is roughly equal to a change in water storage of 8,000 ac-ft. The total storage capacity of the San Gabriel Basin is estimated to be about 8.6 million ac-ft (Main San Gabriel Basin Watermaster, 2011). The historic high groundwater elevation was measured in 1916 at 329.1 feet at which time the Main San Gabriel Basin storage was estimated at 8.7 million ac-ft. The historic low groundwater elevation was 189.2 feet in 2009 when the Main San Gabriel Basin storage was estimated at 7.6 million ac-ft.

### 4.3.1 Main San Gabriel Basin Adjudication

In 1973, the rights to use groundwater from the San Gabriel Valley Basin were adjudicated in the case *Upper San Gabriel Valley Municipal Water District vs. City of Alhambra, et al* (Superior Court, County of Los Angeles, Case No. 924128, Appendix F). During the adjudication process, the safe yield of the basin was studied to help assign prescriptive pumping rights. The total prescriptive pumping right for the Main San Gabriel Basin was established at 197,634 ac-ft. This prescriptive right was used during the adjudication to determine the baseline share of pumping rights for each water producer in the basin.

The Main San Gabriel Basin Watermaster regulates groundwater production within the basin. Each year the Watermaster determines the operating safe yield (OSY) for the basin, which may be larger or smaller than the total prescriptive right of 197,634. The Watermaster performs hydrologic balance calculations to assess the groundwater conditions in the Main San Gabriel Basin. The hydrologic assessments are based on an evaluation of groundwater levels in the Basin, determination of the previous year's recharge and extraction activities, estimates of the current year's recharges and extractions, water quality, historic and current rainfall data, and the availability of imported water. The OSY has historically fluctuated to account for wet or dry conditions in the basin and to accommodate the availability of imported water that may be needed to supplement local water supplies and recharge of the basin.

The OSY is the amount of water that can be pumped from the basin before the Watermaster imposes a "Replacement Water Assessment" to replenish the basin with imported water. Each water right holder is entitled to a set percentage of the OSY annually. Because the OSY is recalculated each fiscal year (FY), the actual amount of water GSWC has rights to pump without paying a replenishment assessment fee can fluctuate annually. Since the basin was adjudicated in 1973, the OSY has ranged from a low of 140,000 (FY 1991 – 1992) to a high of 240,000 ac-ft (FY's 2005 – 2007).

Water pumped in excess of the OSY is managed by Upper District, the applicable responsible agency, which is determined by geographic and political boundaries under terms of the Judgment. Upper District is responsible for ensuring that the basin is not overpumped in any given year, i.e. that total groundwater production equals OSY water rights plus replenishment water. Replenishment water must be available to allow pumping in excess of the OSY. For the past 2 years, replenishment water was not available when the producers over pumped in the basin. The responsible parties have implemented cyclic storage agreements to provide replenishment water supplies during periods of reduced imported water availability. Additional descriptions of groundwater supply reliability and cyclic storage are provided in Chapter 6.

GSWC has pumping rights to 2.92105 percent of the OSY for the Main San Gabriel Basin, which is shared between the South San Gabriel and South Arcadia Systems. GSWC's total pumping rights for these two Systems have varied from 4,089 ac-ft/yr to 6,718 ac-ft/yr as shown in Table 4-2. In May 2011, the Watermaster established an OSY of 210,000 ac-ft/yr for FY 2011-12, which means that GSWC's current pumping right is 6,134 ac-ft/yr. However, since the OSY is set annually by the Watermaster, it was conservatively assumed that the long-term average OSY will be equal to 190,000 ac-ft/yr, for a pumping right of 5,550 ac-ft/yr. This total could be augmented by purchasing or leasing water rights from other right-holders in the basin. Furthermore, the adjudication for the Main San Gabriel Basin permits producers to carry over water rights from previous years and to pump more than their share of the OSY, provided they pay a replenishment fee for all excess production. The historic low, high, and current operating safe yield for the Main San Gabriel Basin are shown in Table 4-2.

Table 4-2: Main San Gabriel Basin Groundwater Pumping Rights

| Condition/Time Period | Operating Safe Yield (ac-ft/yr) | GSWC Pumping Rights[1] (ac-ft/yr) |
|---|---|---|
| Historic Low OSY (FY 1991 – 1992) | 140,000 | 4,089 |
| Historic High OSY (FY 2005 – 2007) | 240,000 | 7,011 |
| Current OSY (FY 2011 – 2012) | 210,000 | 6,134 |

Notes:
1. GSWC pumping right is equal to 2.92105 percent of the OSY for the South Arcadia and South San Gabriel Systems.
2. OSY is reassessed on an annual basis.

GSWC's South San Gabriel System currently operates 3 active wells in the Main San Gabriel Groundwater Basin; they are listed in Table 4-3. Well production capacity is provided in terms of instantaneous capacity in gpm and annual yield in ac-ft/yr for the South San Gabriel System. The total normal year active well capacity for GSWC's South San Gabriel System is 2,700 gpm (4,356 ac-ft/yr).

Table 4-3: Well Name and Capacity

| Well Name | Current Well Capacity (gpm)[1] | Current Well Capacity (ac-ft/yr) |
|---|---|---|
| Earle | 0 | 0 |
| Garvey No. 1 | 0 | 0 |
| Garvey No. 2 | 0 | 0 |
| San Gabriel No. 1 | 1,200 | 1,936 |
| San Gabriel No. 2 | 0 | 0 |
| Saxon No. 3 | 1,000 | 1,613 |
| Saxon No. 4 | 500 | 807 |
| **Total Capacity** | **2,700** | **4,356** |

Note:
1. 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 groundwater pumping history for the South San Gabriel System for calendar years 2005 through 2010. The amount of water pumped from the Main San Gabriel Basin for the South San Gabriel System has varied through this 5 year period. From 2005 to 2010, groundwater represented between 68 and 92 percent of the total water supply for the South San Gabriel System.

Table 4-4: Groundwater Pumping History by South San Gabriel System (2005 to 2010) in ac-ft

| Basin Name | Metered or Unmetered | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|---|---|---|---|---|---|---|---|
| Main San Gabriel | Metered | 2,192 | 2,555 | 2,912 | 2,877 | 2,628 | 2,352 |
| Percent of Total Water Supply | | 68% | 74% | 90% | 92% | 91% | 87% |

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

The projected groundwater pumping volumes for the South San Gabriel System through 2035 are summarized in Table 4-5. If needed, the South San Gabriel System's share of the OSY could be augmented through the purchase or lease of pumping rights from other producers in the Main San Gabriel Basin. The adjudication for the Main San Gabriel Basin also permits a producer to pump more than its share of the OSY if replenishment water is available, and if the producer pays a replenishment fee for all production in excess of the allocated rights.

Table 4-5: Projected Groundwater Pumping Amounts by South San Gabriel System to 2035 in ac/ft

| Basin Name | 2010 | 2015 | 2020 | 2025 | 2030 | 2035 |
|---|---|---|---|---|---|---|
| Main San Gabriel | 2,352 | 1,313 | 1,134 | 991 | 850 | 733 |
| Percent of Total Water Supply | 87% | 38% | 32% | 28% | 23% | 20% |

Notes:
1. Table format based on DWR Guidebook Table 19.
2. Years are reported in calendar years (January 1 – December 31).

## 4.4 Transfers and Exchanges

GSWC has historically transferred groundwater rights for its holdings in the Main San Gabriel Basin between the San Dimas District and the San Gabriel District. Additionally, if GSWC's actual need for groundwater exceeds its share of the OSY, GSWC can lease available groundwater rights from other producers in the basin to increase their allowed pumping. GSWC has the ability to obtain leases for additional groundwater in the Main San Gabriel Basin annually, on an as-needed basis, following an evaluation of the economic benefits to their rate payers.

No specific transfer or exchange opportunities have been identified in the South San Gabriel System at this time; therefore, Table 4-6 has been left blank.

Table 4-6: 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

GSWC, as a part of its normal maintenance and operations, will construct new wells, pipelines, and treatment systems as needed as a part of its ongoing Capital Investment Program to maintain its supply and meet distribution system requirements.

Additionally, GSWC participates with the Upper District in a variety of programs intended to enhance regional water supply. These projects include surface water treatment plant improvements, groundwater replenishment and recharge studies, recycled water, and groundwater cleanup. In addition, the Upper District is currently evaluating the expanded use of recycled water for groundwater recharge. See the Upper District's 2010 UWMP for details.

A 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. Table 4-7 shows the potential water supply that could be provided by the Cadiz Project.

Table 4-7: 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 4-8 provides the Upper District's existing and planned water sources available to the South San Gabriel System during normal years. These supplies are expected to meet the projected imported water demands.

Table 4-8: Existing and Planned Wholesale Water Supplies in ac-ft/yr

| Wholesaler Sources | Contracted Volume | 2010 | 2015 | 2020 | 2025 | 2030 | 2035 |
|---|---|---|---|---|---|---|---|
| USGVMWD | | 338 | 2,097 | 2,375 | 2,604 | 2,828 | 3,015 |

Note:
This table is based on DWR Guidebook Table 17.

Table 4-9 demonstrates the reliability of wholesale water supply available to meet annual water demand under an average, single-dry year condition for the South San Gabriel System. The table includes single-dry year and multiple-dry year supplies for 2035. The Upper District is assured by Metropolitan of 100 percent reliability to meet the water demand through 2035 (Metropolitan RUWMP, 2010).

Table 4-9: Reliability of Wholesale Supply for Year 2035 in ac-ft/yr

| | | | Multiple-Dry Water Years | | |
|---|---|---|---|---|---|
| Wholesaler | Average / Normal Water Year Supply | Single-Dry | Year 1 | Year 2 | Year 3 |
| USGVMWD | 3,015 | 3,015 | 3,015 | 3,015 | 3,015 |
| Percent Normal | | 100 | 100 | 100 | 100 |

Note:
Table format based on DWR Guidebook Table 31.

Table 4-10 lists factors affecting wholesale supply for the South San Gabriel System. Metropolitan intends to provide 100 percent supply reliability to the Upper District, which in turn provides 100 percent reliability of supply to the South San Gabriel System.

Table 4-10: Factors Affecting Wholesale Supply

| Name of Supply | Legal | Environmental | Water Quality | Climatic |
|---|---|---|---|---|
| USGVMWD | 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 South San Gabriel System. Section 10631(i) of the Act requires an evaluation of desalination opportunities within the South San Gabriel 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.*

GSWC obtains the majority of its water supply for the South San Gabriel System from local groundwater which has not been impacted by salinity issues and does not require desalination. There are currently no opportunities for using desalinated water as a source of water supply for the South San Gabriel System by GSWC or the groundwater basin responsible agency, Upper District. Therefore, Table 4-11 has been intentionally left blank.

Upper District has concluded that due to the high quality (low TDS concentration) groundwater, Upper District and its member agencies do not need to investigate the use of desalination to develop or reestablish a new long-term supply (Upper District, 2011). Likewise, while it is currently economically impractical and infeasible for GSWC to participate in a desalination program that directly benefits the South San Gabriel System, GSWC would be open to considering partnering opportunities with other water suppliers in the region who may participate in a desalination project that would provide a direct or indirect benefit through mechanisms such as groundwater replenishment.

Table 4-11: Summary of Opportunities for Water Desalination

| Source of Water | Yield (ac-ft/yr) | Start Date | Type of Use | Other |
|---|---|---|---|---|
| None | N/A | N/A | N/A | N/A |

## 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) 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 recycled water currently being used in the supplier's service area, including, but not limited to, the type, place, and quantity of use.*
> *(c) 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 4-12 summarizes the role of the agencies that participate in the development of recycled water plans that affect the South San Gabriel System of the Golden State Water Company (GSWC).

Table 4-12: Role of Participating Agencies in the Development of the Recycled Water Plan

| Participating Agencies | Role in Plan Development |
|---|---|
| Water agencies | GSWC works closely with the Los Angeles County Sanitation District (LACSD) in planning a potential recycled water distribution system and identifying potential recycled water customers. The Upper San Gabriel Valley Municipal Water District acting as the recycled water wholesaler, would lead the way in implementing the recycled water plan and distribution network. |
| Wastewater agencies | The LACSD provides 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 | Los Angeles County Sanitation District plays a key role in conducting data and customer assessments, as well as analyzing community and economic impacts. |

### 4.8.2 Wastewater Quantity, Quality, and Current Uses

Wastewater in the South San Gabriel System is collected by gravity sewers and lift stations owned by the cities of Rosemead, San Gabriel, and Monterey Park, as well as by the Sanitation Districts of Los Angeles County (LACSD). The wastewater is transported through trunk sewers to LACSD's San Jose Creek and Whittier Narrows Water Reclamation Plants (WRP).

The San Jose Creek WRP provides primary, secondary, and tertiary treatment for an average dry weather flow (DWF) of 100 million gallons of wastewater per day (mgd). The plant serves a largely residential population of approximately one million people. About 35 mgd of treated effluent from San Jose Creek WRP is reused at 17 different sites. The recycled water is primarily used for groundwater recharge and agricultural and landscape irrigation. The remaining effluent (65 mgd) is discharged into the San Gabriel River (LACSD 2011).

The Whittier Narrows WRP provides primary, secondary, and tertiary treatment for an average DWF of 15 mgd. The plant serves a population of approximately 150,000 people. According to the LACSD, nearly all of the treated effluent is reused as groundwater recharge into the Rio Hondo and San Gabriel Coastal Spreading Grounds or for irrigation at an adjacent nursery. Any remaining effluent is discharged into the San Gabriel River (LACSD 2011).

Because the Whittier Narrows and San Jose Creek WRPs treat wastewater for a larger population than exists in the South San Gabriel System, an estimated per capita wastewater generation factor was used to calculate the volume of wastewater generated by GSWC's customers in South San Gabriel. Based on the populations served and the average wastewater treatment rates for the San Jose Creek and Whittier Narrows WRPs as detailed above, the average per capita wastewater generation factor for both of these WRPs is 100 gallons per person per day. This factor was used to estimate existing and projected volumes of wastewater collected and treated in the South San Gabriel System as summarized in Table 4-13.

Because all of the effluent from Whittier Narrows and San Jose Creek WRPs is treated to meet Title 22 recycled water standards, 100 percent of the treated effluent is included in Table 4-13 as meeting such standards. However, out of the combined wastewater effluent (115 mgd) from these two treatment plants, 50 mgd (43 percent) of the treated water is actively reused throughout the region. Therefore, the assumption is that 43 percent of the treated wastewater that is collected in the South San Gabriel System is recycled while the remaining 57 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 riverbed, LACSD does not consider this an active recycled water use. Table 4-14 lists the estimates of existing and projected volumes of treated effluent collected from the South San Gabriel System that will be discharged into the San Gabriel River.

Although much of the wastewater generated in the South San Gabriel System is recycled, all of the reuse sites are elsewhere in the LACSD system, and there are no existing uses of recycled water within the boundaries of the South San Gabriel service area. Therefore, Table 4-15 has intentionally been left blank.

Table 4-13: Estimates of Existing and Projected Wastewater Collection and Treatment in ac-ft/yr (mgd) for the South San Gabriel System

| | 2005(3) | 2010(3) | 2015 | 2020 | 2025 | 2030 | 2035 |
|---|---|---|---|---|---|---|---|
| Projected population in service area(2) | 28,140 | 28,715 | 29,414 | 30,065 | 30,710 | 31,332 | 31,932 |
| Wastewater collected and treated in service area(4) | 3,152 (2.81 mgd) | 3,216 (2.87 mgd) | 3,295 (2.94 mgd) | 3,368 (3.01 mgd) | 3,440 (3.07 mgd) | 3,510 (3.13 mgd) | 3,577 (3.19 mgd) |
| Quantity that meets recycled water standard | 3,152 (2.81 mgd) | 3,216 (2.87 mgd) | 3,295 (2.94 mgd) | 3,368 (3.01 mgd) | 3,440 (3.07 mgd) | 3,510 (3.13 mgd) | 3,577 (3.19 mgd) |

Notes:
1. This table is based on the DWR Guidebook Table 21.
2. For population projections see Section 2.3.
3. Based on calendar year.
4. Volumes of wastewater collected and treated are estimated based on the per capita generation factor. WW = population x 100 gal/day.

| Table 4-14: Estimates of Existing and Projected Disposal of Non-Recycled Wastewater in ac-ft/yr (mgd) for the South San Gabriel System | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Method of Disposal** | **Treatment Level** | **2005(2)** | **2010(2)** | **2015** | **2020** | **2025** | **2030** | **2035** |
| River Discharge | Tertiary | 1,782 (1.59) | 1,818 (1.62) | 1,862 (1.66) | 1,904 (1.70) | 1,944 (1.74) | 1,984 (1.77) | 2,022 (1.80) |

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

| Table 4-15: Existing Recycled Water Use in the South San Gabriel System | | |
|---|---|---|
| **Type of Use** | **Treatment Level** | **2010 Use (ac-ft/yr)** |
| N/A | N/A | N/A |

### 4.8.3 Potential and Projected Use

Although the wastewater generated in the South San Gabriel System is treated by the San Jose Creek and Whittier Narrows WRPs, the recycled water distribution networks from these two facilities do not extend to the South San Gabriel System. It is the responsibility of LACSD, as owner and operator of these facilities, to determine the feasibility of extending the recycled water distribution network to South San Gabriel. At this time, LACSD does not have plans to extend their distribution network.

In addition to LACSD, the Upper San Gabriel Municipal Water District (Upper District), a member agency of the Metropolitan Water District of Southern California, and a water provider for the GSWC, has developed a direct reuse project located in the vicinity of the South San Gabriel System. The Direct Reuse project will supply approximately 1,800 ac-ft/yr of recycled water to irrigation customers in the Whittier Narrows area in order to replace groundwater and imported potable water that historically has been used for irrigation at these customer locations. However, this project does not include GSWC customers within the South San Gabriel System.

Since no potential or projected recycled water use has been identified for the South San Gabriel System, Table 4-16 and Table 4-17 were intentionally left blank. In the 2005 UWMP for the South San Gabriel System there were no projections of recycled water by the year 2010, so Table 4-18 has also been left blank.

| Table 4-16: Potential Future Recycled Water Uses in ac-ft/yr | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Type of Use** | **Treatment Level** | **Description** | **Feasibility** | **2015** | **2020** | **2025** | **2030** | **2035** |
| N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

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** |
| N/A | N/A | N/A | N/A | N/A | N/A |

| Table 4-18: Comparison of Recycled Water Uses—Year 2000 Projections versus 2005 Actual | | |
|---|---|---|
| **Type of Use** | **2005 Projection for 2010** | **2010 Actual Use** |
| N/A | N/A | N/A |

Note:
This table is based on the DWR Guidebook Table 24.

### 4.8.4 Optimization and Incentives for Recycled Water Use

If and when the LACSD and/or Upper District decide to extend the distribution of recycled water to South San Gabriel, where feasible, GSWC will support the projects by encouraging recycled water use among its customers. However, because no plans exist to provide recycled water to the South San Gabriel System, there are no actions in place at this time by which GSWC is encouraging the use of recycled water in this system. Therefore, Table 4-19 is not applicable for this system and has been intentionally left blank.

| Table 4-19: Methods to Encourage Recycled Water Use and the Resulting Projected Use in ac-ft/yr | | | | | |
|---|---|---|---|---|---|
| **Actions** | **2015** | **2020** | **2025** | **2030** | **2035** |
| N/A | N/A | N/A | N/A | N/A | N/A |

Note:
This table is based on the DWR Guidebook Table 25.

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# 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, maintaining 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 South San Gabriel 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 Surface Water Quality

Treated surface water purchased from the Upper San Gabriel Valley Municipal Water District (Upper District) enters the South San Gabriel System through a single inter-connection. Metropolitan and Upper District are responsible for meeting all drinking water standards as water leaves the surface water treatment plant and at all inter-connections with the South San Gabriel System.

### 5.2.2 Groundwater Quality Management

Significant groundwater contamination in the Main San Gabriel Basin has resulted from industrial solvents known as volatile organic compounds (VOCs) and agricultural practices which contribute nitrates to the groundwater. In an effort to create a coordinated response to the groundwater contamination issue and to minimize impacts to groundwater supply, Main Basin water agencies adopted a joint resolution in 1989. This resolution assigned the Main Basin Watermaster the responsibility of developing and maintaining a 5-Year Water Quality and Supply Plan, subject to review by the Los Angeles Regional Water Quality Control Board. The objective of the 5-Year Plan is to coordinate cleanup projects, and ensure that pumping does not lead to degradation of water quality in the Main Basin. The Upper District also maintains a basinwide groundwater quality management and remediation plan (Upper District, 2010). As a result of these coordinated efforts by the Main Basin Watermaster and Upper District, groundwater quality is carefully monitored and activities are regulated to ensure that the effect of contamination on producers, including GSWC, is minimized.

### 5.2.3 Groundwater Quality

Table 5-1 summarizes water quality issues and recommendations for wells within the water system. The groundwater wells in the South San Gabriel System meet all current California Title 22 drinking water standards before water is delivered to customers. The following discussion relates to contaminants with maximum contaminant levels (MCLs) that are either existing or have been proposed by the 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.

Portions of the groundwater basin are impacted by contaminants from improper waste disposal. The contaminants consist primarily of volatile organic compounds (VOCs) and perchlorate. The water system has been able to compensate for the loss of the contaminated wells and maintain its extractions from the basin by upgrading equipment at existing well sites, and making other system improvements.

The water system currently includes a total of seven wells, four of which have been taken off-line due to groundwater contamination. These wells and associated contaminants are:

- Earle Well – VOCs
- Garvey Wells No. 1 and No. 2 – VOCs
- San Gabriel Well No. 2 – VOCs, perchlorate and nitrate

**Perchlorate.** To date, perchlorate has impacted two wells, San Gabriel Wells Nos. 1 and 2. In 2010, perchlorate treatment was removed due to a sustained decline in perchlorate levels at San Gabriel Well No. 1. In addition, granular activated carbon treatment is being provided to remove VOCs. An expansion of the treatment process is underway to bring San Gabriel Well No. 2 on-line.

**VOCs**. Volatile organic compounds (VOCs) have impacted the five wells, including the San Gabriel No. 1 Well for which granular activated carbon treatment is being used. VOC monitoring and actions at the other wells include drilling replacement wells, well destruction, or installation of wellhead treatment systems.

**Nitrate.** Nitrate currently impacts San Gabriel Well No. 2. There is currently no treatment in place for nitrate, and the well has been taken offline.

**1,4-Dioxane**. Recently, 1,4-Dioxane has been detected in San Gabriel Well No. 1. The average concentration is below the Notification Limit of 1 µg/L. 1,4-Dioxane monitoring occurs on a more frequent basis.

Should additional treatment for the constituents listed above including perchlorate, VOCs, or 1,4 dioxane removal be required in the future, it is anticipated it would take approximately 2 to 5 years to implement a best available technology wellhead treatment system such as ion exchange, GAC, or advanced oxidation. Consideration will also be included for alternative water quality management strategies such as blending or supply replacement.

**Radon**. Radon has also been detected in many of the wells in the system. In 1999, the USEPA has proposed a radon MCL at 300 pCi/L, with an alternative standard of 4,000 pCi/L if the state has an approved Multimedia Mitigation program to reduce the indoor radon risk from soil and rocks underneath homes and buildings. While the proposed radon rule has not proceeded to promulgation, the effect of the proposed radon MCL would be widespread in groundwater wells throughout California.

Groundwater production from most of the active wells in this system will be impacted if the radon MCL is set at 300 pCi/L. Best available technologies for radon removal include Packed Tower Aeration (PTA) and Granular Activated Carbon (GAC). Due to some critical operation concerns with the use of GAC, PTA is the most common and effective method for radon removal. Installation of treatment facilities at some of the well sites in this system may be problematic due to lack of available space for treatment equipment. It is expected the state will develop an approved Multimedia Mitigation program thus allow the alternative MCL standard. If an MCL is promulgated, Multimedia mitigation would be recommended for these wells.

| Table 5-1: Summary of Assessment | | | | | |
|---|---|---|---|---|---|
| **Well** | **Current Well Capacity (gpm)[1]** | **Status** | **Water Quality Issue/Concern** | **Existing Treatment** | **Recommendations** |
| Earle | 0 | Inactive | VOCs; Radon | | Destroy |
| Garvey No. 1 | 0 | Inactive | VOCs; Radon | | Destroy |
| Garvey No. 2 | 0 | Inactive | VOCs; Radon | | Destroy |
| San Gabriel No. 1 | 1,200 | Active | VOCs, Perchlorate & 1,4-Dioxane | GAC | Continue Treatment |
| San Gabriel No. 2 | 0 | Inactive | VOCs perchlorate; nitrate, Radon | | Provide Treatment; Future multimedia mitigation (radon) |
| Saxon No. 3 | 1,000 | Active | Radon | | Future Multimedia mitigation (radon) |
| Saxon No. 4 | 500 | Active | Radon | | Future Multimedia mitigation (radon) |

Note:

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

### 5.2.4 Distribution System Water Quality

Distribution system water quality monitoring is performed for several water quality parameters in the South San Gabriel 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 South San Gabriel 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 South San Gabriel System has also established an aggressive cross-connection control program to reduce the hazard associated with backflow and back-siphonage. These programs are required to comply with DHS regulations on Waterworks Standards and Cross Connection Control. Drinking water standard levels for disinfection by-products will be lowered in the future in accordance with the Stage 2 D/DBP Rule. It is anticipated that the system will meet the new standard without treatment or operational changes.

## 5.3 Projected Water Quality Impacts

As the water system loses additional wells due to groundwater contamination (Table 5-2), evaluations will be made to determine replacement water supply, treatment options and/or drilling new wells in accordance with the requirements of the Upper District's groundwater quality management policies.

Table 5-2: Summary of Projected Water Supply Changes Due to Water Quality Issues

| Water Source | Projected Change (ac-ft/yr) | | | | | |
|---|---|---|---|---|---|---|
| | 2010 | 2015 | 2020 | 2025 | 2030 | 2035 |
| Earle (to be destroyed) | (261) | 0 | 0 | 0 | 0 | 0 |
| Garvey No. 1 (to be destroyed) | (149) | 0 | 0 | 0 | 0 | 0 |
| Garvey No. 2 (to be destroyed) | (217) | 0 | 0 | 0 | 0 | 0 |
| San Gabriel No. 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| San Gabriel No. 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| Saxon No. 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| Saxon No. 4 | 0 | 0 | 0 | 0 | 0 | 0 |

Note:
Table format based on DWR Guidebook Table 30.

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# 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 South San Gabriel System obtains its water supply from two sources: Metropolitan imported water obtained from the Upper District San Gabriel Valley Municipal Water District (Upper District), and groundwater from the Main San Gabriel Groundwater Basin. The majority of the imported water delivered from the Upper District to its sub-agencies is used for groundwater recharge (Upper District, 2011). Upper District is the agency identified in the Main Basin Judgment that is responsible for importing water into the basin for the South Arcadia and South San Gabriel Systems. The Upper District imports water from Metropolitan, therefore, conditions in local and distant areas can impact the reliability of supplies. In general, GSWC's supply is expected to be 100 percent reliable through 2035. This is a result of the projected reliability of the Upper District as a member of Metropolitan, both of which intend to provide 100 percent reliable imported water supplies. Groundwater reliability is based on GSWC's share of the projected Main San Gabriel Basin annual OSY and the numerous current and planned projects in the Main San Gabriel Basin designed to increase the reliability of the groundwater supply. The following is a summary of the basis of this reliability.

### 6.1.1 Metropolitan Supply Reliability

Metropolitan member agencies in the San Gabriel Valley, including Upper District, are largely pass-through entities that obtain nearly all their imported water from Metropolitan, directly or indirectly. Metropolitan's resource management plans are intended to optimize the use of its available resources during surpluses and shortages to minimize the probability of severe shortages and eliminate the possibility of extreme shortages and shortage allocations

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.

### 6.1.2 The Upper District's Water Supply Reliability

In addition to Metropolitan's reliability initiatives, the Upper District and GSWC participate in a variety of programs intended to enhance the reliability of regional water supply. These projects include surface water treatment plant improvements, percolation studies, recycled water, and groundwater cleanup. In addition, the Upper District is currently evaluating the expanded use of recycled water for groundwater recharge. See the Upper District's 2010 UWMP for details.

### 6.1.3 South San Gabriel System's Water Supply Reliability

Supply reliability for the South San Gabriel System depends upon the reliability of imported water and local groundwater pumping, as discussed above.

Under the Main San Gabriel Basin Judgment, the Watermaster is responsible for managing withdrawals from the Basin by monitoring groundwater levels at the Baldwin Park Key Well. The Judgment states that the Watermaster shall not spread replenishment water when the groundwater level at the Key Well exceeds 250 feet above mean sea level (msl). The Judgment also states that the Watermaster shall spread replacement water necessary to maintain the water level elevation above 200 feet msl. During the period of management under the Judgment, significant drought events have occurred from 1969 to 1977, 1983 to 1991, and 1998 to 2004. In each drought cycle the Main San Gabriel Basin was managed to maintain groundwater levels. Based on historic management practices, all pumpers from the Main San Gabriel Basin will have adequate supply over the next 25 years under single year and multiple year drought periods (Upper District, 2011). The Upper District's UWMP provides basin-wide details about the reliability of the Main San Gabriel Basin.

GSWC and other water producers participate with the responsible agency, Upper District, to ensure that the OSY is available to the pumpers in the Main San Gabriel Basin. The Upper District has a cyclic storage agreement with Metropolitan and the Main Basin Watermaster. Cyclic storage accounts have been used to increase storage in the basin since 1975. Metropolitan pre-delivers replenishment water to the Basin and later sells the stored water to the water districts at a reduced rate. Metropolitan can store up to 100,000 ac-ft of water for the Upper District. Currently, Metropolitan has 22,633 ac-ft of water in storage for Upper District (Main San Gabriel Basin Watermaster 2010).

The Main San Gabriel Groundwater Basin's pumping and reliability is subject to the OSY established each fiscal year by the Watermaster and the availability of replenishment water. Long-term cyclic storage provides a mechanism that allows the responsible agency to establish a buffer during droughts and periods of reduced OSY by allowing for storage recharge waters during times of available import supplies. Recharge in the basin occurs from percolation of precipitation, return flow of applied water, some septic system discharges, and stream flow. Recharge through streams and spreading basins is generated from runoff from surrounding mountains and imported water from the State Water Project and the Colorado River.

There are also pending amendments to the Judgment that would enhance groundwater reliability in the basin. The Watermaster has determined that its 1973 Judgment may require changes to reflect the current conditions and allow the Watermaster more flexibility in securing necessary supplemental supplies. The Watermaster expects proposed changes to be finalized and submitted to the Los Angeles Superior Court for approval after FY 2010-11 (Watermaster 2010). Some of the key proposed changes that would enhance basin groundwater reliability and reduce vulnerability to droughts and uncertain imported supplies include:

- Storage and export –allow for outside water to be stored and exported by agreement with Watermaster;
- Recycled water –remove the limit on recycled water that can be recharged in 1 year;
- Key Well –eliminate the 250-foot upper limit at the Key Well for spreading imported water;
- Assessments –provide a means for the Watermaster to levy assessments to support endeavors such as pre-purchasing Replacement Water, development of new supplemental water resources (such as the recycled water recharge project), and to buy supplemental water that may become available unexpectedly or on short notice.

In part, the Main Basin reliability may also be increased through the groundwater management and replenishment efforts of the other responsible agencies in the basin. For example, the Upper San Gabriel Municipal Water District will supply approximately 15,000 ac-ft/yr of recycled water to irrigation customers through the San Gabriel Valley Water Recycling Direct Reuse Project. This project will optimize the availability of Metropolitan's imported water supply, enhancing the reliability of regional water supplies. This project replaces untreated imported water used for groundwater replenishment and irrigation. There are four phases to this project, two of which have been completed in 2007. The remaining two phases include the following:

Phase IIA-Rosemead Extension expands Phase IIA-Whittier Narrows Project to provide recycled water in the near future to the Whittier Narrows Golf Course, several schools, parks and industrial complexes. The project began construction in September 2009 and is projected to be completed by summer of 2011. Pipeline construction is complete and retrofits are being designed. The facilities for Phase IIA-Rosemead Extension include an approximate 2.5-mile

long pipeline. An approximate demand of 720 acre-feet per year of high-quality water is anticipated to be supplied from the Whittier Narrows Water Reclamation Plant. The 720 acre-feet will be available during an average year, single-dry year and multiple-dry years.

Phase IIB Industry Project is separated into packages. Phase IIB includes the construction of new joint and local conveyance, storage, and distribution facilities, providing improved and extended recycled water service to potential customers in the Cities of West Covina and Walnut. Construction began in 2010 and is projected to be constructed by summer 2013. Phase IIB will supply approximately 1,600 acre-feet per year of recycled water to several landfills, parks, schools, open areas and commercial establishments from the San Jose Creek and Whittier Narrows Water Reclamation Plants. The 1,600 acre-feet will be available during an average year, single-dry year and multiple-dry years.

Table 6-1 presents 2035 water supply projections for imported and groundwater sources during a normal year, a single-dry year, and multiple-dry years for the South San Gabriel 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.

As described above, Metropolitan, which is the source of water to the Upper District, has indicated that it will maintain 100 percent reliability through 2035. GSWC bases its reliability projections for purchased supply beyond 2025 on Metropolitan's projections. The purchased 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 the Upper District has stated that it will meet projected demands under all anticipated hydrologic conditions.

Table 6-1: Supply Reliability for the South San Gabriel 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 |
| Purchased water from USGVMWD | 3,015 | 3,015 | 3,015 | 3,015 | 3,015 |
| Groundwater | 733 | 733 | 733 | 733 | 733 |
| Total | 3,748 | 3,748 | 3,748 | 3,748 | 3,748 |
| Percent of Normal | | 100% | 100% | 100% | 100% |

Note:
Table format based on DWR Guidebook Table 28.

The San Gabriel Basin Watermaster adjusts the OSY annually to account for fluctuations in groundwater availability in the Main San Gabriel Groundwater Basin. The Upper District's 2010 UWMP states that all pumpers, including GSWC, will have adequate supply to meet their demands during normal year, single-dry year, and multiple-dry year periods (Upper District, 2010). Replenishment water is used to replace the water pumped beyond a producer's share of the OSY and to maintain groundwater levels in the Key Well above 200 feet msl. The

replenishment water for the Main San Gabriel Basin will be supplied from imported water through the Upper District and Metropolitan. Metropolitan has provided its member agencies with a reliability analysis for imported water supplies, which indicates Metropolitan's plan to provide 100 percent reliability through 2035 (Metropolitan, 2010). Upper District has provided projections of up to 25,000 ac-ft/yr of untreated imported water and recycled water to be used for basin replenishment through Fiscal Year 2030-31 (Upper District, 2011).

The South San Gabriel System has pumped between 2,192 ac-ft/yr and 2,912 ac-ft/yr for the past 5 years. It is projected the South San Gabriel System will decrease pumping rates annually, pumping only 733 ac-ft/yr in 2035.

Table 6-2 lists single-dry year and multiple-dry year periods for groundwater supplies. The single-dry year and multiple-dry year periods are based on Upper District's and Metropolitan's analysis on the lowest average precipitation for a single year and consecutive multiple-year period, respectively. Metropolitan's estimates, based on average rainfall between 1922 and 2004, uses the average of these years for normal water year conditions. 1977 represents the single-dry year, and the years 1990-1992 represent the driest three consecutive years. Effective management by the Main San Gabriel Basin Watermaster is expected to ensure that the Basin will have sufficient storage to meet projected water demands for these periods, so the available supply is equal to the projected demands.

Table 6-2: Basis of Water Year Data

| Water Year Type | Base Year(s) | Historical Sequence |
|---|---|---|
| Normal Water Year[(2)] | Average of 1922 - 2004 | 1922 - 2004 |
| Single-Dry Water Year | 1977 | 1922 - 2004 |
| Multiple-Dry Water Years | 1990 - 1992 | 1922 - 2004 |

Notes:
1. Based on Metropolitan Water District 2010 RUWMP analysis of climate data.
2. Normal Water Year calculated from average precipitation for 1922-2004.
3. Table format based on DWR Guidebook Table 27.

Again, the Main San Gabriel Basin storage is used and the 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 Watermaster established under the Main San Gabriel Basin Judgment. The Basin has proven to be very reliable under extreme climate conditions over the last 30+ years and is expected to remain reliable through 2035.

### 6.1.4 Factors Resulting in Inconsistency of Supply

Table 6-3 presents factors that could potentially result in inconsistency of supply for the South San Gabriel System.

Although there are no known factors that would results in an inconsistency in overall water supply, it should be noted that groundwater extractions in the San Gabriel Basin are regulated by the Watermaster. Annually, the Watermaster establishes basin-wide pumping limits based on local hydrologic conditions and groundwater levels within the basins. In dry years, when the operating safe yield (OSY) is low and GSWC's water right is correspondingly reduced, GSWC

does have the option of leasing or purchasing water rights from other users in the basin and can thereby reliably meet all system demands. The adjudication for the Main San Gabriel Basin also permits a producer to pump more than its rights when replenishment water is available from the responsible agency. A replenishment fee is required for all production in excess of the allocated rights. As a result, GSWC does not foresee any inconsistency in its ability to supply the South San Gabriel System, and Table 6-3 is intentionally blank.

Table 6-3: Factors Resulting in Inconsistency of Supply

| Name of Supply | Legal | Environmental | Water Quality | Climatic |
|---|---|---|---|---|
| USGVMWD | N/A | N/A | N/A | N/A |
| Groundwater, Main San Gabriel Groundwater Basin | N/A | N/A | N/A | N/A |

Notes:
1. Table format based on DWR Guidebook Table 29.
2. N/A – Not Applicable.

## 6.2 Normal Water Year Analysis

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

Table 6-4: Comparison of Projected Normal Year Supply and Demand

| | 2015 | 2020 | 2025 | 2030 | 2035 |
|---|---|---|---|---|---|
| Water Supply Total (ac-ft/yr) | 3,410 | 3,509 | 3,595 | 3,678 | 3,748 |
| Water Demand Total (ac-ft/yr) | 3,410 | 3,509 | 3,595 | 3,678 | 3,748 |
| 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 South San Gabriel System in a single-dry year.

Table 6-5: Comparison of Projected Supply and Demand for Single-Dry Year

| | 2015 | 2020 | 2025 | 2030 | 2035 |
|---|---|---|---|---|---|
| Supply Total (ac-ft/yr) | 3,410 | 3,509 | 3,595 | 3,678 | 3,748 |
| Demand Total (ac-ft/yr) | 3,410 | 3,509 | 3,595 | 3,678 | 3,748 |
| 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 Upper District) intends to meet projected purchased 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. Upper District has determined that they can meet projected water demands for multiple-dry years, so the water supply is projected to equal the demand.

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

- Upper District determined that they can meet projected water demands for the multiple-dry year periods (see Chapter 3), and;
- Groundwater from the Main San Gabriel Groundwater Basin is expected to be 100 percent reliable in multiple-dry years.

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

In summary, GSWC, Metropolitan, and Upper District have implemented and will continue to implement projects to ensure the purchased 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 | 3,122 | 3,122 | 0 | 0% | 0% |
| 2014 | 3,266 | 3,266 | 0 | 0% | 0% |
| 2015 | 3,410 | 3,410 | 0 | 0% | 0% |
| 2016 | | | | | |
| 2017 | | | | | |
| 2018 | 3,470 | 3,470 | 0 | 0% | 0% |
| 2019 | 3,489 | 3,489 | 0 | 0% | 0% |
| 2020 | 3,509 | 3,509 | 0 | 0% | 0% |
| 2021 | | | | | |
| 2022 | | | | | |
| 2023 | 3,560 | 3,560 | 0 | 0% | 0% |
| 2024 | 3,577 | 3,577 | 0 | 0% | 0% |
| 2025 | 3,595 | 3,595 | 0 | 0% | 0% |
| 2026 | | | | | |
| 2027 | | | | | |
| 2028 | 3,644 | 3,644 | 0 | 0% | 0% |
| 2029 | 3,661 | 3,661 | 0 | 0% | 0% |
| 2030 | 3,678 | 3,678 | 0 | 0% | 0% |
| 2031 | | | | | |
| 2032 | | | | | |
| 2033 | 3,720 | 3,720 | 0 | 0% | 0% |
| 2034 | 3,734 | 3,734 | 0 | 0% | 0% |
| 2035 | 3,748 | 3,748 | 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.

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# Chapter 7: Conservation Program and Demand Management Measures

This Chapter addresses the water conservation requirements of the Act for the South San Gabriel 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 conservation program implementation for the San Gabriel Valley Reporting Unit includes the reporting of the South Arcadia and South San Gabriel systems. Therefore, this chapter includes the reporting for both 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 San Gabriel Valley 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 San Gabriel Valley 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 San Gabriel Valley Reporting Unit. GSWC also partners on conservation activities with its wholesale water suppliers, including Metropolitan and Upper San Gabriel Valley Municipal Water District (Upper District). GSWC's customers are eligible for 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 San Gabriel Valley 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.

| Table 7-2: Water Loss Control Evaluation Summary | | |
|---|---|---|
| **Report Year** | **Prescreen Completed** | **Prescreen Result** |
| 2006 | No | - |
| 2007 | No | - |
| 2008 | Yes | 93.20% |
| 2009 | Yes | 97.70% |

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.

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 San Gabriel Valley Reporting Unit 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 the San Gabriel Valley Reporting Unit 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 III. 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 San Gabriel Valley 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 63.1 percent of San Gabriel Valley 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 South San Gabriel System 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**

San Gabriel Valley Reporting Unit customers are notified of various conservation programs by the Community Education Department. GSWC had a 2010 annual budget of $6,100 for public outreach in the San Gabriel Valley Reporting Unit. 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.

In addition, the Upper District promotes water conservation through its many public information programs. The Upper District offers conservation brochures and posters, activity booklets, public outreach displays, oral presentations, and workshops to inform the public of conservation efforts. The Upper District also raises awareness about water conservation through paid advertising, press releases, news ads, media events, and through the Speaker's Bureau. Annually, Upper District hosts a water awareness festival (Water Fest) to raise public awareness about water conservation, water quality and other water-related issues.

Table 7-3: Outreach Activities

| Item | 2006 | 2007 | 2008 | 2009 | 2010 |
|---|---|---|---|---|---|
| Paid Advertising | 3 | 2 | 4 | 4 | 4 |
| Public Service Announcement | 2 | 1 | 3 | 4 | 4 |
| Bill Inserts / Newsletters / Brochures | 2 | 4 | 3 | 8 | 8 |
| Bill showing water usage in comparison to previous year's usage | Yes | Yes | Yes | Yes | Yes |
| Demonstration Gardens | 0 | 0 | 0 | 1 | 1 |
| Special Events, Media Events | 2 | 1 | 4 | 2 | 2 |
| Speaker's Bureau | 0 | 0 | 1 | 0 | 0 |
| Program to coordinate with other government agencies, industry, public interest groups and media | Yes | Yes | Yes | Yes | Yes |

### School Education Programs

GSWC sponsors a school education program in South San Gabriel elementary schools, as implemented by The Discovery Science Center (DSC) ), with a 2010 annual budget of $39,000. 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 | 12 | 3 | - | - | - |
| Grade | $4^{th}$ – $6^{th}$ | $4^{th}$ – $6^{th}$ | 4 – $6^{th}$ | - | - |
| Number of students | 666 | 591 | 2,234 | 746 | 1,367 |

In addition, Upper District directly offers school education programs in an effort to raise awareness of water issues. Upper District started its school education programs in September 1992 and the materials and presentations meet state education framework requirements. The following is a list of Upper District's school educational programs.

- Water Awareness Art Contests
- Solar Cup Competition
- Water Education Grant Program
- Annual Art Poster Contest for grades K through $3^{rd}$ and $4^{th}$ through $6^{th}$
- T-shirt Art Contest for grades $7^{th}$ through $12^{th}$
- Water Resource Library

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 company-wide.

<u>Implementation Steps and Schedule</u>

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, Upper District, 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 San Gabriel Valley Reporting Unit's demand.

## 7.4 Programmatic DMMs

GSWC intends to continue to comply with the MOU using the BMP compliance approach for the San Gabriel Valley Reporting Unit. Implementation of the programmatic BMPs will continue to be a joint effort with Metropolitan and Upper District. The wholesalers are responsible for administering most of the Residential, Landscape, and CII BMPs currently being offered to San Gabriel Valley Reporting Unit customers. Additional detailed descriptions of wholesaler DMM implementation can also be found in Metropolitan's 2010 RUWMP, as well as Upper District's 2010 UWMP 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 the San Gabriel Valley Reporting Unit, where the avoided cost of water is $926 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

| | 2006 | 2007 | 2008 | 2009 | 2010 |
|---|---|---|---|---|---|
| **Single-Family Accounts** | | | | | |
| Surveys Offered | 0 | 0 | 1,251 | 0 | 0 |
| Surveys Completed | 0 | 0 | 227 | 0 | 0 |
| **Multi-Family Accounts** | | | | | |
| Surveys Offered | 0 | 0 | 1,251 | 0 | 0 |
| Surveys Completed | 0 | 0 | 227 | 0 | 0 |
| **Devices** | | | | | |
| Showerheads | 569 | 0 | 2,234 | 0 | 0 |
| Aerators | 1,300 | 0 | 2,234 | 0 | 0 |

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 175 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 174 surveys per year, it is estimated that GSWC will save more than 300 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. At 75 percent saturation, the potential total savings is approximately 54 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 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 more than 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 the San Gabriel Valley Reporting Unit is provided in Table 7-6.

Table 7-6: HECW Rebates

| | 2006 | 2007 | 2008 | 2009 | 2010 | TOTAL |
|---|---|---|---|---|---|---|
| Rebates | 44 | 0 | 149 | 0 | 282 | 475 |

Implementation Steps and Schedule

To comply with the BMP, rebates need to be issued to 104 customers per year in the San Gabriel Valley Reporting Unit 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 142 ac-ft from 104 annual HECW installations 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 HET rebate program administered by Metropolitan since 2008. Metropolitan has provided incentives for toilet programs since 1988, including ultra-low-flush toilet (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). ULFTs 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 South San Gabriel advertises the rebates and provides a link to the Metropolitan website for full details. The number of rebates issued by Metropolitan to GSWC San Gabriel Valley Reporting Unit customers is provided in Table 7-7.

Table 7-7: Toilet Rebates and Replacements Received by San Gabriel Valley Reporting Unit Customers

| Type | 2006 | 2007 | 2008 | 2009 | 2010 |
|---|---|---|---|---|---|
| **Single-Family** | | | | | |
| ULFT Rebate | 350 | 0 | 11 | 0 | 0 |
| HET Rebate | 0 | 0 | 0 | 136 | 44 |
| **Multi-Family** | | | | | |
| ULFT Rebate | 0 | 0 | 9 | 0 | 0 |
| HET Rebate | 0 | 0 | 0 | 51 | 0 |

Implementation Steps and Schedule

To comply with the BMP, rebates need to be issued to 93 SF and 23 MF customers per year in the San Gabriel Valley Reporting Unit. 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 141 ac-ft from HET installations completed over the next 10 years at required implementation levels of 93 SF and 23 MF installations per year. There are no anticipated impacts on GSWC's ability to further reduce demands.

#### 7.4.1.5 WaterSense Specification for Residential Development

Integration of 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 San Gabriel Valley Reporting Unit customers from 2006 to 2010. GSWC customers are eligible to participate in Upper District and Metropolitan's CII 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.

| Table 7-8: CII Programs | | | | | |
|---|---|---|---|---|---|
| **Program** | **2006** | **2007** | **2008** | **2009** | **2010** |
| CII HET Rebates | 0 | 0 | 2 | 0 | 0 |
| CII ULFT Rebates | 0 | 0 | 0 | 0 | 0 |
| Dual Flush Toilets | 0 | 0 | 0 | 0 | 0 |
| CII Urinal Rebates | 0 | 0 | 16 | 1 | 37 |
| CII HECW Rebates | 0 | 0 | 0 | 0 | 0 |
| Cooling Tower Controllers | 0 | 0 | 0 | 0 | 0 |
| Cash for Grass | 0 | 0 | 0 | 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 94 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 9 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. The program is available to all large landscape customers free of charge. An increase in conservation pricing rates in 2011 is expected to prompt increased participation, and funding has been designated for improved program marketing.

Upper District's large landscape conservation program includes the Synthetic Turf Grant School Program. The Goal of the Synthetic Turf Grant Program is to assist schools with funding for retrofitting large landscaped areas with synthetic turf. Through this program, Upper District offers grants of up to $75,000 per site to assist with the cost of installing synthetic turf. Since the start of the program in fiscal year 2005-06, five schools have participated in this program. Based on an estimated service life of 10 years for synthetic turf, the total annual water savings for the 5 synthetic turf programs is estimated at 53 acre-feet.

Implementation Steps and Schedule

Implementation of this BMP will be improved by promoting existing incentive opportunities s 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/Upper District will need to develop evapotranspiration-based landscape water budgets for 9 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 Used 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 279 AF could be conserved by 2020 (Table 7-9). There are no anticipated impacts on GSWC's ability to further reduce demands.

Table 7-9: Water Savings for Large Landscape Programs

| Large Landscape Conservation Program | Units per Year | Water savings over next 10 Years (ac- ft) |
|---|---|---|
| CII WBIC Rebates | 9 | 46 |
| CII WBIC Direct Install | 9 | 46 |
| CII Precision Nozzles Distribution | 1,330 | 85 |
| Dedicated Irrigation Surveys | 9 | 102 |
| TOTAL | 1,357 | 279 |

## 7.5 SBX7-7 Compliance Strategy

The SBX7-7 water use baseline for the South San Gabriel System is 105 gpcd, and the 2020 compliance goal is 100 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 m and other conservation measures. Over the past 3 years, there has been a recent 13 percent decline in gpcd in the South San Gabriel System from 97 gpcd in 2008 to an estimated 84 gpcd in 2010. Therefore, the South San Gabriel 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 100 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, Upper District, 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.

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# 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 South San Gabriel 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.

Table 8-1: Water Supply Shortage Stages and Conditions

| 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 existing water supply sources.

Table 8-2 summarizes the minimum volume of water available from each existing 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 purchased water supplies will meet projected imported water demands under all anticipated hydrologic conditions.

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

- Adjudicated groundwater rights in the Main San Gabriel Basin,
- anticipated benefits of groundwater replenishment provisions and conjunctive use storage programs, and
- the projected reliability of Metropolitan water supplies purchased through USGVMWD, 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** |
| Purchased water from USGVMWD | 689 | 1,041 | 1,393 | 337 |
| Groundwater | 2,144 | 1,936 | 1,729 | 2,352 |
| Recycled water | - | - | - | 0 |
| Total | 2,833 | 2,978 | 3,122 | 2,689 |

Note:
This table is based on the 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 | • Isolate areas that will take the longest to repair and/or present a public health threat. Arrange to provide emergency water.<br>• Establish water distribution points and ration water if necessary.<br>• If water service is restricted, attempt to provide potable water tankers or bottled water to the area.<br>• Make arrangements to conduct bacteriological tests, in order to determine possible contamination.<br>• Utilize backup power supply to operate pumps in conjunction with elevated storage. |
| Earthquake | • Assess the condition of the water supply system.<br>• Complete the damage assessment checklist for reservoirs, water treatment plants, wells and boosters, system transmission and distribution.<br>• Coordinate with Cal EMA utilities group or fire district to identify immediate fire fighting needs.<br>• Isolate areas that will take the longest to repair and/or present a public health threat. Arrange to provide emergency water.<br>• 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.<br>• Take actions to preserve storage.<br>• Determine any health hazard of the water supply and issue any “Boil Water Order” or “Unsafe Water Alert” notification to the customers, if necessary.<br>• Cancel the order or alert information after completing comprehensive water quality testing.<br>• Make arrangements to conduct bacteriological tests, in order to determine possible contamination. |
| Malevolent acts | • Assess threat or actual intentional contamination of the water system.<br>• Notify local law enforcement to investigate the validity of the threat.<br>• Get notification from public health officials if potential water contamination<br>• Determine any health hazard of the water supply and issue any “Boil Water Order” or “Unsafe Water Alert” notification to the customers, if necessary.<br>• Assess any structural damage from an intentional act.<br>• 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.

Table 8-4: Summary of Mandatory Prohibitions

| 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.

# 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 19, 2011

City of Arcadia
Corkran W. Nicholson
Planning Services Manager
240 W. Huntington Drive
Arcadia, CA 91006

Subject: ***REVISED***-Notification of Public Hearing for the 2010 Urban Water Management Plan (UWMP) Golden State Water Company –Claremont, San Gabriel and South Arcadia Water Systems.

Dear Corkran:

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:

Claremont, San Gabriel and South Arcadia

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

San Gabriel Customer Service Center
110 East Live Oak
Arcadia, CA 91006

Claremont Customer Service Center
689 West Foothill Blvd., Suite D
Claremont, CA 91711

A public hearing to solicit comments on the draft UWMP's will be held at 6:00 p.m., on *Thursday, August 18, 2011,* and take place at:

San Dimas/Senior Community Center
201 E. Bonita Avenue
San Dimas, CA 91773

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 19, 2011

City of Arcadia
Philip A. Wray
City Engineer
240 W. Huntington Drive
Arcadia, CA 91006

Subject: ***REVISED***- Notification of Public Hearing for the 2010 Urban Water Management Plan (UWMP)Golden State Water Company –Claremont, San Gabriel and South Arcadia Water Systems.

Dear Phillip:

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:

Claremont, San Gabriel and South Arcadia

The UWMP's will be available for public review one week prior to the public hearing during normal business hours. Please call 1-800-999-4033 to make an appointment to view the plans at the following locations:

San Gabriel Customer Service Center
110 East Live Oak
Arcadia, CA 91006

Claremont Customer Service Center
689 West Foothill Blvd., Suite D
Claremont, CA 91711

A public hearing to solicit comments on the draft UWMP's will be held at 6:00 p.m., on *Thursday, August 18, 2011* and take place at:

San Dimas/Senior Community Center
201 E. Bonita Avenue
San Dimas, CA 91773

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 19, 2011

City of Claremont
Chris Veirs
City Planner
P.O. Box 880
Claremont, CA 91711

Subject: ***REVISED***-Notification of Public Hearing for the 2010 Urban Water Management Plan (UWMP) Golden State Water Company –Claremont, San Gabriel and South Arcadia Water Systems.

Dear Chris:

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:

Claremont, San Gabriel and South Arcadia

The UWMP's will be available for public review one week prior to the public hearing during normal business hours. Please call 1-800-999-4033 to make an appointment to view the plans at the following locations:

San Gabriel Customer Service Center
110 East Live Oak
Arcadia, CA 91006

Claremont Customer Service Center
689 West Foothill Blvd., Suite D
Claremont, CA 91711

A public hearing to solicit comments on the draft UWMP's will be held at 6:00 p.m., on *Thursday, July 19, 2011* and take place at:

San Dimas/Senior Community Center
201 E. Bonita Avenue
San Dimas, CA 91773

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

May 17, 2011

City of Covina
Michael A. Marquez
Community Development Director
125 E. College Street
Covina, CA 91723

Subject: Notification of Public Hearing for the 2010 Urban Water Management Plan (UWMP) Golden State Water Company – San Dimas, Claremont, San Gabriel and South Arcadia Water Systems.

Dear Michael:

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:

San Dimas, Claremont, San Gabriel and South Arcadia

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:

San Dimas Customer Service Office
121 Exchange Place
San Dimas, CA 91773

San Gabriel Customer Service Center
110 East Live Oak
Arcadia, CA 91006

Claremont Customer Service Center
689 West Foothill Blvd., Suite D
Claremont, CA 91711

A public hearing to solicit comments on the draft UWMP will be held at 6:00 p.m., on Tuesday, July 19, 2011 and take place at:

San Dimas Community Center
201 E. Bonita Avenue
San Dimas, CA 91773

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 19, 2011

City of El Monte
James Troyer
Planning Services Manager
11333 Valley Blvd.
El Monte, Ca 91732

Subject: ***REVISED***-Notification of Public Hearing for the 2010 Urban Water Management Plan (UWMP) Golden State Water Company –Claremont, San Gabriel and South Arcadia Water Systems.

Dear James:

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:

Claremont, San Gabriel and South Arcadia

The UWMP's will be available for public review one week prior to the public hearing during normal business hours. Please call 1-800-999-4033 to make an appointment to view the plans at the following locations:

San Gabriel Customer Service Center
110 East Live Oak
Arcadia, CA 91006

Claremont Customer Service Center
689 West Foothill Blvd., Suite D
Claremont, CA 91711

A public hearing to solicit comments on the draft UWMP's will be held at 6:00 p.m., on *Thursday, August 18, 2011* and take place at:

San Dimas Community/Senior Center
201 E. Bonita Avenue
San Dimas, CA 91773

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 19, 2011

City of Irwindale
Tonya Pace
Director of Planning
5050 North Irwindale Ave.
Irwindale, CA 91706

Subject: ***REVISED-*** Notification of Public Hearing for the 2010 Urban Water Management Plan (UWMP)Golden State Water Company –Claremont, San Gabriel and South Arcadia Water Systems.

Dear Tonya:

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:

Claremont, San Gabriel and South Arcadia

The UWMP's will be available for public review one week prior to the public hearing during normal business hours. Please call 1-800-999-4033 to make an appointment to view the plans at the following locations:

San Gabriel Customer Service Center
110 East Live Oak
Arcadia, CA 91006

Claremont Customer Service Center
689 West Foothill Blvd., Suite D
Claremont, CA 91711

A public hearing to solicit comments on the draft UWMP's will be held at 6:00 p.m., on *Thursday, August 18, 2011* and take place at:

San Dimas Community/Senior Center
201 E. Bonita Avenue
San Dimas, CA 91773

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

May 17, 2011

City of La Verne
Hal Fredericksen
Community Development Director
3660 D Street
La Verne, CA 91723

Subject: Notification of Public Hearing for the 2010 Urban Water Management Plan (UWMP) Golden State Water Company – San Dimas, Claremont, San Gabriel and South Arcadia Water Systems.

Dear Hal:

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:

San Dimas, Claremont, San Gabriel and South Arcadia

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:

San Dimas Customer Service Office
121 Exchange Place
San Dimas, CA 91773

San Gabriel Customer Service Center
110 East Live Oak
Arcadia, CA 91006

Claremont Customer Service Center
689 West Foothill Blvd., Suite D
Claremont, CA 91711

A public hearing to solicit comments on the draft UWMP will be held at 6:00 p.m., on Tuesday, July 19, 2011 and take place at:

San Dimas Community Center
201 E. Bonita Avenue
San Dimas, CA 91773

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 19, 2011

City of Monrovia
Alice Griselle
Community Development Director
415 South Ivy Avenue
Monrovia, CA 91016

Subject: ***REVISED-*** Notification of Public Hearing for the 2010 Urban Water Management Plan (UWMP) Golden State Water Company –Claremont, San Gabriel and South Arcadia Water Systems.

Dear Alice:

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:

Claremont, San Gabriel and South Arcadia

The UWMP's will be available for public review one week prior to the public hearing during normal business hours. Please call 1-800-999-4033 to make an appointment to view the plans at the following locations:

San Gabriel Customer Service Center
110 East Live Oak
Arcadia, CA 91006

Claremont Customer Service Center
689 West Foothill Blvd., Suite D
Claremont, CA 91711

A public hearing to solicit comments on the draft UWMP's will be held at 6:00 p.m., on *Thursday, August 18, 2011* and take place at:

San Dimas Community/Senior Center
201 E. Bonita Avenue
San Dimas, CA 91773

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 19, 2011

City of Montclair
Steve Lustro
Community Development Director
5111 Bento Street
Montclair, CA 91763

Subject: ***REVISED-*** Notification of Public Hearing for the 2010 Urban Water Management Plan (UWMP) Golden State Water Company –Claremont, San Gabriel and South Arcadia Water Systems.

Dear Steve:

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:

Claremont, San Gabriel and South Arcadia

The UWMP's will be available for public review one week prior to the public hearing during normal business hours. Please call 1-800-999-4033 to make an appointment to view the plans at the following locations:

San Gabriel Customer Service Center
110 East Live Oak
Arcadia, CA 91006

Claremont Customer Service Center
689 West Foothill Blvd., Suite D
Claremont, CA 91711

A public hearing to solicit comments on the draft UWMP's will be held at 6:00 p.m., on *Thursday, August 18, 2011* and take place at:

San Dimas Community/Senior Center
201 E. Bonita Avenue
San Dimas, CA 91773

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 19, 2011

City of Monterey Park
Ray Hamada
Planning Manager
320 West Newmark Avenue
Monterey Park, CA 91754

Subject: ***REVISED***- Notification of Public Hearing for the 2010 Urban Water Management Plan (UWMP) Golden State Water Company – Claremont, San Gabriel and South Arcadia Water Systems.

Dear Ray:

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:

Claremont, San Gabriel and South Arcadia

The UWMP's will be available for public review one week prior to the public hearing during normal business hours. Please call 1-800-999-4033 to make an appointment to view the plans at the following locations:

San Gabriel Customer Service Center
110 East Live Oak
Arcadia, CA 91006

Claremont Customer Service Center
689 West Foothill Blvd., Suite D
Claremont, CA 91711

A public hearing to solicit comments on the draft UWMP's will be held at 6:00 p.m., on *Thursday, August 18, 2011* and take place at:

San Dimas Community/Senior Center
201 E. Bonita Avenue
San Dimas, CA 91773

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 19, 2011

City of Pomona
Mark Laccaretto
Planning Division
505 South Garey Avenue
Pomona, CA 91766

Subject: ***REVISED-*** Notification of Public Hearing for the 2010 Urban Water Management Plan (UWMP) Golden State Water Company – Claremont, San Gabriel and South Arcadia Water Systems.

Dear Mark:

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:

Claremont, San Gabriel and South Arcadia

The UWMP's will be available for public review one week prior to the public hearing during normal business hours. Please call 1-800-999-4033 to make an appointment to view the plans at the following locations:

San Gabriel Customer Service Center
110 East Live Oak
Arcadia, CA 91006

Claremont Customer Service Center
689 West Foothill Blvd., Suite D
Claremont, CA 91711

A public hearing to solicit comments on the draft UWMP's will be held at 6:00 p.m., on *Thursday, August 18, 2011* and take place at:

San Dimas Community/Senior Center
201 E. Bonita Avenue
San Dimas, CA 91773

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 19, 2011

City of Rosemead
Bradford Johnson
Planning Director
8838 Valley Blvd.
Rosemead, CA 91770

Subject: ***REVISED***- Notification of Public Hearing for the 2010 Urban Water Management Plan (UWMP) Golden State Water Company – Claremont, San Gabriel and South Arcadia Water Systems.

Dear Bradford:

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:

Claremont, San Gabriel and South Arcadia

The UWMP's will be available for public review one week prior to the public hearing during normal business hours. Please call 1-800-999-4033 to make an appointment to view the plans at the following locations:

San Gabriel Customer Service Center
110 East Live Oak
Arcadia, CA 91006

Claremont Customer Service Center
689 West Foothill Blvd., Suite D
Claremont, CA 91711

A public hearing to solicit comments on the draft UWMP's will be held at 6:00 p.m., on *Thursday, August 18, 2011* and take place at:

San Dimas Community/Senior Center
201 E. Bonita Avenue
San Dimas, CA 91773

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

May 17, 2011

City of San Dimas
Dan Coleman
Planning Manager
245 East Bonita Avenue
San Dimas, CA 91773

Subject: Notification of Public Hearing for the 2010 Urban Water Management Plan (UWMP) Golden State Water Company – San Dimas, Claremont, San Gabriel and South Arcadia Water Systems.

Dear Dan:

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:

San Dimas, Claremont, San Gabriel and South Arcadia

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:

San Dimas Customer Service Office
121 Exchange Place
San Dimas, CA 91773

San Gabriel Customer Service Center
110 East Live Oak
Arcadia, CA 91006

Claremont Customer Service Center
689 West Foothill Blvd., Suite D
Claremont, CA 91711

A public hearing to solicit comments on the draft UWMP will be held at 6:00 p.m., on Tuesday, July 19, 2011 and take place at:

San Dimas Community Center
201 E. Bonita Avenue
San Dimas, CA 91773

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 19, 2011

City of San Gabriel
Carol Banet
Planning Manager
425 South Mission Drive
San Gabriel, CA 91776

Subject: ***REVISED-*** Notification of Public Hearing for the 2010 Urban Water Management Plan (UWMP) Golden State Water Company –Claremont, San Gabriel and South Arcadia Water Systems.

Dear Carol:

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:

Claremont, San Gabriel and South Arcadia

The UWMP's will be available for public review one week prior to the public hearing during normal business hours. Please call 1-800-999-4033 to make an appointment to view the plans at the following locations:

San Gabriel Customer Service Center
110 East Live Oak
Arcadia, CA 91006

Claremont Customer Service Center
689 West Foothill Blvd., Suite D
Claremont, CA 91711

A public hearing to solicit comments on the draft UWMP's will be held at 6:00 p.m., on *Thursday, August 18, 2011* and take place at:

San Dimas Community/Senior Center
201 E. Bonita Avenue
San Dimas, CA 91773

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 19, 2011

City of Temple City
Joseph Lambert
Community Development Director
9701 Las Tunas Drive
Temple City, CA 91780

Subject: ***REVISED-*** Notification of Public Hearing for the 2010 Urban Water Management Plan (UWMP) Golden State Water Company –Claremont, San Gabriel and South Arcadia 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:

Claremont, San Gabriel and South Arcadia

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110 East Live Oak
Arcadia, CA 91006

Claremont Customer Service Center
689 West Foothill Blvd., Suite D
Claremont, CA 91711

A public hearing to solicit comments on the draft UWMP's will be held at 6:00 p.m., on *Thursday, August 18, 2011* and take place at:

San Dimas Community/Senior Center
201 E. Bonita Avenue
San Dimas, CA 91773

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 19, 2011

City of Upland
Jeffrey Bloom
Planning Director
460 North Euclid Avenue
Upland, CA 91786

Subject: ***REVISED***-Notification of Public Hearing for the 2010 Urban Water Management Plan (UWMP) Golden State Water Company –Claremont, San Gabriel and South Arcadia Water Systems.

Dear Jeffrey:

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:

Claremont, San Gabriel and South Arcadia

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San Gabriel Customer Service Center
110 East Live Oak
Arcadia, CA 91006

Claremont Customer Service Center
689 West Foothill Blvd., Suite D
Claremont, CA 91711

A public hearing to solicit comments on the draft UWMP's will be held at 6:00 p.m., on *Thursday, August 18, 2011* and take place at:

San Dimas Community/Senior Center
201 E. Bonita Avenue
San Dimas, CA 91773

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

May 17, 2011

City of Walnut
Tom Wiener
Director of Community Development
21201 La Puente Road
Walnut, CA 91789

Subject: Notification of Public Hearing for the 2010 Urban Water Management Plan (UWMP) Golden State Water Company – San Dimas, Claremont, San Gabriel and South Arcadia Water Systems.

Dear Tom:

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:

San Dimas, Claremont, San Gabriel and South Arcadia

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:

San Dimas Customer Service Office
121 Exchange Place
San Dimas, CA 91773

San Gabriel Customer Service Center
110 East Live Oak
Arcadia, CA 91006

Claremont Customer Service Center
689 West Foothill Blvd., Suite D
Claremont, CA 91711

A public hearing to solicit comments on the draft UWMP will be held at 6:00 p.m., on Tuesday, July 19, 2011 and take place at:

San Dimas Community Center
201 E. Bonita Avenue
San Dimas, CA 91773

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

May 17, 2011

Country of Los Angeles
Richard Brudckner
Director Department of Regional Planning
320 West Temple Street
Los Angeles, CA 90012

Subject: Notification of Public Hearing for the 2010 Urban Water Management Plan (UWMP) Golden State Water Company – San Dimas, Claremont, San Gabriel and South Arcadia Water Systems.

Dear Richard:

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:

San Dimas, Claremont, San Gabriel and South Arcadia

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121 Exchange Place
San Dimas, CA 91773

San Gabriel Customer Service Center
110 East Live Oak
Arcadia, CA 91006

Claremont Customer Service Center
689 West Foothill Blvd., Suite D
Claremont, CA 91711

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San Dimas Community Center
201 E. Bonita Avenue
San Dimas, CA 91773

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 19, 2011

Country of Los Angeles
Richard Brudckner
Director Department of Regional Planning
320 West Temple Street
Los Angeles, CA 90012

Subject: ***REVISED***- Notification of Public Hearing for the 2010 Urban Water Management Plan (UWMP) Golden State Water Company –Claremont, San Gabriel and South Arcadia Water Systems.

Dear Richard:

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:

Claremont, San Gabriel and South Arcadia

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110 East Live Oak
Arcadia, CA 91006

Claremont Customer Service Center
689 West Foothill Blvd., Suite D
Claremont, CA 91711

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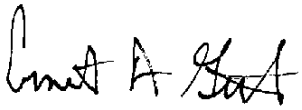
San Dimas Community/Senior Center
201 E. Bonita Avenue
San Dimas, CA 91773

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

Very truly yours,
GOLDEN STATE WATER COMPANY



Ernest A. Gisler
Planning Manager

(Space below for use of County Clerk only)

**SAN GABRIEL VALLEY TRIBUNE**

**Affiliated with**
**SGV Newspaper Group**
**1210 N. Azusa Canyon Road**
**West Covina, CA 91790**

## 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 **SAN GABRIEL VALLEY TRIBUNE**, a newspaper of general circulation which has been adjudicated as a newspaper of general circulation by the Superior Court of the County of Los Angeles, State of California, on the date of September 10, 1957, Case Number 684891. 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:

6/15/11, 6/22/11

I declare under penalty of perjury that the foregoing is true and correct.

Executed at West Covina, LA Co. California
This 22nd day of June, 2011

Signature

12/22/9

*A0000022580 60*

Proof of Publication of

Golden State
Water Company
A Subsidiary of American States Water 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 July 19, from 6 p.m. to 7 p.m. at the San Dimas Community Center, 201 East Bonita Avenue, San Dimas, to solicit comments on the Urban Water Management Plans (UWMPs) for the company's San Dimas, Claremont, San Gabriel and South Arcadia water systems.

GSWC's San Dimas Water System serves customers in San Dimas and portions of Charter Oaks, Covina, Glendora, La Verne, and Walnut.

The company's Claremont Water System serves customers in Claremont and portions of Montclair, Pomona, and Upland.

GSWC's San Gabriel and South Arcadia Water Systems serve customers in portions of Arcadia, El Monte, Irwindale, Monrovia, Monterey Park, Rosemead, San Gabriel, and Temple City.

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

San Dimas Customer Service Office
121 Exchange Place
San Dimas, CA 91773

San Gabriel Customer Service Office
110 East Live Oak
Arcadia, CA 91006

Claremont Customer Service Office
689 West Foothill Blvd., Ste. D
Claremont, CA 91711

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

**Published: June 15, 22, 2011**
**San Gabriel Valley Tribune Ad#42810**

21192017

SAN GABRIEL VALLEY TRIBUNE

affiliated with
SGV Newspaper Group
1210 N. Azusa Canyon Road
West Covina, CA 91790

# 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 SAN GABRIEL VALLEY TRIBUNE, a newspaper of general circulation which has been adjudicated as a newspaper of general circulation by the Superior Court of the County of Los Angeles, State of California, on the date of September 10, 1957, Case Number 684891. 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:

5/17/11

I declare under penalty of perjury that the foregoing is true and correct.

Executed at West Covina, LA Co. California
this 17 day of MAY, 20 11

signature

Proof of Publication of

Golden State Water Company
A Subsidiary of American States Water 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 July 19, from 6 p.m. to 7 p.m. at the San Dimas Community Center, 201 East Bonita Avenue, San Dimas, to solicit comments on the Urban Water Management Plans (UWMPs) for the company's San Dimas, Claremont, San Gabriel and South Arcadia water systems.

GSWC's San Dimas Water System serves customers in San Dimas and portions of Charter Oaks, Covina, Glendora, La Verne, and Walnut.

The company's Claremont Water System serves customers in Claremont and portions of Montclair, Pomona, and Upland.

GSWC's San Gabriel and South Arcadia Water Systems serve customers in portions of Arcadia, El Monte, Irwindale, Monrovia, Monterey Park, Rosemead, San Gabriel, and Temple City.

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

San Dimas Customer Service Office
121 Exchange Place
San Dimas, CA 91773

San Gabriel Customer Service Office
110 East Live Oak
Arcadia, CA 91006

Claremont Customer Service Office
689 West Foothill Blvd., Ste. D
Claremont, CA 91711

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

CNS#2102177
Published: May 17, 2011
San Gabriel Valley Tribune

Ad#201573

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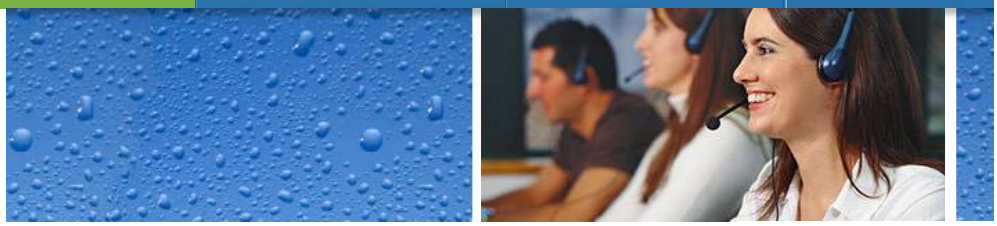

Customer Service Home Page
Find Local Office Information
Payment Options
Understanding Your Bill
How to Read Your Meter
Definitions and Terminology
Frequently Asked Questions
New Customer Brochure

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)

Find Local Office Information » San Gabriel Valley

# San Gabriel Valley Customer Service Area

Areas Serviced
This Customer Service Area serves approximately 12,200 customers in portions of Arcadia, El Monte, Irwindale, Monrovia, Monterey Park, Rosemead, San Gabriel, and Temple City

Office Location
San Gabriel CSA
110 East Live Oak
Arcadia, CA 91006

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

WATER CONSERVATION TIPS

Don't use the toilet as a wastebasket and save up to 200 gallons of water a month.

## 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.

## Golden State Water Company (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 San Gabriel Valley Customer Service Area for 2011 and 2012

The CPUC 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 III, which includes the San Gabriel Valley 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 San Gabriel Valley Customer Service Area to Encourage Water Use Efficiency

GSWC residential customers in the utility's San Gabriel Valley 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 San Gabriel Valley CSA, residential customers will pay the lowest rate for each Ccf they use in tier one, up to 13 Ccf. For every unit of water used in tier two, which is 14-21 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 22 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)

## Visit Golden State Water Company's Demonstration Garden

Golden State Water Company's demonstration garden which features over 25 different California-friendly plants, drought tolerant turf, and a water-wise smart irrigation system recently received the California Landscape Contractors Association (CLCA) state-wide trophy award for sustainability.

The CLCA trophy awards recognize companies, institutions, municipalities and residents for their interest in preserving and maintaining a beautiful California. The first of an inaugural award to be given by the CLCA, the award was designed to recognize those projects containing sustainable installation elements, including: water management, planting and plant selection, sustainable construction methods.

Since the completion of the project, Golden State Water Company has exceeded a 56-month return on investment goal of 40 percent water savings.

## Golden State Water Company's Water Shortage Plan for San Gabriel Valley Customers

Golden State Water Company (GSWC) developed a water shortage plan (Schedule 14.1) for its San Gabriel 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 San Gabriel customers are voluntary, allocation forms will not be processed at this time.

For more information, see our list of frequently asked questions about the water shortage plan, or call 1-800-999-4033.

## Golden State has Invested More Than $19.7 Million in the San Gabriel Customer Service Area Since 2000

Golden State is continually improving its water infrastructure to ensure its supply, distribution, and storage systems are adequate. From 2000 to 2009, Golden State spent

more than $19.7 million on improvements in the San Gabriel Customer Service Area, which includes portions of Arcadia, El Monte, Irwindale, Monrovia, Monterey Park, Rosemead, San Gabriel, and Temple City.

"To make high quality water readily available to all of our customers, we must continually invest in our water facilities, installing new infrastructure," said GSWC's Foothill District Manager Benjamin Lewis.

Golden State Water Company is regulated by the California Public Utilities Commission, which established a Water Action Plan. One of the objectives of the plan is to promote water infrastructure investment. Nationally, leaking pipes lose an estimated seven billion gallons of clean drinking water a day, according to the American Society of Civil Engineers.

## 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 San Gabriel Valley Customer Service Area customers. Funding is limited.

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 (SmarTimer)
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

South Arcadia
South San Gabriel

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Terms of Use | Privacy Policy

Home Page | About Golden State Water Company | Customer Service | Find Your Local Office | Understanding Your Bill
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

AUGUST 18, 2011

2010 UWMP PUBLIC MEETING MINUTES FOR CLAREMONT, SOUTH ARCADIA & SOUTH SAN GABRIEL

GSWC ATTENDEES: ADRIAN COMBES, BEN LEWIS, TOM TRAFFAS, DIANE PINNICK

MEETING CALLED TO ORDER 6:02pm

SEE COMMENT CARDS FOR ALL QUESTIONS AND COMMENTS

MEETING ADJOURNED 7:06pm

Golden State Water Company
A Subsidiary of American Water Water Company

# Comment Card
## Claremont, South Arcadia, South San Gabriel
## UWMP Public Hearing
## Aug. 18, 2011

**Name** Richard Haskell

**Service Address** 421 Baughman Avenue

**City** Claremont

**Question** regarding future use of reclaimed waste water:

Does GSW have a vision for the use of reclaimed water in the Claremont community? How can GSW collaborate with Three Valleys, LACSD, + the City to provide reclaimed water for landscape irrigation? The section on reclaimed water is very disappointing.

Golden State
Water Company
A Subsidiary of American States Water Company

# Comment Card
## Claremont, South Arcadia, South San Gabriel
## UWMP Public Hearing
## Aug. 18, 2011

**Name** Marilee Scaff

**Service Address** 640 Alden Rd

**City** Claremont

**Question** Read comments

Response 2010 Urban Water Management Plan for CLAREMONT
Hearing at San Dimas Community Center, August 18, 2011

From: Marilee K. Scaff 640 Alden Road Apt 2, Claremont, Ca 91711
C0Chair of the Water Task Force of League of Women Voters of Claremont Area

Golden State Water Company and Kennedy/Jenks Consultants are to be commended for the 2011 Revision of their Urban Water Management Plan for Claremont. It is comprehensive and detailed, and outlines well the current situation of water supplies for Pomona Valley.

However, there are errors and omissions and important issues not addressed which if corrected might make the Plan even more useful, and improve its function as a guide for future operations. I wpu ld like to call attention to the following:

1. Page vii. First, may I point out that advance notices of this public hearing are quite inadequate for inviting comment from citizens of Claremont. A notice in a newspaper in Covina is completely inaccessible to the reading public of Claremont; *Inland Valley Daily Bulletin* published in Pomona and *Claremont Courier* are the papers people in Pomona Valley read. Also you should remember that a great many of your clientele --several thousand college students, plus all residents of retirement communities, all persons living in multi-family housing and renters in single family homes never see their water bills, as they pay for water through their rents. Yet all of them should be concerned about their water supply.

2. Chapter 2. Demographics relies entirely on year 2000 population figures and uses these for projections. By the time the period covered by the report comes to an end, your figures will be 20 years out of date, and hence inadequate for planning.

**One thing is sure: The next 20 years will not be like the last 20. Global warming, population increase, diminishing water availability from Sierra snow pack, changes in State Water Plan—all these and more will need to be taken into account.**

As the 2010 Census figures are already available, a really useful plan must take the extra time and effort to put those into its calculations.

3. Claremont's population, furthermore, is quite unusual for a town of its size, and depending on SCAG's population projections do not fit this population. As a small town with eight colleges enrolling something like 14,000 students a majority of whom live in Residence Halls, plus four retirement communities with another 1,500 members, nearly half of the total population does not fit the expected pattern of household and employment projections adopted from 2008 RTP data. So your methodology for 2.3. section is inappropriate and will not give you reliable data.

This same problem infects your population projection of 39,015 by the year 2015 (Table 2.2). Claremont is essentially "built out"; there is almost no open space for normal community growth. Surely there must be other communities which do not fit this paradigm of never-ending growth. It certainly will affect planning and water distribution. This same inaccuracy I note in all your longer-range water use projections. You would more reasonably revise these projections.

4. May I commend the core of this report: Chapter 3 on historical water use, the present efforts at conservation, and future targets for reduction in per capita use. Claremont's "Sustainable City " Plan is in full agreement with GSWC on this subject and we all applaud both the data and your efforts.

However, one does note the inconsistency of amounts of water used by the residents, (Table 3-3) with per capita daily use varying between 269 and 345 in the last 6 years. Therefore, I am astonished that in face of this, you can we even speak of a target reduction of 50% to 142 by the year 2020? Is thata reasonable?

5. Affordable Housing/ Disadvantages resi8dents
Section 3-18 - Disadvantaged Community Water Projections implies that Claremont has no need of provision of affordable housing. This s not accurate. Claremont City lists at least the following:

Courier Village (City sponsored) is under construction on S. College for 45 seniors and 40 families (I'm less sure of the numbers)
Access Village (City sponsored) on N. Mountain for handicapped adults
Claremont Villa (City sponsored) on Indian Hill Blvd. for seniors, some affordable units.
Bonita Terrace for seniors
Claremont Village Green for seniors
Mountain Village for seniors
Emerson Village in Pomona, (to which Claremont refers seniors.)
Plus some Section 8 voucher-accepting commercial housing.

6. Ch 4.8 - 4.15 on Recycled water: thank you for the summary of the current situation about Recycled water. The Claremont College Consortium does expect to go ahead with recycling water for their own multiple-campus irrigation, which we hope will become a model for small scale recycling and that in the next 10 years there will be others.

7.One final addition: The State Water Plan calls for Southern California to seek to improve their reliance on local water supplies. What does GSWC plan about a possible **Water Emergency**, either because of a catastrophe on the delivery system of the State Water Project, or because of extended drought or damage to the Delta? The public should hear what kinds of thinking GSWC and MWD and TVMWD are doing in preparation for this really long-range possibility.

8. Finally, The League of Women Voters has a Water Task Force working for the last six years on water issues in the Claremont Area. This public-interest group has shared all our material with Golden State Water Company and all the other component users of water in Pomona Valley. Our aim has been to improve storm water spreading in Thompson Creek. We have a Feasibility Study, funded by Prop 84 bonds through the Los Angeles and San Gabriel Rivers and Mountains Conversancy which estimates that we could increase storm water spreading there by 30% to 150%. In addition the City of Claremont is willing to add this land to the Claremont Hills Wilderness Park, and manage it for the free usage by people from all over this region. Floyd Wicks as CEO of Golden State Water offered encouragement and support to this project. We urge Golden State Water Company to continue leadership in this project which would benefit the health and welfare of citizens all over this great Valley

how

Golden State Water Company
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# Comment Card
## Claremont, South Arcadia, South San Gabriel
## UWMP Public Hearing
## Aug. 18, 2011

**Name** Freeman Allen

**Service Address** 394 Blaisdell Dr,

**City** Claremont

**Question** Written

**Comments on the draft 2010 urban Water Management Plan - Claremont**
**August 18, 2011**

The Urban Water Management Plan for Claremont contains a wealth of information, and is well written. The following comments address aspects that should be strengthened

## 1.1 Background

**Solicitation of active participation of the population within the service area was minimal, and should be enhanced in the future.**

Page 1-6. According to the Urban Water Management Plan Act:

*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*

In fact:

- Notice of the Hearings on July 19 and August 18 were not published in Claremont. The population in this part of the service area was not encouraged to be involved.
- No notice of the Hearing was posted in the Claremont office of Golden States Water. Upon inquiry as to the time and location of the Hearing the customer representative referred to the GSW web site for the information. The Notice of public Hearing printed from the web site instructs the customer to "call 1-800-999-4033 to make an appointment to view the plan at the (Claremont office)". At that number it was difficult to find anyone who knew of the Hearing. The information provided was to "contact the local office; no appointment is necessary".
- At the local office, earlier today, the only information offered about the Plan was reference to the web site.

I attended the July 19 hearing and suggested that the August 18 Heating be publicized in the local newspaper, the Claremont Courier, and that copies of the Plan be made easily accessible at locations such as the Claremont Public Library. That was not done.

Clearly involvement of the population in the service area has not been encouraged. This appears to be contrary to the intent of the Act, and an opportunity lost to involve the public in cooperative planning for the future of their water supply.

The relevant population should be involved and encouraged to participate. Golden States Water carries out a very active and well-publicized program encouraging water conservation. I suggest a similar active program be used to encourage involvement in water management planning.

If the Plan is to be relied on by the CPUC in regulatory decision-making accuracy and completeness will be important. The following comments relate to these features.

## 2.2 Demographics

Affordable housing units are presently being constructed. This Plan says they "may be implemented".

## 2.3 Population, Housing and Employment

It was apparently not possible to use the latest census data. More accurate and up-to-date data should be used in regulatory decisions.

## 4.1. Water Sources

The reference to the Covina Irrigation Company does not seem relevant.

**Table 4.4.**

Pumping for 2006 and 2007 appears to exceed pumping rights. Are these figures correct?

## 4.8.3 Potential and Projected Use (of recycled water).

Planning for a scalping plant at the Claremont Colleges is correctly stated to be in the preliminary stages. However, it now seems likely this plant will be constructed and in operation within a few years. If so, the recycled water used for irrigation will amount to about 5% of Claremont's total usage and similarly reduce the need for more expensive imported water. This should be a consideration in CPUC regulatory decisions.

## 6.1.3 Water Supply

PVPA also owns and operates the Thompson Creek Spreading Grounds. This source of water is much smaller than the San Antonio Spreading Grounds but it does provide water for the Six Basins Aquifer from the San Gabriel River watershed.

## 8.3 Catastrophic Supply Interruption Plan

This section should specifically address the possibility of disruption of the State Water System for long periods of time. The Sacramento/San Joaquin river delta is notably vulnerable.

C. Freeman Allen, PhD
Professor Emeritus Chemistry, Pomona College
Co-Chair, Sustainable Claremont
Director for Sustainability, League of Women Voters of the Claremont Area

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**Urban Water Management Planning Meeting**
**Sign-In Sheet**
**Claremont, South San Gabriel, South Arcadia Systems**
**Aug. 18, 2011**

| Name | Address | Phone | Email |
|---|---|---|---|
| Jim Pedroza | 580 Cinderella Dr | 909-864-2047 | |
| Richard Haskell | 421 Baughman Ave Claremont | 909-625-2223 | richard_haskell@hmc.ed |
| CHRIS VEIRS | PO BOX 880 CLAREMONT | (909) 399-5486 | CVEIRS@CI.CLAREMONT.CA.US |
| Freeman Allen | 394 Blanchell Dr Claremont, CA 91711 | | cf1allen@aol.com |
| Marilee Scaff | 620 Alden Rd Claremont CA 91711 | | marilee.scaff@verizon |

# Appendix C

## Council Annual Reports for Demand Management Measures

# CUWCC BMP RETAIL COVERAGE REPORT 2009-2010

## Foundation Best Management Practices for Urban Water Efficiency

**Agency:** Golden State Water Company **District Name:** San Gabriel Valley **CUWCC Unit #:** 5045
**Retail**

**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** | **144** |
| **GPCD Target for 2018** | 152 |

| Year | Report | Target | | Highest Acceptable Bound | |
|---|---|---|---|---|---|
| | | % Base | GPCD | % Base | GPCD |
| 2010 | 1 | 96.4% | 179 | 100% | 185 |
| 2012 | 2 | 92.8% | 172 | 96% | 179 |
| 2014 | 3 | 89.2% | 165 | 93% | 172 |
| 2016 | 4 | 85.6% | 159 | 89% | 165 |
| 2018 | 5 | 82.0% | 152 | 82% | 152 |

Not on Track if 2010 GPCD is > than target

| | |
|---|---|
| GPCD in 201 | 144 |
| Highest Acceptable GPCD for | 185 |

**On Track**

**Agency:** Golden State Water Company **District Name:** San Gabriel Valley **CUWCC Unit #:** 5045
**Retail**

# CUWCC BMP RETAIL COVERAGE REPORT 2009-2010

## Foundation Best Management Practices for Urban Water Efficiency

## Foundational BMPs

### BMP 1.1 Operational Practices

Conservation Coordinator provided with necessary resources to implement BMPs?

| | | 2009 | 2010 |
|---|---|---|---|
| 1.Conservation Coordinator provided with necessary resources to implement BMPs? | Name | Albert Frias | Albert Frias |
| | Title | Water Conservation Coordinator | Water Conservation Coordinator |
| | Email | | |
| | | On Track | On Track |

2. Water waste prevention documentation

| | | |
|---|---|---|
| Descriptive File | Rule 20 = Water Conservation. Rule 11B = Discontinuance of Service based upon Water Wastage. R | On Track if any one of the 6 ordinance actions done, plus documentation or links provided |
| Descriptive File 2010 | | |
| URL | 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. http://www.aswater.com/Organization/Rates_and_Regulations/Rates_and_Tariffs/Rule_11.pdf | |
| URL 2010 | | |
| Describe Ordinance Terms | On Track | On Track |

Agency: Golden State Water Company
Retail

District Name: San Gabriel Valley

CUWCC Unit #: 5045

# CUWCC BMP RETAIL COVERAGE REPORT 2009-2010

## Foundation Best Management Practices for Urban Water Efficiency

### BMP 1.2 Water Loss Control

| | 2009 | | |
|---|---|---|---|
| Complete a prescreening Audit | | | On Track if Yes |
| Metered Sales | 6,081 | | |
| Verifiable Other Uses | 143 | | |
| Total Supply | 6,511 | | |
| (Metered Sales + System uses)/ Total Supply >0.89 | 0.96 | On Track | On Track if =>.89, Not on Track if No |
| If ratio is less than 0.9, complete a full scale Audit in 2009? | No | | On Track if Yes |
| Verify Data with Records on File? | Yes | On Track | On Track if Yes |
| Operate a system Leak Detection Program? | Yes | On Track | On Track if Yes |

| | 2010 | | |
|---|---|---|---|
| Compile Standard Water Audit using AWWA Software? | Yes | On Track | On Track if Yes, Not on Track if No |
| AWWA file provided to CUWCC? | Yes | On Track | On Track if Yes, Not on Track if No |
| AWWA Water Audit Validity Score? | 84 | | Info only until 2012 |
| Completed Training in AWWA Audit Method? | Yes | | |
| Completed Training in Component Analysis Process? | No | | Info only until 2012 |
| Complete Component Analysis? | No | | Info only until 2012 |
| Repaired all leaks and breaks to the extent cost effective? | Yes | On Track | On Track if Yes, Not on Track if No |
| Locate and repair unreported leaks to the extent cost effective. | Yes | On Track | On Track if Yes, Not on Track if No |
| 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. | Yes | | Info only until 2012 |

Provided 7 types of Water Loss Control Info — Info only until 2012

| Leaks Repaired | Value Real Losses | Value Apparent Losses | Miles Surveyed | Press Reduction | Cost of Interventions | Water Saved |
|---|---|---|---|---|---|---|
| 18 | $1,540.00 | $1,540.00 | 38 | | | 41 |

Agency: Golden State Water Company District Name: San Gabriel Valley CUWCC Unit #: 5045
Retail

# 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

| | | 2009 | | 2010 | | |
|---|---|---|---|---|---|---|
| Exemption or 'At least as Effective As' accepted by CUWCC | | | | | | 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. |
| Numbered Unmetered Accounts | 2008 | 0 | On Track | 0 | On Track | On Track if no unmetered accounts |
| Metered Accounts billed by volume of use | | Yes | On Track | Yes | On Track | Volumetric billing required for all connections on same schedule as metering |
| Number of CII accounts with Mixed Use meters | | 120 | | 120 | | Info only |
| Conducted a feasibility study to assess merits of a program to provide incentives to switch mixed-use accounts to dedicated landscape meters? | | No | | No | | Info only until 2012 |
| Feasibility Study provided to CUWCC? | | No | On Track until 2012 | No | On Track until 2012 | On Track if Yes, Not on Track if No |
| Completed a written plan, policy or program to test, repair and replace meters | | Yes | On Track | Yes | On Track | On Track if Yes, Not on Track if No |

# CUWCC BMP RETAIL COVERAGE REPORT 2009-2010

## Foundation Best Management Practices for Urban Water Efficiency

**Agency:** Golden State Water Company **District Name:** San Gabriel Valley **CUWCC Unit #:** 5045
**Retail**

**Primary Contact** John Turner **Email:** johnturner@gswater.com

### 1.4 Retail Conservation Pricing

On Track if: Increasing Block, Uniform, Allocation, Standby Service; Not on Track if otherwise

**Metered Water Rate Structure**

| 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 1July 2010. If signed MOU after 31 Dec. 1997, implementation starts no later than 1July 2013, or within seven years of signing the MOU,

**Agency:** Golden State Water Company **District Name:** San Gabriel Valley **CUWCC Unit #:** 5045
**Retail**

# CUWCC BMP RETAIL COVERAGE REPORT 2009-2010

## Foundation Best Management Practices for Urban Water Efficiency

**Adequacy of Volumetric Rates) for Agencies with No Unmetered Accounts**

| Customer Class | 2009 Rate Type | 2009 Volumetric Revenues $1000s | 2010 Rate Type | 2010 Volumetric Revenues $1000s |
|---|---|---|---|---|
| Single-Family | Increasing Block | $ 2,994 | Single-Family | $ 2,930 |
| Multi-Family | Increasing Block | $ 370 | Multi-Family | $ 362 |
| Commercial | Uniform | $ 1,791 | Commercial | $ 1,753 |
| Industrial | Uniform | $ 26 | Industrial | $ 26 |
| Institutional | Uniform | $ 375 | Institutional | $ 366 |
| Dedicated Irrigation | | $ 136 | | $ 133 |
| Other | | $ 35 | | $ 34 |
| Total Revenue Commodity Charges (V): | | $ 5,728 | | $ 5,605 |
| Total Revenue Fixed Charges (M): | | $ 3,343 | | $ 3,271 |
| Calculate: V / (V + M): | | 63% | | 63% |
| | | Info Only untill 2011 | | Info Only untill 2011 |

Agency Choices for rates:

A) Agencies signing MOU prior to 13 June2007, implementation starts 1 July2007: On Track if (V / (V + M) ≥ 70% x .8 = **56% for 2009** and 70%x0.90 = **63% for 2010**; Not on track if (V / (V + M)) < 70%;

B) Use Canadian model. Agencies signing MOU after 13June2007, implementation starts July 1 of year following signing.

| | | |
|---|---|---|
| Canadian Water & Wastewater Rate Design Model Used and Provided to CUWCC | **No** | **No** |
| If Canadian Model is used, was 1 year or 3 year period applied? | Info Only untill 2011 | Info Only untill 2011 |

**Wastewater Rates**

| | 2009 | | 2010 |
|---|---|---|---|
| Does Agency Provide Sewer Service? | **No** | If 'No', then wastewater rate info not required. | **No** |

| Customer Class | 2009 Rate Type | Conserving Rate? | Customer Class | 2010 Rate Type | Conserving Rate? |
|---|---|---|---|---|---|
| | | Yes | | | Yes |
| | | Yes | | | Yes |
| | | Yes | | | Yes |
| | | Yes | | | Yes |
| | | Yes | | | Yes |
| | | Yes | | | Yes |
| | | Yes | | | Yes |
| | | On Track | | | On Track |

On Track if: 'Increasing Block', 'Uniform', 'based on long term marginal cost' or 'next unit of capacity'

# 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**

| | 2009 | 2010 | |
|---|---|---|---|
| Does a wholesale agency implement Public Outrach Programs for this unility's benefit? | Yes | **Yes** | Yes/No |
| Names of Wholesale Agencies | **Upper San Gabriel Valley Munipal Water District and MWD Los angeles** | **Upper San Gabriel Valley Munipal Water District and MWD Los angeles** | |
| 1) Contacts with the public (minimum = 4 times per year) | 18 | 18 | |
| 2) Water supplier contacts with media (minimum = 4 times per year, i.e., at least quarterly). | 8 | 8 | |
| 3) An actively maintained website that is updated regularly (minimum = 4 times per year, i.e., at least quarterly). | Yes | Yes | All 6 action types implemented and reported to CUWCC to be 'On Track') |
| 4) Description of materials used to meet minimum requirement. | Newspaper contacts<br>Television contacts | Newspaper contacts<br>Television contacts | |
| 5) Annual budget for public outreach program. | $ 6,100 | $ 6,100 | |
| 6) Description of all other outreach programs | Full description will be online in the BMP reporting database | Full description will be online in the BMP reporting database | |
| | **On Track** | **OnTrack** | |

# 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 | |
|---|---|---|---|
| Does a wholesale agency implement School Education Programs for this unility's benefit? | No | No | |
| Name of Wholesale Supplier? | Description available in the online BMP reporting system when available. | Description available in the online BMP reporting system when available. | |
| 3) Materials Distributed to K-6? | Yes | Yes | |
| Materials distributed to 7-12 students? | No | No | Info Only |
| | On Track | On Track | |

# 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 impeding 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. (T)

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.

(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)

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 dicontinued. Notice will be in as prescribed in subdivision (a) above, and in Rules Nos. 5 and 8. (T)

(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)

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. (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 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)

(Continued)

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)

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.

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)

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**



GENERAL INFORMATION

(N)

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)

(Continued)

# RULE 14.1
# WATER CONSERVATION AND RATIONING PLAN



GENERAL INFORMATION (Continued) (N)

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**



GENERAL INFORMATION (Continued)

(N)

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.

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**



(N)

STAGED MANDATORY RATIONING OF WATER USAGE (Continued)

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**



(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)



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

(N)

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)

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)

# Appendix E

DMM Supporting Documents

Schedule No. R3-1-R
Region 3 Customer Service Areas
RESIDENTIAL METERED SERVICE

APPLICABILITY

Applicable to all residential metered water services provided to single-family residential customers.

TERRITORY

Barstow and vicinity, San Bernardino County, the City of Claremont, portions of Montclair, Pomona, Upland, within the area north of Thompson Creek and the Padua Hills Service Area, and adjacent unincorporated territory in Los Angeles and San Bernardino Counties, the City of Calipatria and community of Niland, and the adjacent territory in Imperial County, the vicinity of Victorville and Lucerne, San Bernardino County, all or portions of the Cities of Cypress, La Palma, Los Alamitos, Placentia, Seal Beach, Stanton, Yorba-Linda and vicinity, Cowan Heights, Orange County; San Dimas, Charter Oak and vicinity, Los Angeles County; and portions of the Cities of Arcadia, El Monte, Irwindale, Monrovia, Monterey Park, Rosemead, San Gabriel, Temple City and vicinity, Los Angeles County.

RATES

| | |
|---|---|
| Quantity Rate: | |
| First 1,300 cu. Ft., per 100 cu. ft. | $ 2.673 |
| Next 800 cu. Ft., per 100 cu. ft. | $ 3.074 |
| Over 2,100 cu. Ft., per 100 cu. ft. | $ 3.535 |

| Service Charges: | Per Meter Per Month |
|---|---|
| For 5/8 x 3/4-inch meter | $ 15.15 |
| For 3/4-inch meter | 22.70 |
| For 1-inch meter | 37.80 |
| For 1 1/2 inch meter | 75.65 |
| For 2-inch meter | 121.00 |
| For 3-inch meter | 227.00 |
| For 4-inch meter | 378.00 |
| For 6-inch meter | 756.00 |
| For 8-inch meter | 1,210.00 |
| For 10-inch meter | 1,739.00 |
| Sprinkler System Services | $16.65 |

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 Rate.

**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 $0.156 per Ccf for Tier 1, $0.180 per Ccf for Tier 2 and $0.207 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 1381-W, which is March 21, 2010. This surcharge will apply to all customers covered by the WRAM in 2009 which includes metered customers in Barstow, Claremont, San Gabriel, Los Alamitos, Placentia, San Dimas and Calipatria customers who were billed at the metered rate as of December 31, 2009
4. As authorized by the California Public Utilities Commission, an amount of $0.0735 per Ccf for Tier 1, $0.0845 per Ccf for Tier 2 and $0.0972 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 1401-W, which is June 7, 2010. This surcharge will recover the undercollection in the CARW Balancing Account, as of December 31, 2009.
5. Pursuant to Decision 10-11-035, a surcharge of $0.0035 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 1417-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 in D. 10-11-035, an amount of $0.20214 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.
7. As authorized by the California Public Utilities Commission, an amount of $0.0053 per Ccf for Tier 1 and $0.0061 per Ccf (N)
for Tier 2 is to be added to the Quantity Rate for a period of 12 months, beginning on the effective date of Advice Letter (N)
1408-WA. This surcharge will recover the undercollection in the Orange County Annexation Memorandum Account, as of March (N)
31, 2010. (N)

Schedule No. R3-1-NR
Region 3 Customer Service Areas
NON-RESIDENTIAL METERED SERVICE

APPLICABILITY

Applicable to all metered water service except those covered under R3-1-R.

TERRITORY

Barstow and vicinity, San Bernardino County, the City of Claremont, portions of Montclair, Pomona, Upland, within the area north of Thompson Creek and the Padua Hills Service Area, and adjacent unincorporated territory in Los Angeles and San Bernardino Counties, the City of Calipatria and community of Niland, and the adjacent territory in Imperial County, the vicinity of Victorville and Lucerne, San Bernardino County, all or portions of the Cities of Cypress, La Palma, Los Alamitos, Placentia, Seal Beach, Stanton, Yorba-Linda and vicinity, Cowan Heights, Orange County; San Dimas, Charter Oak and vicinity, Los Angeles County; and portions of the Cities of Arcadia, El Monte, Irwindale, Monrovia, Monterey Park, Rosemead, San Gabriel, Temple City and vicinity, Los Angeles County.

RATES

Quantity Rate:

| | |
|---|---|
| For all water delivered, per 100 cu. ft. | $ 2.489 |

| Service Charges: | Per Meter Per Month |
|---|---|
| For 5/8 x 3/4-inch meter | $ 21.45 |
| For 3/4-inch meter | 32.15 |
| For 1-inch meter | 53.55 |
| For 1 1/2 inch meter | 107.00 |
| For 2-inch meter | 171.00 |
| For 3-inch meter | 321.00 |
| For 4-inch meter | 536.00 |
| For 6-inch meter | 1,071.00 |
| For 8-inch meter | 1,714.00 |
| For 10-inch meter | 2,464.00 |

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 Rate.

**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 $0.154 per Ccf is to be added to the Quantity Rate for a period of 24 months, beginning on the effective date of Advice Letter 1381-W, which is March 21, 2010. This surcharge will apply to all customers covered by the WRAM in 2009 which includes metered customers in Barstow, Claremont, San Gabriel, Los Alamitos, Placentia, San Dimas and Calipatria customers who were billed at the metered rate as of December 31, 2009.
3. As authorized by the California Public Utilities Commission, an amount of $0.06879 per Ccf is to be added to the Quantity Rate for a period of 12 months, beginning on the effective date of Advice Letter 1401-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 $0.0035 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 1417-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 in D. 10-11-035, an amount of $0.20214 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.
6. As authorized by the California Public Utilities Commission, an amount of $0.0047 per Ccf is to be added to the Quantity Rate (N)
for a period of 12 months, beginning on the effective date of Advice Letter 1408-WA. This surcharge will recover the (N)
undercollection in the Orange County Annexation Memorandum Account, as of March 31, 2010. (N)

# AWWA WLCC Water Audit Software: Reporting Worksheet

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Back to Instructions

? Click to access definition

**Water Audit Report for:** Golden State Water Company - South San Gabriel
**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: | ? | M | 2,866.000 | acre-ft/yr |
| Master meter error adjustment: | ? | | 0.000 | under-registered acre-ft/yr |
| Water imported: | ? | M | 295.000 | acre-ft/yr |
| Water exported: | ? | | 0.000 | acre-ft/yr |
| **WATER SUPPLIED:** | | | 3,161.000 | acre-ft/yr |

## AUTHORIZED CONSUMPTION

Click here: ? for help using option buttons below

| | | | | | Pcnt: | Value: |
|---|---|---|---|---|---|---|
| Billed metered: | ? | M | 2,982.000 | acre-ft/yr | | |
| Billed unmetered: | ? | | 0.000 | acre-ft/yr | | |
| Unbilled metered: | ? | M | 76.600 | acre-ft/yr | | |
| Unbilled unmetered: | ? | | 39.513 | acre-ft/yr | 1.25% | |
| **AUTHORIZED CONSUMPTION:** | | | 3,098.113 | acre-ft/yr | | |

Use buttons to select percentage **OR** value

## WATER LOSSES (Water Supplied - Authorized Consumption)

62.888 acre-ft/yr

### Apparent Losses

| | | | | | Pcnt: | Value: |
|---|---|---|---|---|---|---|
| Unauthorized consumption: | ? | | 7.903 | acre-ft/yr | 0.25% | |
| Customer metering inaccuracies: | ? | | 62.420 | acre-ft/yr | 2.00% | |
| Systematic data handling errors: | ? | | 0.000 | acre-ft/yr | | |
| Apparent Losses: | | | 70.323 | acre-ft/yr | | |

**Check above input values; APPARENT LOSSES should be less than WATER LOSSES**

### Real Losses

Real Losses = (Water Losses - Apparent Losses): -7.435 acre-ft/yr

**WATER LOSSES:** 62.888 acre-ft/yr

## NON-REVENUE WATER

**NON-REVENUE WATER:** 179.000 acre-ft/yr

## SYSTEM DATA

| | | | | |
|---|---|---|---|---|
| Length of mains: | ? | M | 35.0 | miles |
| Number of active AND inactive service connections: | ? | M | 5,054 | |
| Connection density: | | | 144 | conn./mile main |
| Average length of customer service line: | ? | E | 30.0 | ft (pipe length between curbstop and customer meter or property boundary) |
| Average operating pressure: | ? | M | 62.8 | psi |

## COST DATA

| | | | | |
|---|---|---|---|---|
| Total annual cost of operating water system: | ? | | $1,988,855 | $/Year |
| Customer retail unit cost (applied to Apparent Losses): | ? | | $25.44 | $/100 cubic feet (ccf) |
| Variable production cost (applied to Real Losses): | ? | | $549.00 | $/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:
  - **7 as measured values**
  - **1 as estimated values**
  - **2 as default values**
  - **7 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: | 5.7% |
| Non-revenue water as percent by cost: | 42.2% |
| Annual cost of Apparent Losses: | $779,295 |
| Annual cost of Real Losses: | -$4,082 |

### Operational Efficiency Indicators

| | | |
|---|---|---|
| Apparent Losses per service connection per day: | 12.42 | gallons/connection/day |
| Real Losses per service connection per day*: | -1.31 | gallons/connection/day |
| Real Losses per length of main per day*: | N/A | |
| Real Losses per service connection per day per psi pressure: | -0.02 | gallons/connection/day/psi |
| ? Unavoidable Annual Real Losses (UARL): | 26.65 | million gallons/year |
| ? Infrastructure Leakage Index (ILI) [Real Losses/UARL]: | -0.09 | |

* only the most applicable of these two indicators will be calculated

# Appendix F

## Groundwater Basin Water Rights Stipulation/Judgment

SUPERIOR COURT OF THE STATE OF CALIFORNIA

FOR THE COUNTY OF LOS ANGELES

UPPER SAN GABRIEL VALLEY
MUNICIPAL WATER DISTRICT

Plaintiff,

vs.

CITY OF ALHAMBRA, et al,

Defendants.

No. 924128

AMENDED JUDGMENT
(and Exhibits Thereto),

Honorable Florence T. Pickard
Assigned Judge Presiding

Original Judgment
Signed and Filed: December 29, 1972;
Entered: January 4, 1973
Book 6741, Page 197

JUDGMENT AS AMENDED AUGUST 24, 1989

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North Hollywood, CA 91602
Telephone (818) 769-2002

Attorney for Watermaster

SUPERIOR COURT OF CALIFORNIA, COUNTY OF LOS ANGELES

| | |
|---|---|
| UPPER SAN GABRIEL VALLEY MUNICIPAL WATER DISTRICT,<br><br>Plaintiff,<br><br>vs.<br><br>CITY OF ALHAMBRA, et al.,<br><br>Defendants. | No. 924128<br><br>AMENDED JUDGMENT<br><br>(And Exhibits Thereto) |

HONORABLE FLORENCE T. PICKARD

Assigned Judge Presiding

DEPARTMENT 38

August 24, 1989

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Identified With Prior Judgment
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EXHIBITS

"A" -- Map entitled "San Gabriel River Watershed Tributary to Whittier Narrows"

Exhibits Continued

"B" -- Boundaries of Relevant Watershed

"C" -- Table Showing Base Annual Diversion Rights of Certain Diverters

"D" -- Table Showing Rights and Pumper's Share of Each Pumper

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SUPERIOR COURT OF CALIFORNIA, COUNTY OF LOS ANGELES

| | |
|---|---|
| UPPER SAN GABRIEL VALLEY MUNICIPAL WATER DISTRICT, Plaintiff, vs. CITY OF ALHAMBRA, et al., Defendants. | No. 924128<br>AMENDED JUDGMENT<br>Hearing: August 24, 1989<br>Department 38, 9:00 A.M. |

The Petition of the MAIN SAN GABRIEL BASIN WATERMASTER for this AMENDED JUDGMENT herein, came on regularly for hearing in this Court before the HONORABLE FLORENCE T. PICKARD, ASSIGNED JUDGE PRESIDING, on August 24, 1989; Ralph B. Helm appeared as attorney for Watermaster - Petitioner; and good cause appearing, the following ORDER and AMENDED JUDGMENT are, hereby, made:

## I. INTRODUCTION

1. Pleadings, Parties, and Jurisdiction. The complaint herein was filed on January 2, 1968, seeking an adjudication of water rights. By amendment of said complaint and dismissals of certain parties, said adjudication was limited to the Main San Gabriel Basin and its Relevant Watershed. Substantially all

defendants and the cross-defendant have appeared herein, certain defaults have been entered, and other defendants dismissed. By the pleadings herein and by Order of this Court, the issues have been made those of a full inter se adjudication of water rights as between each and all of the parties. This Court has jurisdiction of the subject matter of this action and of the parties herein.

2. Stipulation for Entry of Judgment. A substantial majority of the parties, by number and by quantity of rights herein Adjudicated, Stipulated for entry of a Judgment in substantially the form of the original Judgment herein.

3. Lis Pendens. (New) A Lis Pendens was recorded August 20, 1970, as Document 2650, in Official Records of Los Angeles County, California, in Book M 3554, Page 866.

4. Findings and Conclusions. (Prior Judgment Section 3) Trial was had before the Court, sitting without a jury, John Shea, Judge Presiding, commencing on October 30, 1972, and Findings of Fact and Conclusions of Law have been entered herein.

5. Judgment. (New) Judgment (and Exhibits Thereto), Findings of Fact and Conclusions of Law (and Exhibits thereto), Order Appointing Watermaster, and Initial Watermaster Order were signed and filed December 29, 1972, and Judgment was entered January 4, 1973, in Book 6791, Page 197.

6. Intervention After Judgment. (New) Certain defendants have, pursuant to the Judgment herein and the Court's continuing jurisdiction, intervened and appeared herein after entry of Judgment.

7. Amendments to Judgment. (New) The original Judgment herein was previously amended on March 29, 1979, by: (1) adding definition (r [1]) thereto, (2) amending definition (bb) therein, (3) adding Exhibit "K" thereto, (4) adding Sections 14.5 and 16.5 thereto, and (5) amending Sections 37(b), 37(c), 37(d), and Section 47 therein; it was again amended on December 21, 1979, by amending Section 38(c) thereof; again amended on February 21, 1980, by amending Section 24 thereof; again amended on September 12, 1980, by amending Sections 35(a), 37(a), and 38(a); again amended on December 22, 1987, by adding Section 37(e) thereto; and last amended on July 22, 1988 by amending Section 37(e) thereof and Ordering an Amended Judgment herein.

8. Transfers. (New) Since the entry of Judgment herein there have been numerous transfers of Adjudicated water rights. To the date hereof, said transfers are reflected in Exhibits "C", "D", and "E".

9. Producers and Their Designees. (New) The current status of Producers and their Designees is shown on Exhibit "L".

10. Definitions. (Prior Judgment Section 4) As used in this Judgment, the following terms shall have the meanings herein set forth:

(a) Base Annual Diversion Right -- The average annual quantity of water which a Diverter is herein found to have the right to Divert for Direct Use.

(b) Direct Use --Beneficial use of water other than for spreading or Ground Water recharge.

(c) Divert or Diverting -- To take waters of any surface stream within the Relevant Watershed.

(d) Diverter -- Any party who Diverts.

(e) Elevation -- Feet above mean sea level.

(f) Fiscal Year -- A period July 1 through June 30, following.

(g) Ground Water -- Water beneath the surface of the ground and within the zone of saturation.

(h) Ground Water Basin -- An interconnected permeable geologic formation capable of storing a substantial Ground Water supply.

(i) Integrated Producer -- Any party that is both a Pumper and a Diverter, and has elected to have its rights adjudicated under the optional formula provided in Section 18 of this Judgment.

(j) In-Lieu Water Cost -- The differential between a Producer's non-capital cost of direct delivery of Supplemental Water and the cost of Production of Ground Water (including depreciation on Production facilities) to a particular Producer who has been required by Watermaster to take direct delivery of Supplemental Water in lieu of Ground Water.

(k) Key Well -- Baldwin Park Key Well, being elsewhere designated as State Well No. 1S/10W-7R2, or Los Angeles County Flood Control District Well No. 3030-F. Said well has a ground surface Elevation of 386.7.

(l) Long Beach Case -- Los Angeles Superior Court Civil Action No. 722647, entitled, "Long Beach, et al., v. San Gabriel Valley Water Company, et al."

(m) Main San Gabriel Basin or Basin -- The Ground Water Basin underlying the area shown as such on Exhibit "A".

(n) Make-up Obligation -- The total cost of meeting the obligation of the Basin to the area at or below Whittier Narrows, pursuant to the Judgment in the Long Beach Case.

(o) Minimal Producer -- Any party whose Production in any Fiscal Year does not exceed five (5) acre feet.

(p) Natural Safe Yield -- The quantity of natural water supply which can be extracted annually from the Basin under conditions of long term average annual supply, net of the requirement to meet downstream rights as determined in the Long Beach Case (exclusive of Pumped export), and under cultural conditions as of a particular year.

(q) Operating Safe Yield -- The quantity of water which the Watermaster determines hereunder may be Pumped from the Basin in a particular Fiscal Year, free of the Replacement Water Assessment under the Physical Solution herein.

(r) Overdraft -- A condition wherein the total annual Production from the Basin exceeds the Natural Safe Yield thereof.

(s) Overlying Rights -- (Prior Judgment Section 4 (r) [1]) The right to Produce water from the Basin for use on Overlying Lands, which rights are exercisable only on specifically defined Overlying Lands and which cannot be separately conveyed or transferred apart therefrom.

(t) Physical Solution -- (Prior Judgment Section 4 (s)) The Court decreed method of managing the waters of the Basin so as to achieve the maximum utilization of the Basin and its water supply, consistent with the rights herein declared.

(u) Prescriptive Pumping Right -- (Prior Judgment

Section 4 (t)) The highest continuous extractions of water by a Pumper from the Basin for beneficial use in any five (5) consecutive years after commencement of Overdraft and prior to filing of this action, as to which there has been no cessation of use by that Pumper during any subsequent period of five (5) consecutive years, prior to the said filing of this action.

(v) Produce or Producing -- (Prior Judgment Section 4 (u)) To Pump or Divert water.

(w) Producer -- (Prior Judgment Section 4 (v)) A party who Produces water.

(x) Production -- (Prior Judgment Section 4 (w)) The annual quantity of water Produced, stated in acre feet.

(y) Pump or Pumping -- (Prior Judgment Section 4 (x)) To extract Ground Water from the Basin by Pumping or any other method.

(z) Pumper -- (Prior Judgment Section 4 (y)) Any party who Pumps water.

(aa) Pumper's Share -- (Prior Judgment Section 4 (z)) A Pumper's right to a percentage of the entire Natural Safe Yield, Operating Safe Yield and appurtenant Ground Water storage.

(bb) Relevant Watershed -- (Prior Judgment Section 4(aa)) That portion of the San Gabriel River watershed tributary to Whittier Narrows which is shown as such on Exhibit "A", and the exterior boundaries of which are described in Exhibit "B".

(cc) Replacement Water -- (Prior Judgment Section 4 (bb)) Water purchased by Watermaster to replace:

(1) Production in excess of a Pumper's Share of Operating Safe Yield; (2) The consumptive use portion resulting from the exercise of an Overlying Right; and (3) Production in excess of a Diverter's right to Divert for Direct Use.

(dd) Responsible Agency -- (Prior Judgment Section 4 (cc)) The municipal water district which is the normal and appropriate source from whom Watermaster shall purchase Supplemental Water for replacement purposes under the Physical Solution, being one of the following:

(1) Upper District -- Upper San Gabriel Valley Municipal Water District, a member public agency of The Metropolitan Water District of Southern California (MWD).

(2) San Gabriel District -- San Gabriel Valley Municipal Water District, which has a direct contract with the State of California for State Project Water.

(3) Three Valleys District -- Three Valleys Municipal Water District, formerly, "Pomona Valley Municipal Water District", a member public agency of MWD.

(ee) Stored Water -- (Prior Judgment Section 4 (dd)) Supplemental Water stored in the Basin pursuant to a contract with Watermaster as authorized by Section 34(m).

(ff) Supplemental Water -- (Prior Judgment Section 4 (ee)) Nontributary water imported through a Responsible Agency.

(gg) Transporting Parties -- (Prior Judgment Section 4 (ff)) Any party presently transporting water (i.e., during the 12 months immediately preceding the making of the findings herein) from the Relevant Watershed or Basin to an area outside

thereof, and any party presently or hereafter having an interest in lands or having a service area outside the Basin or Relevant Watershed contiguous to lands in which it has an interest or a service area within the Basin or Relevant Watershed. Division by a road, highway, or easement shall not interrupt contiguity. Said term shall also include the City of Sierra Madre, or any party supplying water thereto, so long as the corporate limits of said City are included within one of the Responsible Agencies and if said City, in order to supply water to its corporate area from the Basin, becomes a party to this action bound by this Judgment.

(hh) Water Level -- (Prior Judgment Section 4 (gg)) The measured Elevation of water in the Key Well, corrected for any temporary effects of mounding caused by replenishment or local depressions caused by Pumping.

(ii) Year -- (Prior Judgment Section 4 (hh)) A calendar year, unless the context clearly indicates a contrary meaning.

11. Exhibits. (Prior Judgment Section 5) The following exhibits are attached to this Judgment and incorporated herein by this reference:

Exhibit "A" -- Map entitled "San Gabriel River Watershed Tributary to Whittier Narrows", showing the boundaries and relevant geologic and hydrologic features in the portion of the watershed of the San Gabriel River lying upstream from Whittier Narrows.

Exhibit "B" -- Boundaries of Relevant Watershed.

Exhibit "C" -- Table Showing Base Annual Diversion

Rights of Certain Diverters.

Exhibit "D" -- Table Showing Prescriptive Pumping Rights and Pumper's Share of Each Pumper.

Exhibit "E" -- Table Showing Production Rights of Each Integrated Producer.

Exhibit "F" -- Table Showing Special Category Rights.

Exhibit "G" -- Table Showing Non-consumptive Users.

Exhibit "H" -- Watermaster Operating Criteria.

Exhibit "J" -- Puente Narrows Agreement.

Exhibit "K" -- Overlying Rights, Nature of Overlying Right, Description of Overlying Lands to which Overlying Rights are Appurtenant, Producers Entitled to Exercise Overlying Rights and their Respective Consumptive Use Portions, and Map of Overlying Lands.

Exhibit "L" -- (New) List of Producers And Their Designees, as of June 1988.

Exhibit "M" -- (New) Watermaster Members, Officers and Staff, Including Calendar Year 1989.

## II. DECREE

**NOW, THEREFORE, IT IS HEREBY DECLARED, ORDERED, ADJUDGED AND DECREED:**

### A. DECLARATION OF HYDROLOGIC CONDITIONS

12. Basin as Common Source of Supply. (Prior Judgment Section 6) The area shown on Exhibit "A" as Main San Gabriel Basin overlies a Ground Water basin. The Relevant Watershed is the watershed area within which rights are herein adjudicated. The waters of the Basin and Relevant Watershed constitute a common source of natural water supply to the parties herein.

13. Determination of Natural Safe Yield. (Prior Judgment Section 7) The Natural Safe Yield of the Main San Gabriel Basin is found and declared to be one hundred fifty-two thousand seven-hundred (152,700) acre feet under Calendar Year 1967 cultural conditions.

14. Existence of Overdraft. (Prior Judgment Section 8) In each and every Calendar Year commencing with 1953, the Basin has been and is in Overdraft.

B. DECLARATION OF RIGHTS

15. Prescription. (Prior Judgment Section 9) The use of water by each and all parties and their predecessors in interest has been open, notorious, hostile, adverse, under claim of right, and with notice of said overdraft continuously from January 1, 1953 to January 4, 1973. The rights of each party herein declared are prescriptive in nature. The following aggregate consequences of said prescription within the Basin and Relevant Watershed are hereby declared:

(a) Prior Prescription. Diversions within the Relevant Watershed have created rights for direct consumptive use within the Basin, as declared and determined in Sections 16 and 18 hereof, which are of equal priority *inter se*, but which are prior and paramount to Pumping Rights in the Basin.

(b) Mutual Prescription. The aggregate Prescriptive Pumping Rights of the parties who are Pumpers now exceed, and for many years prior to filing of this action, have exceeded, the Natural Safe Yield of the Basin. By reason of said condition, all rights of said Pumpers are declared

to be mutually prescriptive and of equal priority, inter se.

(c) Common Ownership of Safe Yield and Incidents Thereto. By reason of said Overdraft and mutual Prescription, the entire Natural Safe Yield of the Basin, the Operating Safe Yield thereof and the appurtenant rights to Ground Water storage capacity of the Basin are owned by Pumpers in undivided Pumpers' Shares as hereinafter individually declared, subject to the control of Watermaster, pursuant to the Physical Solution herein decreed. Nothing herein shall be deemed in derogation of the rights to spread water pursuant to rights set forth in Exhibit "G".

16. Surface Rights. (Prior Judgment Section 10) Certain of the aforesaid prior and paramount prescriptive water rights of Diverters to Divert for Direct Use stream flow within the Relevant Watershed are hereby declared and found in terms of Base Annual Diversion Right as set forth in Exhibit "C". Each Diverter shown on Exhibit "C" shall be entitled to Divert for Direct Use up to two hundred percent (200%) of said Base Annual Diversion Right in any one (1) Fiscal Year; provided that the aggregate quantities of water Diverted in any consecutive ten (10) Fiscal Year period shall not exceed ten (10) times such Diverter's Base Annual Diversion Right.

17. Ground Water Rights. (Prior Judgment Section 11) The Prescriptive Pumping Right of each Pumper, who is not an Integrated Producer, and his Pumper's Share are declared as set forth in Exhibit "D".

18. Optional Integrated Production Rights. (Prior Judgment Section 12) Those parties listed on Exhibit "E" have elected to be treated as Integrated Producers. Integrated Production Rights have two (2) historical components:

(1) a fixed component based upon historic Diversions for Direct Use; and

(2) a mutually prescriptive Pumper's Share component based upon Pumping during the period 1953 through 1967.

Assessment and other Watermaster regulation of the rights of such parties shall relate to and be based upon each such component. So far as future exercise of such rights is concerned, however, the gross quantity of the aggregate right in any Fiscal Year may be exercised, in the sole discretion of such party, by either Diversion or Pumping or any combination or apportionment thereof; provided, that for Assessment purposes the first water Produced in any Fiscal Year (other than "carry-over", under Section 49 hereof) shall be deemed an exercise of the Diversion component, and any Production over said quantity shall be deemed Pumped water, regardless of the actual method of Production.

19. Special Category Rights. (Prior Judgment Section 13) The parties listed on Exhibit "F" have water rights in the Relevant Watershed which are not ordinary Production rights. The nature of each such right is as described in Exhibit "F".

20. Non-consumptive Practices. (Prior Judgment Section 14) Certain Producers have engaged in Water Diversion and spreading practices which have caused such Diversions to have a

non-consumptive or beneficial impact upon the aggregate water supply available in the Basin. Said parties, and a statement of the nature of their rights, uses and practices, are set forth in Exhibit "G". The Physical Solution decreed herein, and particularly its provisions for Assessments, shall not apply to such non-consumptive uses. Watermaster may require reports on the operations of said parties.

21. Overlying Rights. (Prior Judgment Section 14.5) Producers listed in Exhibit "K" hereto were not parties herein at the time of the original entry of Judgment herein. They have exercised in good faith Overlying Rights to Produce water from the Basin during the periods subsequent to the entry of Judgment herein and have by self-help initiated or maintained appurtenant Overlying Rights. Such rights are exercisable without quantitative limit only on specifically described Overlying Land and cannot be separately conveyed or transferred apart therefrom. As to such rights and their exercise, the owners thereof shall become parties to this action and be subject to Watermaster Replacement Water Assessments under Section 45 (b) hereof, sufficient to purchase Replenishment Water to offset the net consumptive use of such Production and practices. In addition, the gross amount of such Production for such overlying use shall be subject to Watermaster Administrative Assessments under Section 45 (a) hereof and the consumptive use portion of such Production for overlying use shall be subject to Watermaster's In-Lieu Water Cost Assessments under Section 45 (d) hereof. The Producers presently entitled to exercise Overlying Rights, a description of the Overlying Land to which

Overlying Rights are appurtenant, the nature of use and the consumptive use portion thereof are set forth in Exhibit "K" hereto. Watermaster may require reports and make inspections of the operations of said parties for purposes of verifying the uses set forth in said Exhibit "K", and, in the event of a material change, to redetermine the net amount of consumptive use by such parties as changed in the exercise of such Overlying Rights. Annually, during the first two (2) weeks of June in each Calendar Year, such Overlying Rights Producers shall submit to Watermaster a verified statement as to the nature of the then current uses of said Overlying Rights on said Overlying Lands for the next ensuing Fiscal Year, whereupon Watermaster shall either affirm the prior determination or redetermine the net amount of the consumptive use portion of the exercise of such Overlying Right by said Overlying Rights Producer.

C. INJUNCTION

22. Injunction Against Unauthorized Production. (Prior Judgment Section 15) Effective July 1, 1973, each and every party, its officers, agents, employees, successors and assigns, to whom rights to waters of the Basin or Relevant Watershed have been declared and decreed herein is **ENJOINED AND RESTRAINED** from Producing water for Direct Use from the Basin or the Relevant Watershed except pursuant to rights and Pumpers' Shares herein decreed or which may hereafter be acquired by transfer pursuant to Section 55, or under the provisions of the Physical Solution in this Judgment and the Court's continuing jurisdiction, provided that no party is enjoined from Producing up to five (5) acre feet per Fiscal Year.

23. Injunction re Non-consumptive Uses. (Prior Judgment Section 16) Each party listed in Exhibit "G", its officers, agents, employees, successors and assigns, is **ENJOINED AND RESTRAINED** from materially changing said non-consumptive method of use.

24. Injunction Re Change in Overlying Use Without Notice Thereof To Watermaster. (Prior Judgment Section 16.5) Each party listed in Exhibit "K", its officers, agents, employees, successors and assigns, is **ENJOINED AND RESTRAINED** from materially changing said overlying uses at any time without first notifying Watermaster of the intended change of use, in which event Watermaster shall promptly redetermine the consumptive use portion thereof to be effective after such change.

25. Injunction Against Unauthorized Recharge. (Prior Judgment Section 17) Each party, its officers, agents, employees, successors and assigns, is **ENJOINED AND RESTRAINED** from spreading, injecting or otherwise recharging water in the Basin except pursuant to: (a) an adjudicated non-consumptive use, or (b) consent and approval of or Cyclic Storage Agreement with Watermaster, or (c) subsequent order of this Court.

26. Injunction Against Transportation From Basin or Relevant Watershed. (Prior Judgment Section 18) Except upon further order of Court, all parties, other than Transporting Parties and MWD in its exercise of its Special Category Rights, to the extent authorized therein, are **ENJOINED AND RESTRAINED** from transporting water hereafter Produced from the Relevant Watershed or Basin outside the areas thereof. For purposes of

this Section, water supplied through a city water system which lies chiefly within the Basin shall be deemed entirely used within the Basin. Transporting Parties are entitled to continue to transport water to the extent that any Production of water by any such party does not violate the injunctive provisions contained in Section 22 hereof; provided that said water shall be used within the present service areas or corporate or other boundaries and additions thereto so long as such additions are contiguous to the then existing service area or corporate or other boundaries; except that a maximum of ten percent (10%) of use in any Fiscal Year may be outside said then existing service areas or corporate or other boundaries.

D. CONTINUING JURISDICTION

27. Jurisdiction Reserved. (Prior Judgment Section 19) Full jurisdiction, power and authority are retained by and reserved to the Court for purposes of enabling the Court upon application of any party or of the Watermaster, by motion and upon at least thirty (30) days notice thereof, and after hearing thereon, to make such further or supplemental orders or directions as may be necessary or appropriate for interim operation before the Physical Solution is fully operative, or for interpretation, enforcement or carrying out of this Judgment, and to modify, amend or amplify any of the provisions of this Judgment or to add to the provisions thereof consistent with the rights herein decreed. Provided, that nothing in this paragraph shall authorize:

(1) modification or amendment of the quantities specified in the declared rights of any party;

(2) modification or amendment of the manner of exercise of the Base Annual Diversion Right or Integrated Production Right of any party; or

(3) the imposition of an injunction prohibiting transportation outside the Relevant Watershed or Basin as against any Transporting Party transporting in accordance with the provisions of this Judgment or against MWD as to its Special Category Rights.

E. WATERMASTER

28. Watermaster to Administer Judgment. (Prior Judgment Section 20) A Watermaster comprised of nine (9) persons, to be nominated as hereinafter provided and appointed by the Court, shall administer and enforce the provisions of this Judgment and any subsequent instructions or orders of the Court thereunder.

29. Qualification, Nomination and Appointment. (Prior Judgment Section 21) The nine (9) member Watermaster shall be composed of six (6) Producer representatives and three (3) public representatives qualified, nominated and appointed as follows:

(a) Qualification. Any adult citizen of the State of California shall be eligible to serve on Watermaster; provided, however, that no officer, director, employee or agent of Upper District or San Gabriel District shall be qualified as a Producer member of Watermaster.

(b) Nomination of Producer Representatives. A meeting of all parties shall be held at the regular meeting of Watermaster in November of each year, at the offices of Watermaster. Nomination of the six (6) Producer

representatives shall be by cumulative voting, in person or by proxy, with each Producer entitled to one (1) vote for each one hundred (100) acre feet, or portion thereof, of Base Annual Diversion Right or Prescriptive Pumping Right or Integrated Production Right.

(c) Nomination of Public Representatives. On or before the regular meeting of Watermaster in November of each year, the three (3) public representatives shall be nominated by the boards of directors of Upper District (which shall select two [2]) and San Gabriel District (which shall select one [1]). Said nominees shall be members of the board of directors of said public districts.

(d) Appointment. All Watermaster nominations shall be promptly certified to the Court, which will in ordinary course confirm the same by an appropriate order appointing said Watermaster; provided, however, that the Court at all times reserves the right and power to refuse to appoint, or to remove, any member of Watermaster.

30. Term and Vacancies. (Prior Judgment Section 22) Each member of Watermaster shall serve for a one (1) year term commencing on January 1, following his appointment, or until his successor is appointed. In the event of a vacancy on Watermaster, a successor shall be nominated at a special meeting to be called by Watermaster within ninety (90) days (in the case of a Producer representative) or by action of the appropriate district board of directors (in the case of a public representative).

31. Quorum. (Prior Judgment Section 23) Five (5) members

of the Watermaster shall constitute a quorum for the transaction of affairs of the Watermaster. Action by the affirmative vote of five (5) members shall constitute action by Watermaster, <u>except</u> that the affirmative vote of six (6) members shall be required:

(a) to approve the purchase, spreading or injection of water for Ground Water recharge, or

(b) to enter in any Agreement pursuant to Section 34 (m) hereof.

32. <u>Compensation.</u> (Prior Judgment Section 24) Each Watermaster member shall receive compensation of One Hundred Dollars ($100.00) per day for each day's attendance at meetings of Watermaster or for each day's service rendered as a Watermaster member at the request of Watermaster, together with any expenses incurred in the performance of his duties required or authorized by Watermaster. No member of the Watermaster shall be employed by or compensated for professional services rendered by him to Watermaster, other than the compensation herein provided, and any authorized travel or related expense.

33. <u>Organization.</u> (Prior Judgment Section 25) At its first meeting in each year, Watermaster shall elect a chairman and a vice chairman from its membership. It shall also select a secretary, a treasurer and such assistant secretaries and assistant treasurers as may be appropriate, any of whom may, but need not be, members of Watermaster.

(a) <u>Minutes</u>. Minutes of all Watermaster meetings shall be kept which shall reflect all actions taken by Watermaster. Draft copies thereof shall be furnished to

any party who files a request therefor in writing with Watermaster. Said draft copies of minutes shall constitute notice of any Watermaster action therein reported; failure to request copies thereof shall constitute waiver of notice.

(b) Regular Meetings. Watermaster shall hold regular meetings at places and times to be specified in Watermaster's rules and regulations to be adopted by Watermaster. Notice of the scheduled or regular meetings of Watermaster and of any changes in the time or place thereof shall be mailed to all parties who shall have filed a request therefor in writing with Watermaster.

(c) Special Meetings. Special meetings of Watermaster may be called at any time by the chairman or vice chairman or by any three (3) members of Watermaster by written notice delivered personally or mailed to each member of Watermaster and to each party requesting notice, at least twenty-four (24) hours before the time of each such meeting in the case of personal delivery, and forty-eight (48) hours prior to such meeting in the case of mail. The calling notice shall specify the time and place of the special meeting and the business to be transacted at such meeting. No other business shall be considered at such meeting.

(d) Adjournments. Any meeting of Watermaster may be adjourned to a time and place specified in the order of adjournment. Less than a quorum may so adjourn from time to time. A copy of the order or notice of adjournment

shall be conspicuously posted on or near the door of the place where the meeting was held within twenty-four (24) hours after adoption of the order of adjournment.

34. Powers and Duties. (Prior Judgment Section 26) Subject to the continuing supervision and control of the Court, Watermaster shall have and may exercise the following express powers, and shall perform the following duties, together with any specific powers, authority and duties granted or imposed elsewhere in this Judgment or hereafter ordered or authorized by the Court in the exercise of its continuing jurisdiction.

(a) Rules and Regulations. To make and adopt any and all appropriate rules and regulations for conduct of Watermaster affairs. A copy of said rules and regulations and any amendments thereof shall be mailed to all parties.

(b) Acquisition of Facilities. To purchase, lease, acquire and hold all necessary property and equipment; provided, however, that Watermaster shall not acquire any interest in real property in excess of year-to-year tenancy for necessary quarters and facilities.

(c) Employment of Experts and Agents. To employ such administrative personnel, engineering, geologic, accounting, legal or other specialized services and consulting assistants as may be deemed appropriate in the carrying out of its powers and to require appropriate bonds from all officers and employees handling Watermaster funds.

(d) Measuring Devices, etc. To cause parties, pursuant to uniform rules, to install and maintain in good

operating condition, at the cost of each party, such necessary measuring devices or meters as may be appropriate; and to inspect and test any such measuring device as may be necessary.

(e) Assessments. To levy and collect all Assessments specified in the Physical Solution.

(f) Investment of Funds. To hold and invest any and all funds which Watermaster may possess in investments authorized from time to time for public agencies in the State of California.

(g) Borrowing. To borrow in anticipation of receipt of Assessment proceeds an amount not to exceed the annual amount of Assessments levied but uncollected.

(h) Purchase of and Recharge with Supplemental Water. To purchase Supplemental Water and to introduce the same into the Basin for replacement or cyclic storage purposes, subject to the affirmative vote of six (6) members of Watermaster.

(i) Contracts. To enter into contracts for the performance of any administrative powers herein granted, subject to approval of the Court.

(j) Cooperation With Existing Agencies. To act jointly or cooperate with agencies of the United States and the State of California or any political subdivision, municipality or district to the end that the purposes of the Physical Solution may be fully and economically carried out. Specifically, in the event Upper District has facilities available and adequate to accomplish any of the

administrative functions of Watermaster, consideration shall be given to performing said functions under contract with Upper District in order to avoid duplication of facilities.

(k) Assumption of Make-up Obligation. Watermaster shall assume the Make-up Obligation for and on behalf of the Basin.

(m) Water Quality. Water quality in the Basin shall be a concern of Watermaster, and all reasonable steps shall be taken to assist and encourage appropriate regulatory agencies to enforce reasonable water quality regulations affecting the Basin, including regulation of solid and liquid waste disposal.

(n) Cyclic Storage Agreements. To enter into appropriate contracts, to be approved by the Court, for utilization of Ground Water storage capacity of the Basin for cyclic or regulatory storage of Supplemental Water by parties and non-parties, for subsequent recovery or Watermaster credit by the storing entity, pursuant to uniform rules and conditions, which shall include provision for:

(1) Watermaster control of all spreading or injection and extraction scheduling and procedures for such stored water;

(2) calculation by Watermaster of any special costs, damages or burdens resulting from such operations;

(3) determination by Watermaster of, and

accounting for, all losses in stored water, assuming that such stored water floats on top of the Ground Water supplies, and accounting for all losses of water which otherwise would have replenished the Basin, with priorities being established as between two or more such contractors giving preference to parties over non-parties; and

(4) payment to Watermaster for the benefit of the parties hereto of all special costs, damages or burdens incurred (without any charge, rent, assessment or expense as to parties hereto by reason of the adjudicated proprietary character of said storage rights, nor credit or offset for benefits resulting from such storage); provided, that no party shall have any direct interest in or control over such contracts or the operation thereof by reason of the adjudicated right of such party, the Watermaster having sole custody and control of all Ground Water storage rights in the Basin pursuant to the Physical Solution herein, and subject to review of the Court.

(o) Notice List. Maintain a current list of party designees to receive notice hereunder, in accordance with Section 54 hereof.

35. Policy Decisions -- Procedure. (Prior Judgment Section 27) It is contemplated that Watermaster will exercise discretion in making policy decisions relating to Basin management under the Physical Solution decreed herein. In order to assure full participation and opportunity to be heard for

those affected, no policy decision shall be made by Watermaster until thirty (30) days after the question involved has been raised for discussion at a Watermaster meeting and noted in the draft of minutes thereof.

36. Reports. (Prior Judgment Section 28) Watermaster shall annually file with the Court and mail to the parties a report of all Watermaster activities during the preceding year, including an audited statement of all accounts and financial activities of Watermaster, summary reports of Diversions and Pumping, and all other pertinent information. To the extent practical, said report shall be mailed to all parties on or before November 1.

37. Review Procedures. (Prior Judgment Section 29) Any action, decision, rule or procedure of Watermaster (other than a decision establishing Operating Safe Yield, see Section 43[c]) shall be subject to review by the Court on its own motion or on timely motion for an Order to Show Cause by any party, as follows:

(a) Effective Date of Watermaster Action. Any order, decision or action of Watermaster shall be deemed to have occurred on the date that written notice thereof is mailed. Mailing of draft copies of Watermaster minutes to the parties requesting the same shall constitute notice to all such parties.

(b) Notice of Motion. Any party may, by a regularly noticed motion, petition the Court for review of said Watermaster's action or decision. Notice of such motion shall be mailed to Watermaster and all parties. Unless so

ordered by the Court, such petition shall not operate to stay the effect of such Watermaster action.

(c) Time for Motion. Notice of motion to review any Watermaster action or decision shall be served and filed within ninety (90) days after such Watermaster action or decision.

(d) De Novo Nature of Proceeding. Upon filing of such motion for hearing, the Court shall notify the parties of a date for taking evidence and argument, and shall review de novo the question at issue on the date designated. The Watermaster decision or action shall have no evidentiary weight in such proceeding.

(e) Decision. The decision of the Court in such proceeding shall be an appealable Supplemental Order in this case. When the same is final, it shall be binding upon the Watermaster and the parties.

## F. PHYSICAL SOLUTION

38. Purpose and Objective. (Prior Judgment Section 30) Consistent with the California Constitution and the decisions of the Supreme Court, the Court hereby adopts and Orders the parties to comply with this Physical Solution. The purpose and objective of these provisions is to provide a legal and practical means for accomplishing the most economic, long term, conjunctive utilization of surface, Ground Water, Supplemental Water and Ground Water storage capacity to meet the needs and requirements of the water users dependent upon the Basin and Relevant Watershed, while preserving existing equities.

39. Need for Flexibility. (Prior Judgment Section 31) In

order that Watermaster may be free to utilize both existing and new and developing technological, social and economic concepts for the fullest benefit of all those dependent upon the Basin, it is essential that the Physical Solution hereunder provide for maximum flexibility and adaptability. To that end, the Court has retained continuing jurisdiction to supplement the broad discretion herein granted to the Watermaster.

40. Watermaster Control. (Prior Judgment Section 32) In order to develop an adequate and effective program of Basin management, it is essential that Watermaster have broad discretion in the making of Basin management decisions within the ambit hereinafter set forth. Withdrawal and replenishment of supplies of the Basin and Relevant Watershed and the utilization of the water resources thereof, and of available Ground Water storage capacity, must be subject to procedures established by Watermaster in implementation of the provisions of this Judgment. Both the quantity and quality of said water resource are thereby preserved and its beneficial utilization maximized.

41. General Pattern of Contemplated Operation. (Prior Judgment Section 33) In general outline (subject to the specific provisions hereafter and to Watermaster Operating Criteria set forth in Exhibit "H"), Watermaster will determine annually the Operating Safe Yield of the Basin and will notify each Pumper of his share thereof, stated in acre feet per Fiscal Year. Thereafter, no party may Produce in any Fiscal Year an amount in excess of the sum of his Diversion Right, if any, plus his Pumper's Share of such Operating Safe Yield, or his

Integrated Production Right, or the terms of any Cyclic Storage Agreement, without being subject to Assessment for the purpose of purchasing Replacement Water. In establishing the Operating Safe Yield, Watermaster shall follow all physical, economic, and other relevant parameters provided in the Watermaster Operating Criteria. Watermaster shall have Assessment powers to raise funds essential to implement the management plan in any of the several special circumstances herein described in more detail.

42. Basin Operating Criteria. (Prior Judgment Section 34) Until further order of the Court and in accordance with the Watermaster Operating Criteria, Watermaster shall not spread Replacement Water when the water level at the Key Well exceeds Elevation two hundred fifty (250), and Watermaster shall spread Replacement Water, insofar as practicable, to maintain the water level at the Key Well above Elevation two hundred (200).

43. Determination of Operating Safe Yield. (Prior Judgment Section 35) Watermaster shall annually determine the Operating Safe Yield applicable to the succeeding Fiscal Year and estimate the same for the next succeeding four (4) Fiscal Years. In making such determination, Watermaster shall be governed in the exercise of its discretion by the Watermaster Operating Criteria. The procedures with reference to said determination shall be as follows:

(a) Preliminary Determination. On or before Watermaster's first meeting in April of each year, Watermaster shall make a Preliminary Determination of the Operating Safe Yield of the Basin for each of the succeeding five Fiscal Years. Said determination shall be

made in the form of a report containing a summary statement of the considerations, calculations and factors used by Watermaster in arriving at said Operating Safe Yield.

(b) Notice and Hearing. A copy of said Preliminary Determination and report shall be mailed to each Pumper and Integrated Producer at least ten (10) days prior to a hearing to be held at Watermaster's regular meeting in May, of each year, at which time objections or suggested corrections or modifications of said determinations shall be considered. Said hearing shall be held pursuant to procedures adopted by Watermaster.

(c) Watermaster Determination and Review Thereof. Within thirty (30) days after completion of said hearing, Watermaster shall mail to each Pumper and Integrated Producer a final report and determination of said Operating Safe Yield for each such Fiscal Year, together with a statement of the Producer's entitlement in each such Fiscal Year stated in acre feet. Any affected party, within thirty (30) days of mailing of notice of said Watermaster determination, may, by a regularly noticed motion, petition the Court for an Order to Show Cause for review of said Watermaster finding, and thereupon the Court shall hear such objections and settle such dispute. Unless so ordered by the Court, such petition shall not operate to stay the effect of said report and determination. In the absence of such review proceedings, the Watermaster determination shall be final.

44. Reports of Pumping and Diversion. (Prior Judgment

Section 36) Each party (other than Minimal Producers) shall file with the Watermaster quarterly, on or before the last day of January, April, July and October, a report on a form to be prescribed by Watermaster showing the total Pumping and Diversion (separately for Direct Use and for non-consumptive use, if any,) of such party during the preceding calendar quarter.

45. Assessments -- Purpose. (Prior Judgment Section 37) Watermaster shall have the power to levy and collect Assessments from the parties (other than Minimal Producers, non-consumptive users, or Production under Special Category Rights or Cyclic Storage Agreements) based upon Production during the preceding Fiscal Year. Said Assessments may be for one or more of the following purposes:

(a) Watermaster Administration Costs. Within thirty (30) days after completion of the hearing on the Preliminary Determination of the Operating Safe Yield of the Basin and Watermaster's determination thereof, pursuant to Section 43 hereof, Watermaster shall adopt a proposed budget for the succeeding Fiscal Year and shall mail a copy thereof to each party, together with a statement of the level of Administration Assessment levied by Watermaster which will be collected for purposes of raising funds for said budget. Said Assessment shall be uniformly applicable to each acre foot of Production.

(b) Replacement Water Costs. Replacement Water Assessments shall be collected from each party on account of such party's Production in excess of its Diversion

Rights, Pumper's Share or Integrated Production Right, and on account of the consumptive use portion of Overlying Rights, computed at the applicable rate established by Watermaster consistent with the Watermaster Operating Criteria.

(c) Make-Up Obligation. An Assessment shall be collected equally on account of each acre foot of Production, which does not bear a Replacement Assessment hereunder, to pay all necessary costs of Administration and satisfaction of the Make-Up Obligation. Such Assessment shall not be applicable to water Production for an Overlying Right.

(d) In-Lieu Water Cost. Watermaster may levy an Assessment against all Pumping to pay reimbursement for In-Lieu Water Costs except that such Assessment shall not be applicable to the non-consumptive use portion of an Overlying Right.

(e) Basin Water Quality Improvement. For purposes of testing, protecting or improving the water quality in the Basin, Watermaster may, after a noticed hearing thereon, fix terms and conditions under which it may waive all or any part of its Assessments on such ground water Production and if such Production, in addition to his other Production, does not exceed such Producer's Share or entitlement for that Fiscal Year, such stated Production shall be allowed to be carried over for a part of such Producer's next Fiscal Year's Producer's Share or entitlement. In connection therewith, Watermaster may also

waive the provisions of Sections 25, 26 and 57 hereof, relating to Injunction Against Unauthorized Recharge, Injunction Against Transportation From Basin or Relevant Watershed, and Intervention After Judgment, respectively. Nothing in this Judgment is intended to allow an increase in any Producer's annual entitlement nor to prevent Watermaster, after hearing thereon, from entering into contracts to encourage, assist and accomplish the clean up and improvement of degraded water quality in the Basin by non-parties herein. Such contracts may include the exemption of the Production of such Basin water therefor from Watermaster Assessments and, in connection therewith, the waiver of the provisions of Judgment Sections 25, 26, and 57 hereof.

46. Assessments -- Procedure. (Prior Judgment Section 38) Assessments herein provided for shall be levied and collected as follows:

(a) Levy and Notice of Assessment. Within thirty (30) days of Watermaster's annual determination of Operating Safe Yield of the Basin for each Fiscal Year and succeeding four (4) Fiscal Years, Watermaster shall levy applicable Administration Assessments, Replacement Water Assessments, Make-up Water Assessments and In-Lieu Water Assessments, if any. Watermaster shall give written notice of all applicable Assessments to each party on or before August 15, of each year.

(b) Payment. Each Assessment shall be payable, and each party is Ordered to pay the same, on or before

September 20, following such Assessment, subject to the rights reserved in Section 37 hereof.

(c) Delinquency. Any Assessment which becomes delinquent after January 1, 1980, shall bear interest at the annual prime rate plus one percent (1%) in effect on the first business day of August of each year. Said prime interest rate shall be that fixed by the Bank of America NT&SA for its preferred borrowing customers on said date. Said prime interest rate plus one percent (1%) shall be applicable to any said delinquent Assessment from the due date thereof until paid. Provided, however, in no event shall any said delinquent Assessment bear interest at a rate of less than ten percent (10%) per annum. Such delinquent Assessment and interest may be collected in a Show Cause proceeding herein or any other legal proceeding instituted by Watermaster, and in such proceeding the Court may allow Watermaster its reasonable costs of collection, including attorney's fees.

47. Availability of Supplemental Water From Responsible Agencies. (Prior Judgment Section 39) If any Responsible Agency shall, for any reason, be unable to deliver Supplemental Water to Watermaster when needed, Watermaster shall collect funds at an appropriate level and hold them in trust, together with interest accrued thereon, for purchase of such water when available.

48. Accumulation of Replacement Water Assessment Proceeds. (Prior Judgment Section 40) In order to minimize fluctuation in Assessments and to give Watermaster flexibility in Basin

management, Watermaster may make reasonable accumulations of Replacement Water Assessments. Such moneys and any interest accrued thereon shall only be used for the purchase of Replacement Water.

49. Carry-over of Unused Rights. (Prior Judgment Section 41) Any Pumper's Share of Operating Safe Yield, and the Production right of any Integrated Producer, which is not Produced in a given Fiscal Year may be carried over and accumulated for one Fiscal Year, pursuant to reasonable rules and procedures for notice and accounting which shall be adopted by Watermaster. The first water Produced in the succeeding Fiscal Year shall be deemed Produced pursuant to such Carry-over Rights.

50. Minimal Producers. (Prior Judgment Section 42) In the interest of Justice, Minimal Producers are exempted from the operation of this Physical Solution, so long as such party's annual Production does not exceed five (5) acre feet. Quarterly Production reports by such parties shall not be required, but Watermaster may require, and Minimal Producers shall furnish, specific periodic reports. In addition, Watermaster may conduct such investigation of future operations of any Minimal Producer as may be appropriate.

51. Effective Date. (Prior Judgment Section 43) The effective date for commencing accounting and operation under this Physical Solution, other than for Replacement Water Assessments, shall be July 1, 1972. The first Assessment for Replacement Water shall be payable on September 20, 1974, on account of Fiscal Year 1973-74 Production.

## G. MISCELLANEOUS PROVISIONS

52. Puente Narrows Flow. (Prior Judgment Section 44) The Puente Basin is tributary to the Main San Gabriel Basin. All Producers within said Puente Basin have been dismissed herein, based upon the Puente Narrows Agreement (Exhibit "J"), whereby Puente Basin Water Agency agreed not to interfere with surface inflow and to assure continuance of historic subsurface contribution of water to Main San Gabriel Basin. The Court declares said Agreement to be reasonable and fair and in full satisfaction of claims by Main San Gabriel Basin for natural water from Puente Basin.

53. San Gabriel District - Interim Order. (Prior Judgment Section 45) San Gabriel District has a contract with the State of California for State Project Water, delivered at Devil Canyon in San Bernardino County. San Gabriel District is **HEREBY ORDERED** to proceed with and complete necessary pipeline facilities as soon as practical.

Until said pipeline is built and capable of delivering a minimum of twenty-eight thousand eight-hundred (28,800) acre feet of State Project water per year, defendant cities of Alhambra, Azusa, and Monterey Park shall pay to Watermaster each Fiscal Year a Replacement Assessment at a uniform rate sufficient to purchase Replenishment Water when available, which rate shall be declared by San Gabriel District. When water is available through said pipeline, San Gabriel District shall make the same available to Watermaster, on his reasonable demand, at said specified rate per acre foot. Interest accrued on such funds shall be paid to San Gabriel

District.

54. Service Upon and Delivery to Parties of Various Papers. (Prior Judgment Section 46) Service of the Judgment on those parties who have executed the Stipulation for Judgment shall be made by first class mail, postage prepaid, addressed to the Designee and at the address designated for that purpose in the executed and filed counterpart of the Stipulation for Judgment, or in any substitute designation filed with the Court.

Each party who has not heretofore made such a designation shall, within thirty (30) days after the Judgment shall have been served upon that party, file with the Court, with proof of service of a copy thereof upon Watermaster, a written designation of the person to whom and the address at which all future notices, determinations, requests, demands, objections, reports and other papers and processes to be served upon that party or delivered to that party are to be so served or delivered.

A later substitute designation filed and served in the same manner by any party shall be effective from the date of filing as to the then future notices, determinations, requests, demands, objections, reports and other papers and processes to be served upon or delivered to that party.

Delivery to or service upon any party by Watermaster, by any other party, or by the Court, of any item required to be served upon or delivered to a party under or pursuant to the Judgment may be made by deposit thereof (or by copy thereof) in the mail, first class, postage prepaid, addressed to the Designee of the party and at the address shown in the latest

designation filed by that party.

55. Assignment, Transfer, etc., of Rights. (Prior Judgment Section 47) Any rights Adjudicated herein except Overlying Rights, may be assigned, transferred, licensed or leased by the owners thereof; provided however, that no such assignment shall be complete until the appropriate notice procedures established by Watermaster have been complied with. No water Produced pursuant to rights assigned, transferred, licensed, or leased may be transported outside the Relevant Watershed except by:

(1) a Transporting Party, or

(2) a successor in interest immediate or mediate to a water system on lands or portion thereof, theretofore served by such a Transporting Party, for use by such successor in accordance with limitations applicable to Transporting Parties, or

(3) a successor in interest to the Special Category rights of MWD.

The transfer and use of Overlying Rights shall be limited, as provided in Section 21 hereof, as exercisable only on the specifically defined Overlying Lands and they cannot be separately conveyed or transferred apart therefrom.

56. Abandonment of Rights. (Prior Judgment Section 48) It is in the interest of reasonable beneficial use of the Basin and its water supply that no party be encouraged to take and use more water in any Fiscal Year than is actually required. Failure to Produce all of the water to which a party is entitled hereunder shall not, in and of itself, be deemed or constitute

an abandonment of such party's right, in whole or in part. Abandonment and extinction of any right herein Adjudicated shall be accomplished only by:

(1) a written election by the party, filed in this case, or

(2) upon noticed motion of Watermaster, and after hearing.

In either case, such abandonment shall be confirmed by express subsequent order of this Court.

57. Intervention After Judgment. (Prior Judgment Section 49) Any person who is not a party or successor to a party and who proposes to Produce Water from the Basin or Relevant Watershed, may seek to become a party to this Judgment through a Stipulation For Intervention entered into with Watermaster. Watermaster may execute said Stipulation on behalf of the other parties herein but such Stipulation shall not preclude a party from opposing such Intervention at the time of the Court hearing thereon. Said Stipulation For Intervention must thereupon be filed with the Court, which will consider an order confirming said Intervention following thirty (30) days' notice to the parties. Thereafter, if approved by the Court, such Intervenor shall be a party bound by this Judgment and entitled to the rights and privileges accorded under the Physical Solution herein.

58. Judgment Binding on Successors, etc. (Prior Judgment Section 50) Subject to specific provisions hereinbefore contained, this Judgment and all provisions thereof are applicable to and binding upon and inure to the benefit of not

only the parties to this action, but as well to their respective heirs, executors, administrators, successors, assigns, lessees, licensees and to the agents, employees and attorneys in fact of any such persons.

59. Water Rights Permits. (Prior Judgment Section 51) Nothing herein shall be construed as affecting the relative rights and priorities between MWD and San Gabriel Valley Protective Association under State Water Rights Permits Nos. 7174 and 7175, respectively.

60. Costs. (Prior Judgment Section 52) No party shall recover any costs in this proceeding from any other party.

61. Entry of Judgment. (New) The Clerk shall enter this Judgment.

DATED: August 24, 1989.

s/ Florence T. Pickard
Florence T. Pickard, Judge
Specially Assigned

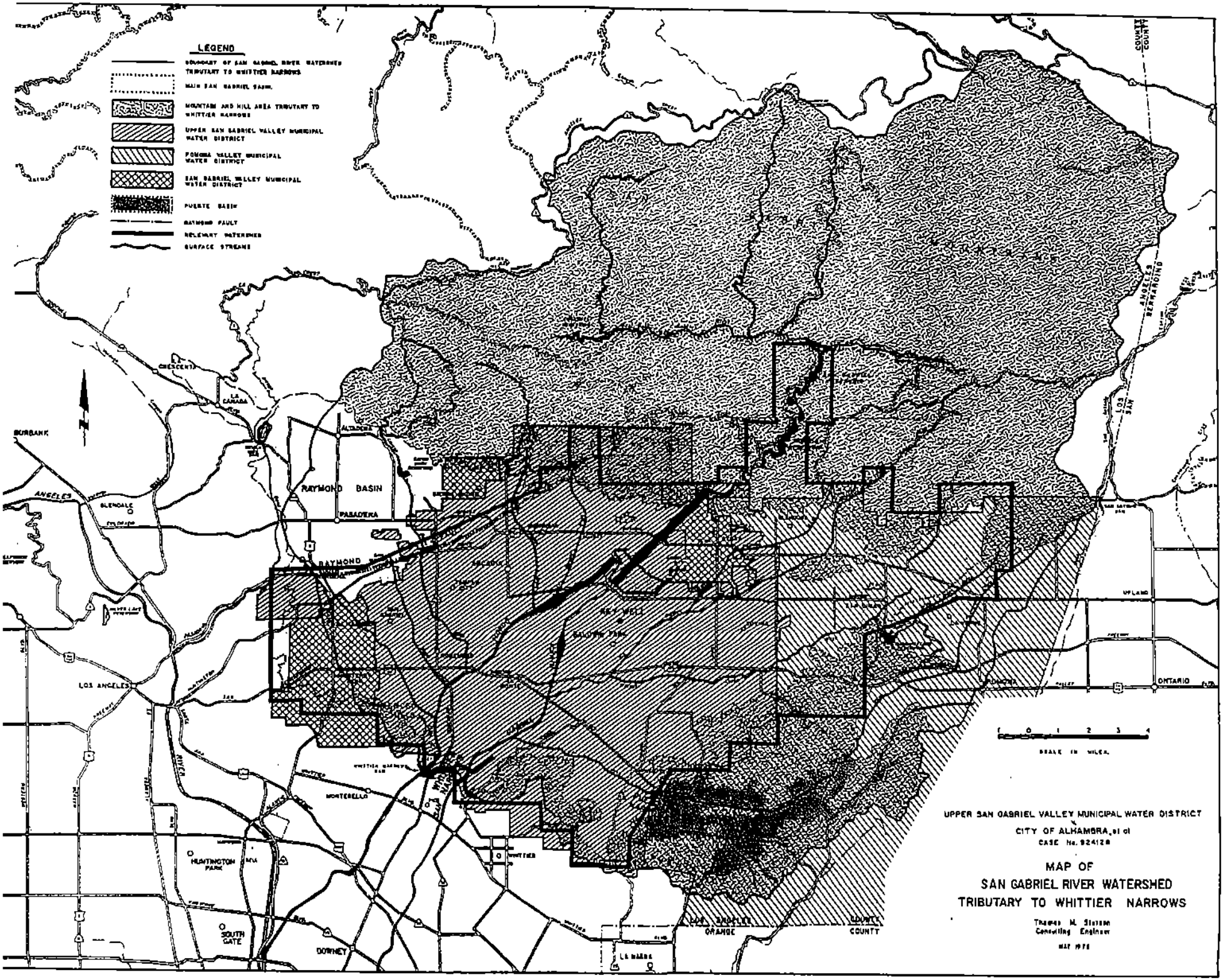

LEGEND
BOUNDARY OF SAN GABRIEL RIVER WATERSHED TRIBUTARY TO WHITTIER NARROWS
MAIN SAN GABRIEL BASIN
MOUNTAIN AND HILL AREA TRIBUTARY TO WHITTIER NARROWS
UPPER SAN GABRIEL VALLEY MUNICIPAL WATER DISTRICT
POMONA VALLEY MUNICIPAL WATER DISTRICT
SAN GABRIEL VALLEY MUNICIPAL WATER DISTRICT
PUENTE BASIN
RAYMOND FAULT
RELEVANT WATERSHED
SURFACE STREAMS
RAYMOND BASIN
PASADENA
ALTADENA
BURBANK
GLENDALE
LA CRESCENTA
LA CANADA
LOS ANGELES
MONTEBELLO
WHITTIER
HUNTINGTON PARK
SOUTH GATE
DOWNEY
LA HABRA
ONTARIO
UPLAND
ORANGE COUNTY
SCALE IN MILES
UPPER SAN GABRIEL VALLEY MUNICIPAL WATER DISTRICT
CITY OF ALHAMBRA, et al
CASE No. 924128
MAP OF
SAN GABRIEL RIVER WATERSHED
TRIBUTARY TO WHITTIER NARROWS
Thomas M. Stetson
Consulting Engineer
MAY 1978

Exhibit "B"

**BOUNDARIES OF RELEVANT WATERSHED**

The following described property is located in Los Angeles County, State of California:

Beginning at the Southwest corner of Section 14, Township 1 North, Range 11 West, San Bernardino Base and Meridian;

Thence Northerly along the West line of said Section 14 to the Northwest corner of the South half of said Section 14;

Thence Easterly along the North line of the South half of Section 14 to the East line of said Section 14;

Thence Northerly along the East line of said Section 14, Township 1 North, Range 11 West and continuing Northerly along the East line of Section 11 to the Northeast corner of said Section 11;

Thence Easterly along the North line of Section 12 to the Northeast corner of said Section 12;

Thence Southerly along the East line of said Section 12 and continuing Southerly along the East line of Section 13 to the Southeast corner of said Section 13, said corner being also the Southwest corner of Section 18, Township 1 North, Range 10 West;

Thence Easterly along the South line of Sections 18, 17, 16 and 15 of said Township 1 North, Range 10 West to the Southwest corner of Section 14;

Thence Northerly along the West line of Section 14 to the Northwest corner of the South half of Section 14;

Thence Easterly along the North line of the South half of Section 14 to the East line of said section;

Thence Northerly along the East line of said Section 14, and continuing Northerly along the West line of Section 12 of said Township 1 North, Range 10 West to the North line of said Section 12;

Thence Easterly along the North line of said Section 12, to the Northeast corner of said Section 12, said corner being also the Southwest corner of Section 6, Township 1 North, Range 9 West;

Thence Northerly along the West line of said Section 6 and continuing Northerly along West line of Sections 31 and 30, Township 2 North, Range 9 West to the Westerly prolongation of the North line of said Section 30;

Thence Easterly along said Westerly prolongation of the North line of said Section 30 and continuing Easterly along the North line of Section 29 to the Northeast corner of said Section 29;

Thence Southerly along the East line of said Section 29 and continuing Southerly along the East line of Section 32, Township 2 North, Range 9 West, and thence continuing Southerly along the East line of Section 5, Township 1 North, Range 9 West to the Southeast corner of said Section 5;

Thence Westerly along the South line of said Section 5 to the Southwest corner of said Section 5, said point being also the Northwest corner of Section 8;

Thence Southerly along the West line of said Section 8 and continuing Southerly along the West line of Section 17, to the Southwest corner of said Section 17, said corner being also the Northwest corner of Section 20;

Thence Easterly along the North line of Sections 20 and 21 to the Northwest corner of Section 22, said corner being also the Southwest corner of Section 15;

Thence Northerly along the West line of said Section 15 to the Northwest corner of the South half of said Section 15;

Thence Easterly along the North line of said South half of Section 15 to the Northeast corner of said South half of Section 15;

Thence Southerly along the East line of Section 15 and continuing Southerly along the East line of Section 22 to the Southeast corner of said Section 22, said point being also the Southwest corner of Section 23;

Thence Easterly along the South line of Sections 23 and 24 to the East line of the West half of said Section 24;

Thence Northerly along said East line of the West half of Section 24 to the North line thereof;

Thence Easterly along said North line of Section 24 to the Northeast corner thereof, said point also being the Northwest corner of Section 19, Township 1 North, Range 8 West;

Thence continuing Easterly along the North line of Section 19 and Section 20 of said Township 1 North, Range 8 West to the Northeast corner of said Section 20;

Thence Southerly along the East line of Sections 20, 29 and 32 of said Township 1 North, Range 8 West to the Southeast corner of said Section 32;

Thence Westerly along the South line of Section 32 to the Northwest corner of the East half of Section 5, Township 1 South, Range 8 West;

Thence Southerly along the West line of the East half of said Section 5 to the South line of said Section 5;

Thence West to the East line of the Northerly prolongation of Range 9 West;

Thence South 67° 30′ West to an intersection with the Northerly prolongation of the West line of Section 27, Township 1 South, Range 9 West;

Thence Southerly along the Northerly prolongation of said West line of Section 27 and continuing Southerly along the West line of Section 27 to the Southwest corner of said Section 27, said point being also the Southeast corner of Section 28;

Thence Westerly along the South line and Westerly projection of the South line of said Section 28 to the Northerly prolongation of the West line of Range 9 West;

Thence Southerly along said prolongation of the West line of Range 9 West to the Westerly prolongation of the North line of Township 2 South;

Thence Westerly along said Westerly prolongation of the North line of Township 2 South, a distance of 8,500 feet;

Thence South a distance of 4,500 feet;

Thence West a distance of 10,700 feet;

Thence South 29° West to an intersection with the Northerly prolongation of the West line of Section 20, Township 2 South, Range 10 West;

Thence Southerly along said Northerly prolongation of the West line of said Section 20 and continuing Southerly along the West line of Section 20 to the Southwest corner of said Section 20;

Thence South a distance of 2,000 feet;

Thence West a distance of two miles, more or less, to an intersection with the East line of Section 26, Township 2 South, Range 11 West;

Thence Northerly along said East line of Section 26 and continuing Northerly along the East line of Section 23, Township 2 South, Range 11 West to the Northeast corner of said Section 23;

Thence Westerly along the North line of said Section 23 to the Northwest corner thereof, said point being also the Southeast corner of Section 15, Township 2 South, Range 11 West;

Thence Northerly and Westerly along the East and North lines, respectively, of said Section 15, Township 2 South, Range 11 West, to the Northwest corner thereof;

Thence continuing Westerly along the Westerly prolongation of said North line of Section 15, Township 2 South, Range 11 West to an intersection with a line parallel to and one mile East of the West line of Range 11 West;

Thence Northerly along said parallel line to an intersection with the Northerly boundary of the City of Pico Rivera as said City of Pico Rivera existed on July 17, 1970;

Thence Westerly along said City boundary to an intersection with the East line of Range 12 West;

Thence Northerly along said East line of Range 12 West to the North line of Township 2 South;

Thence Westerly along the North line of Township 2 South to an intersection with the Southerly prolongation of the East line of the West half of Section 26, Township 1 South, Range 12 West;

Thence Northerly along said Southerly prolongation of said East line of the West half of said Section 26 to the Southeast corner of said West half;

Thence Westerly along the South line of Sections 26, 27 and 28, Township 1 South, Range 12 West, to the Southeast corner of Section 29, Township 1 South, Range 12 West;

Thence Northerly along the East line of said Section 29 to the Northeast corner of the South half of said Section 29;

Thence Westerly along the North line of the South half of said Section 29 to the Northwest corner thereof;

Thence Northerly along the West line of Sections 29, 20, 17 and 8, Township 1 South, Range 12 West;

Thence continuing Northerly along the Northerly prolongation of the West line of Section 8, Township 1 South, Range 12 West to an intersection with the North line of Township 1 South;

Thence Easterly along said North line of Township 1 South to the Northeast corner of Section 3, Township 1 South, Range 12 West;

Thence North 64° 30′ East to an intersection with the West line of Section 23, Township 1 North, Range 11 West;

Thence Northerly along the West line of said Section 23 to the Northwest corner thereof, said point being the Southwest corner of Section 14, Township 1 North, Range 11 West and said point being also the point of beginning.

Exhibit "C"

**TABLE**
**SHOWING BASE**
**ANNUAL DIVERSION**
**RIGHTS OF CERTAIN**
**DIVERTERS**

| | Base Annual Diversion Right Acre-Feet |
|---|---|
| Covell, Ralph (Successor to Rittenhouse, Catherine and Rittenhouse, James) | 2.12 |
| Maddock, A. G. | 3.40 |
| Rittenhouse, Catherine (Transferred to Covell, Ralph) | 0 |
| Rittenhouse, James (Transferred to Covell, Ralph) | 0 |
| Ruebhausen, Arline (Held in common with Ruebhausen, Victor) (Transferred to City of Glendale) | 0 |
| Ruebhausen, Victor (See Ruebhausen, Arline, above) | 0 |
| TOTAL | 5.52 |

Exhibit "D"

**TABLE**
**SHOWING PRESCRIPTIVE PUMPING RIGHTS**
**AND PUMPER'S SHARE OF EACH PUMPER**
**AS OF JUNE, 1988**

| Pumper | Prescriptive Pumping Right Acre-feet | Pumper's Share Percent (%) |
|---|---|---|
| Adams Ranch Mutual Water Company | 100.00 | 0.05060 |
| A & E Plastik Pak Co., Inc. (Transferred to Industry Properties, Ltd.) | 0 | 0 |
| Alhambra, City of | 8,812.05 | 4.45876 |
| Amarillo Mutual Water Company | 709.00 | 0.35874 |
| Anchor Plating Co., Inc. (Successor to Bodger & Sons) (Transferred to Crown City Plating Co.) | 0 | 0 |
| Anderson, Ray L. and Helen T., Trustees (Successor to Covina-Valley Unified School District) | 50.16 | 0.02538 |
| Andrade, Marcario and Consuelo; and Andrade, Robert and Jayne (Successor to J. F. Isbell Estate, Inc.) | 8.36 | 0.00423 |
| Arcardia, City of | 9,252.00 | 4.68137 |
| (Successor to First National Finance Corporation) | 60.90 | 0.03081 |
| (Transferred to City of Monrovia) | 951.00 | 0.48119 |
| | 8,361.90 | 4.23099 |
| Associated Southern Investment Company (Transferred to Southern California Edison Company) | 0 | 0 |
| AZ-Two, Inc. (Lessee of Southwestern Portland Cement Co.) | 0 | 0 |
| Azusa, City | 3,655.99 | 1.84988 |
| Azusa-Western Inc. (Transferred to Southwestern Portland Cement Co.) | 0 | 0 |
| Bahnsen & Beckman Ind., Inc. (Transferred to Woodland, Richard) | 0 | 0 |

| Pumper | Prescriptive Pumping Right Acre-feet | Pumper's Share % |
|---|---|---|
| Bahnsen, Betty M. (Transferred to Dawes, Mary Kay) | 0 | 0 |
| Baldwin Park County Water District (See Valley County Water District) | - | - |
| Banks, Gale C. (Successor to Doyle, Mr. and Mrs.; and Madruga, Mr. and Mrs.) | 50.00 | 0.02530 |
| Base Line Water Company | 430.20 | 0.21767 |
| Beverly Acres Mutual Water Company | 93.00 | 0.04706 |
| Birenbaum, Max (Held in common with Birenbaum, Sylvia; Schneiderman, Alan; Schneiderman, Lydia; Wigodsky, Bernard; Wigodsky, Estera) (Transferred to City of Whittier) | 0 | 0 |
| Birenbaum, Sylvia (See Birenbaum, Max) | - | - |
| Blue Diamond Concrete Materials Div., The Flintkote Company (Transferred to Sully-Miller Contracting Co.) | 0 | 0 |
| Bodger & Sons DBA Bodger Seeds Ltd. (Transferred to Anchor Plating Co., Inc.) | 0 | 0 |
| Botello Water Company | 0 | 0 |
| Burbank Development Company | 50.65 | 0.02563 |
| Cadway, Inc. (Successor to: | | |
| Corcoran, Jack S. and R. L.) | 100.00 | 0.05060 |
| Corcoran, Jack S. and R. L.) | 100.00 | 0.05060 |
| | 200.00 | 0.10120 |
| Cal Fin (Transferred to Suburban Water Systems) | 0 | 0 |
| California-American Water Company (San Marino System) | 7,868.70 | 3.98144 |
| California Country Club | 0 | 0 |

| Pumper | Prescriptive Pumping Right Acre-feet | Pumper's Share % |
|---|---|---|
| California Domestic Water Company | 11,024.82 | 5.57839 |
| (Successor to: | | |
| Cantrill Mutual Water Company | 42.50 | 0.02150 |
| Industry Properties, Ltd. | 73.50 | 0.03719 |
| Modern Accent Corporation | 256.86 | 0.12997 |
| Fisher, Russell) | 19.00 | 0.00961 |
| | 11,416.68 | 5.77666 |
| California Materials Company | 0 | 0 |
| Cantrill Mutual Water Company (Transferred to California Domestic Water Co.) | 0 | 0 |
| Cedar Avenue Mutual Water Company | 121.10 | 0.06127 |
| Champion Mutual Water Company | 147.68 | 0.07472 |
| Chronis, Christine (See Polopolus, et al) | - | - |
| Clayton Manufacturing Company | 511.80 | 0.25896 |
| Collison, E. O. | 0 | 0 |
| Comby, Erma M. (See Wilmott, Erma M.) | - | - |
| Conrock Company | | |
| (Formerly Consolidated Rock Products Co.) | 1,465.35 | 0.74144 |
| (Successor to Manning Bros. Rock & Sand Co.) | 328.00 | 0.16596 |
| | 1,793.35 | 0.90740 |
| Consolidated Rock Products Co. (See Conrock Company) | - | - |
| Corcoran, Jack S. | | |
| (Held in common with Corcoran, R. L.) | | |
| (Transferred to: | 747.00 | 0.37797 |
| Cadway, Inc. | 100.00 | 0.05060 |
| Cadway, Inc.) | 100.00 | 0.05060 |
| | 547.00 | 0.27677 |
| Corcoran, R. L. (See Corcoran, Jack S.) | - | - |
| County Sanitation District No. 18 of Los Angeles County | 4.50 | 0.00228 |

| Pumper | Prescriptive Pumping Right Acre-feet | Pumper's Share % |
|---|---|---|
| Covell, et al. (Successor to Rittenhouse, Catherine and Rittenhouse, James) (Held in common with Jobe, Darr; Goedert, Lillian E.; Goedert, Marion W.; Lakin, Kendall R.; Lakin, Kelly R.; Snyder, Harry) | 111.05 | 0.05619 |
| Covina, City of | 2,507.89 | 1.26895 |
| (Transferred to Covina Irrigating Company) | 1,734.00 | 0.87737 |
| (Transferred to Covina Irrigating Company) | 300.00 | 0.15179 |
| | 473.89 | 0.23979 |
| Covina-Valley Unified School District (Transferred to Anderson, Ray) | 0 | 0 |
| Crevolin, A. J. | 2.25 | 0.00114 |
| Crocker National Bank, Executor of the Estate of A. V. Handorf (Transferred to Modern Accent Corp.) | 0 | 0 |
| Cross Water Company (Transferred to City of Industry) | 0 | 0 |
| Crown City Plating Company | 190.00 | 0.09614 |
| (Successor to Anchor Plating Co., Inc.) | 10.00 | 0.00506 |
| | 200.00 | 0.10120 |
| Davidson Optronics, Inc. | 22.00 | 0.01113 |
| Dawes, Mary Kay (Successor to Bahnsen, Betty M.) | 441.90 | 0.22359 |
| Del Rio Mutual Water Company | 199.00 | 0.10069 |
| Denton, Kathryn W., Trustee for San Jose Ranch Company (Transferred to White, June G., Trustee of the June G. White Share of the Garnier Trust) | 0 | 0 |
| Doyle, Mr. and Mrs.; and Madruga, Mr. and Mrs. (Successor to Sawpit Farms, Ltd.) (Transferred to Banks, Gale C.) | 0 | 0 |
| Driftwood Dairy | 163.80 | 0.08288 |
| Duhalde, L. (Transferred to El Monte Union High School District) | 0 | 0 |

| Pumper | Prescriptive Pumping Right Acre-feet | Pumper's Share % |
|---|---|---|
| Dunning, George (Held in common with Dunning, Vera H.) (Successor to Vera H. Dunning) | 324.00 | 0.16394 |
| Dunning, Vera H. (Transferred to George Dunning) | - | - |
| East Pasadena Water Company, Ltd. | 1,407.69 | 0.71227 |
| Eckis, Rollin (Successor to Sawpit Farms, Ltd.) (Transferred to City of Monrovia) | 0 | 0 |
| El Encanto Properties (Transferred to La Puente Valley County Water District) | 0 | 0 |
| El Monte, City of | 2,784.23 | 1.40878 |
| El Monte Cemetary Association | 18.50 | 0.00936 |
| El Monte Union High School District (Successor to Duhalde, L.) (Transferred to City of Whittier) | 0 | 0 |
| Everett, Mrs. Alda B. (Held in common with Everett, W. B., Executor of the Estate of I. Worth Everett) | 0 | 0 |
| Everett, W. B., Executor of the Estate of I. Worth Everett (See Everett, Mrs. Alda B.) | - | - |
| Faix, Inc. (Successor to Frank F. Pellissier & Sons, Inc.) (Transferred to Faix, Ltd.) | 0 | 0 |
| Faix, Ltd. (Successor to Faix, Inc.) | 6,490.00 | 3.28384 |
| First National Finance Corporation (Transferred to City of Arcadia) | 0 | 0 |
| Fisher, Russell (Held in common with Hauch, Edward and Warren, Clyde) (Transferred to California Domestic Water Company) | 0 | 0 |

| Pumper | Prescriptive Pumping Right Acre-feet | Pumper's Share % |
|---|---|---|
| Frank F. Pellissier & Sons, Inc. (Transferred to Faix, Inc.) | 0 | 0 |
| Fruit Street Water Company (Transferred to: Gifford, Brooks, Jr. City of La Verne) | 0 | 0 |
| Gifford, Brooks, Jr. (Successor to: Fruit Street Water Co., Mission Gardens Mutual Water Company) (Transferred to City of Whittier) | 0 | 0 |
| Gilkerson, Frank B. (Transferred to Jobe, Darr) | - | - |
| Glendora Unified High School District (Transferred to City of Glendora) | 0 | 0 |
| Goedert, Lillian E. (See Covell, et al) | - | - |
| Goedert, Marion W. (See Covell, et al) | - | - |
| Graham, William (Transferred to Darr Jobe) | - | - |
| Green, Walter | 71.70 | 0.03628 |
| Grizzle, Lissa B. (Held in common with Grizzle, Mervin A.; Wilson, Harold R.; Wilson, Sarah C.) (Transferred to City of Whittier) | 0 | 0 |
| Grizzle, Mervin A. (See Grizzle, Lissa B.) | 0 | 0 |
| Hansen, Alice | 0.75 | 0.00038 |
| Hartley, David | 0 | 0 |
| Hauch, Edward (See Fisher, Russell) | 0 | 0 |
| Hemlock Mutual Water Company | 166.00 | 0.08399 |

| Pumper | Prescriptive Pumping Right Acre-feet | Pumper's Share % |
|---|---|---|
| Hollenbeck Street Water Company (Transferred to Suburban Water Systems) | 0 | 0 |
| Hunter, Lloyd F. (Successor to R. Wade) | 4.40 | 0.00223 |
| Hydro-Conduit Corporation | 0 | 0 |
| Industry Waterworks System, City of (Successor to Cross Water Company) | 1,103.00 | 0.55810 |
| Industry Properties, Ltd. (Successor to A & E Plastik Pak Co., Inc.) (Transferred to California Domestic Water Co.) | 0 | 0 |
| J. F. Isbell Estate, Inc. (Transferred to Andrade, Macario and Consuelo; and Andrade, Robert and Jayne) | 0 | 0 |
| Jerris, Helen (See Polopolus, et al) | - | - |
| Jobe, Darr (See Covell, et al) | - | - |
| Kirklen Family Trust (Formerly Kirklen, Dawn L.) (Held in common with Kirklen, William R.) | 375.00 | 0.18974 |
| (Successor to San Dimas-La Verne Recreational Facilities Authority) | 62.50 | 0.03162 |
| | 437.50 | 0.22136 |
| Kirklen, Dawn L. (See Kirklen Family Trust) | - | - |
| Kirklen, William R. (See Kirklen, Dawn L.) | - | - |
| Kiyan, Hideo (Held in common with Kiyan, Hiro) | 30.00 | 0.01518 |
| Kiyan, Hiro (See Kiyan, Hideo) | - | - |
| Knight, Kathryn M. (Successor to William Knight) | 227.88 | 0.11530 |
| Knight, William (Transferred to Kathryn M. Knight) | 0 | 0 |

| Pumper | Prescriptive Pumping Right Acre-feet | Pumper's Share % |
|---|---|---|
| Lakin, Kelly R. (See Covell, et al) | - | - |
| Lakin, Kendall R. (See Covell, et al) | - | - |
| Landeros, John | 0.75 | 0.00038 |
| La Grande Source Water Company (Transferred to Suburban Water Systems) | 0 | 0 |
| Lang, Frank (Transferred to San Dimas-La Verne Recreational Facilities Authority) | 0 | 0 |
| La Puente Cooperative Water Company (Transferred to Suburban Water Systems) | 0 | 0 |
| La Puente Valley County Water District (Successor to El Encanto Properties) | 1,097.00<br>33.40<br>1,130.40 | 0.55507<br>0.01690<br>0.57197 |
| La Verne, City of (Successor to Fruit Street Water Co.) | 250.00<br>105.71<br>355.71 | 0.12650<br>0.05349<br>0.17999 |
| Lee, Paul M. and Ruth A.; Nasmyth, Virrginia; Nasmyth, John | 0 | 0 |
| Little John Dairy | 0 | 0 |
| Livingston-Graham, Inc. | 1,824.40 | 0.92312 |
| Los Flores Mutual Water Company (Transferred to City of Monterey Park) | 0 | 0 |
| Loucks, David | 3.00 | 0.00152 |
| Manning Bros. Rock & Sand Co. (Transferred to Conrock Company) | 0 | 0 |
| Maple Water Company | 118.50 | 0.05996 |
| Martinez, Frances Mercy (Held in common with Martinez, Jaime) | 0.75 | 0.00038 |
| Martinez, Jaime (See Martinez, Frances Mercy) | - | - |
| Massey-Ferguson Company | 0 | 0 |

| Pumper | Prescriptive Pumping Right Acre-feet | Pumper's Share % |
|---|---|---|
| Miller Brewing Company | 111.01 | 0.05617 |
| (Successor to: | | |
| Maechtlen, Estate of J. J. | 151.50 | 0.07666 |
| Phillips, Alice B., et al) | 50.00 | 0.02530 |
| | 312.51 | 0.15813 |
| Mission Gardens Mutual Water Company (Transferred to Gifford, Brooks, Jr.) | 0 | 0 |
| Modern Accent Corporation (Successor to Crocker National Bank, Executor of the Estate of A. V. Handorf) (Transferred to California Domestic Water Co.) | 0 | 0 |
| Monterey Park, City of | 6,677.48 | 3.37870 |
| (Successor to Los Flores Mutual Water Co.) | 26.60 | 0.01346 |
| | 6,704.08 | 3.39216 |
| Murphy Ranch Mutual Water Company (Transferred to Southwest Suburban Water) | 0 | 0 |
| Namimatsu Farms (Transferred to California Cities Water Company) | 0 | 0 |
| Nick Tomovich & Sons | 0.02 | 0.00001 |
| No. 17 Walnut Place Mutual Water Co. (Transferred to San Gabriel Valley Water Company) | 0 | 0 |
| Orange Production Credit Association | 0 | 0 |
| Owl Rock Products Co. | 715.60 | 0.36208 |
| Pacific Rock & Gravel Co. (Transferred to: City of Whittier Rose Hills Memorial Park Association) | 0 | 0 |
| Park Water Company (Transferred to Valley County Water District) | 0 | 0 |
| Penn, Margaret (See Polopolus, et al) | - | - |
| Pico County Water District | 0.75 | 0.00038 |
| Polopolus, John (See Polopolus, et al) | - | - |

| Pumper | Prescriptive Pumping Right Acre-feet | Pumper's Share % |
|---|---|---|
| Polopolus, et al (Successor to Polopolus, Steve) (Held in common with Chronis, Christine; Jerris, Helen; Penn, Margaret; Polopolus, John) | 22.50 | 0.01138 |
| Polopolus, Steve (Transferred to Polopolus, et al) | - | - |
| Rados, Alexander (Held in common with Rados, Stephen and Rados, Walter) | 43.00 | 0.02176 |
| Rados, Stephen (See Rados, Alexander) | - | - |
| Rados, Walter (See Rados, Alexander) | - | - |
| Richwood Mutual Water Company | 192.60 | 0.09745 |
| Rincon Ditch Company | 628.00 | 0.31776 |
| Rincon Irrigation Company | 314.00 | 0.15888 |
| Rittenhouse, Catherine (Transferred to Covell, Ralph) | 0 | 0 |
| Rittenhouse, James (Transferred to Covell, Ralph) | 0 | 0 |
| Rose Hills Memorial Park Association | 594.00 | 0.30055 |
| (Successor to Pacific Rock & Gravel Co.) | 200.00 | 0.10120 |
| | 794.00 | 0.40175 |
| Rosemead Development, Ltd. (Successor to Thompson, Earl W.) | 1.00 | 0.00051 |
| Rurban Homes Mutual Water Company | 217.76 | 0.11018 |
| Ruth, Roy | 0.75 | 0.00038 |
| San Dimas-La Verne Recreational Facilities Authority (Successor to Lang, Frank) (Transferred to Kirklen, Dawn L. and William R.) | 0 | 0 |
| San Gabriel Country Club | 286.10 | 0.14476 |
| San Gabriel County Water District | 4,250.00 | 2.15044 |

| Pumper | Prescriptive Pumping Right Acre-feet | Pumper's Share % |
|---|---|---|
| San Gabriel Valley Municipal Water District | 0 | 0 |
| San Gabriel Valley Water Company | 16,659.00 | 8.42920 |
| (Successor to: | | |
| Vallecito Water Co. | 2,867.00 | 1.45066 |
| No. 17 Walnut Place Mutual Water Co.) | 21.50 | 0.01088 |
| | 19,547.50 | 9.89074 |
| Sawpit Farms, Limited | | |
| (Transferred to: | | |
| Eckis, Rollin | | |
| Doyle and Madruga) | 0 | 0 |
| Schneiderman, Alan | | |
| (See Birenbaum, Max) | - | - |
| Schneiderman, Lydia | | |
| (See Birenbaum, Max) | - | - |
| Security Pacific National Bank, Co-Trustee for the Estate of Winston F. Stoody | | |
| (See Stoody, Virginia A.) | | |
| (Transferred to City of Whittier) | 0 | 0 |
| Sierra Madre, City of | 0 | 0 |
| Sloan Ranches | 129.60 | 0.06558 |
| Smith, Charles | 0 | 0 |
| Snyder, Harry | | |
| (See Covell, et al) | - | - |
| Sonoco Products Company | 311.60 | 0.15766 |
| South Covina Water Service | 992.30 | 0.50209 |
| Southern California Edison Company | 155.25 | 0.07855 |
| (Successor to: Associated | | |
| Southern Investment Company) | 16.50 | 0.00835 |
| | 171.75 | 0.08690 |
| Southern California Water Company, San Gabriel Valley District | 5,773.00 | 2.92105 |
| South Pasadena, City of | 3,567.70 | 1.80520 |
| Southwest Suburban Water | | |
| (See Suburban Water Systems) | - | - |

| Pumper | Prescriptive Pumping Right Acre-feet | Pumper's Share % |
|---|---|---|
| Southwestern Portland Cement Company (Successor to Azusa Western, Inc.) | 742.00 | 0.37544 |
| Speedway 605, Inc. | 0 | 0 |
| Standard Oil Company of California | 2.00 | 0.00101 |
| Sterling Mutual Water Company | 120.00 | 0.06072 |
| Stoody, Virginia A., Co-Trustee for the Estate of Winston F. Stoody (See Security Pacific National Bank, Co-Trustee) | - | - |
| Suburban Water Systems (Formerly Southwest Suburban Water) (Successor to: | 20,462.47 | 10.35370 |
| Hollenbeck Street Water Company | 646.39 | 0.32706 |
| La Grande Source Water Company | 1,078.00 | 0.54545 |
| La Puente Cooperative Water Co. | 1,210.90 | 0.61270 |
| Valencia Valley Water Company | 651.50 | 0.32965 |
| Victoria Mutual Water Company | 469.60 | 0.23761 |
| Cal Fin | 118.10 | 0.05976 |
| Murphy Ranch Mutual Water Co. | 223.23 | 0.11295 |
| | 24,860.19 | 12.57888 |
| Sully-Miller Contracting Company (Successor to Blue Diamond Concrete Materials Division, The Flintkote Co.) | 1,399.33 | 0.70804 |
| Sunny Slope Water Company | 2,228.72 | 1.12770 |
| Taylor Herb Garden (Transferred to Covina Irrigating Company) | 0 | 0 |
| Texaco, Inc. | 50.00 | 0.02530 |
| Thompson, Earl W. (Held in common with Thompson, Mary) (Transferred to Rosemead Development, Ltd.) | 0 | 0 |
| Thompson, Mary (See Thompson, Earl W.) | - | - |
| Tyler Nursery | 3.21 | 0.00162 |
| United Concrete Pipe Corporation (See U. S. Pipe & Foundry Company) | - | - |

| Pumper | Prescriptive Pumping Right Acre-feet | Pumper's Share % |
|---|---|---|
| U. S. Pipe & Foundry Company (Formerly United Concrete Pipe Corporation) | 376.00 | 0.19025 |
| Valencia Heights Water Company | 861.00 | 0.43565 |
| Valencia Valley Water Company (Transferred to Suburban Water Systems) | 0 | 0 |
| Vallecito Water Company (Transferred to San Gabriel Valley Water Company) | 0 | 0 |
| Valley County Water District (Formerly Baldwin Park County Water District) | 5,775.00 | 2.92206 |
| (Successor to Park Water Company) | 184.01 | 0.09311 |
| | 5,959.01 | 3.01517 |
| Valley Crating Company | 0 | 0 |
| Valley View Mutual Water Company | 616.00 | 0.31169 |
| Via, H. (See Via, H., Trust of) | - | - |
| Via, H., Trust of (Formerly Via, H.) | 46.20 | 0.02338 |
| Victoria Mutual Water Company (Transferred to Suburban Water Systems) | 0 | 0 |
| Wade, R. (Transferred to Lloyd F. Hunter) | 0 | 0 |
| Ward Duck Company | 1,217.40 | 0.61599 |
| Warren, Clyde (See Fisher, Russell) | - | - |
| W. E. Hall Company | 0.20 | 0.00010 |
| White, June G., Trustee of the June G. White Share of the Garnier Trust (Successor to Denton, Kathryn W., Trustee for the San Jose Ranch Company) | 185.50 | 0.09386 |

| Pumper | Prescriptive Pumping Right Acre-feet | Pumper's Share % |
|---|---|---|
| Whittier, City of | 7,620.23 | 3.85572 |
| (Successor to: | | |
| Grizzle, Lissa B. | 184.00 | 0.09310 |
| Pacific Rock and Gravel Co.) | 208.00 | 0.10524 |
| Security Pacific National Bank, | | |
| Co-Trustee for the Estate of Winston F. Stoody | 38.70 | 0.01958 |
| El Monte Union High School District | 16.20 | 0.00820 |
| Gifford, Brooks, Jr. | 198.25 | 0.10031 |
| Birenbaum, Max) | 6.00 | 0.00304 |
| | 8,271.38 | 4.18519 |
| Wigodsky, Bernard (See Birenbaum, Max) | - | - |
| Wigodsky, Estera (See Birenbaum, Max) | - | - |
| Wilmott, Erma M. (Formerly Comby, Erma M.) | 0.75 | 0.00038 |
| Wilson, Harold R. (See Grizzle, Lissa B.) | - | - |
| Wilson, Sarah C. (See Grizzle, Lissa B.) | - | - |
| Woodland, Frederick G. | - | - |
| Woodland, Richard (Successor to: Bahnsen and Beckman Ind., Inc.) | 840.50 | 0.42528 |
| **Totals for Exhibit "D"** | **155,800.68** | **78.83276** |
| | 41 833.75 | 21.16724 |
| **Totals from Exhibit "E"** | ~~38,026.25~~ | ~~19.54431~~ |
| **GRAND TOTALS** | **197,634.43** | **100.00000** |

TABLE
SHOWING PRODUCTION RIGHTS
OF EACH
INTEGRATED PRODUCER
AS OF JUNE 1988

| Party | Diversion Component Acre-feet | Prescriptive Pumping Component Acre-feet | Pumping Component Share Percent (%) |
|---|---|---|---|
| Azusa Agricultural Water Company | 1,000.00 | 1,732.20 | 0.87647 |
| Azusa Foot-Hill Citrus Water Company (Transfered to Monrovia Nursery Company) | 0 | 0 | 0 |
| Azusa Valley Water Company | 2,422.00 | 8,274.00 | 4.18652 |
| California-American Water Company (Duarte System) | 1,672.00 | 3,649.00 | 1.84634 |
| California Cities Water Company (See Southern California Water Company, San Dimas District) | - | - | - |
| Covina Irrigating Company | 2,514.00 | 4,140.00 | 2.09478 |
| (Successor to: | | | |
| City of Covina, | | 1,734.00 | 0.87737 |
| City of Covina, and | | 300.00 | 0.15179 |
| Taylor Herb Garden) | | 6.00 | 0.00304 |
| | 2,514.00 | 6,180.00 | 3.12698 |
| Glendora, City of | 17.00 | 8,258.00 | 4.17842 |
| (Successor to: | | | |
| Maechtlen, Estate of J. J., | | 150.00 | 0.07590 |
| Maechtlen, Trust of P. A., | | 50.00 | 0.02530 |
| Ruebhausen, Arline, and | 18.34 | | |
| Glendora Unified High School District) | | 9.00 | 0.05009 |
| | 35.34 | 8,557.00 | 4.32971 |
| Los Angeles, County of | 310.00 | 3,721.30 | 1.88292 |
| Maechtlen, Estate of J. J. | 0 | 301.50 | 0.15256 |
| (Transferred to: | | | |
| City of Glendora | | -150.00 | -0.07590 |
| Miller Brewing Company) | | -151.50 | -0.07666 |
| | 0 | 0 | 0 |

| Party | Diversion Componet Acre-feet | Prescriptive Pumping Component Acre-feet | Pumping Component Share % |
|---|---|---|---|
| Maechtlen, Estate of J. J. | 1.49 | 0 | 0 |
| Maechtlen, Trust of P. A. | 0.50 | 100.50 | 0.05085 |
| (Transferred to: | | | |
| City of Glendora | | -50.00 | -0.02530 |
| Alice B. Phillips, et al) | -0.50 | -50.50 | -0.02555 |
| | 0 | 0 | 0 |
| The Metropolitan Water District of Southern California | 9.59 | 165.00 | 0.08349 |
| Monrovia, City of | 1,098.00 | 5,042.22 | 2.55129 |
| (Sucessor to: | | | |
| Eckis, Rollin | | 123.00 | 0.06224 |
| City of Arcadia) | | 951.00 | 0.48119 |
| | 1,098.00 | 6,116.22 | 3.09472 |
| Monrovia, Nursery Company | 239.50 | 0 | 0 |
| (Successor to: | | | |
| Azusa Foot-Hill Citrus Co.) | 718.50 | 0 | |
| Phillips, Alice B., et al | | | |
| (Successor to: | | | |
| Maechtlen, Trust of P. A.) | 0.50 | 50.50 | 0.02530 |
| (Transferred to: | | | |
| Miller Brewing Company) | | -50.00 | -0.02530 |
| | 0.50 | 0.50 | 0.00025 |
| Southern California Water Company (San Dimas Dist.) | 500.00 | 3,242.53 | 1.64076 |
| (Formerly California Cities Water Company) | | | |
| (Successor to: | | | |
| Namimatsu Farms) | | 196.00 | 0.09917 |
| | 500.00 | 3,438.53 | 1.73984 |
| **TOTAL for Exhibit "E"** | 10,520.92 | 41,833.75 | 21.16724 |

Exhibit "F"

**TABLE SHOWING**
**SPECIAL CATAGORY RIGHTS**

| PARTY | Nature of Right |
|---|---|
| The Metropolitan Water District of Southern California | Morris Reservoir Storage and Withdrawal<br>(a) A right to divert, store and use San Gabriel River Water, pursuant to Permit No. 7174.<br><br>(b) Prior and paramount right to divert 72 acre-feet annually to offset Morris Reservoir evaporation and seepage losses and to provide the water supply necessary for presently existing incidential Morris Dam facilities. |
| Los Angeles County Flood Control District (Now Los Angeles County Department of Public Works) | Puddingstone Reservoir<br>Prior Prescriptive right to divert water from San Dimas Wash for storage in Puddingstone Reservoir in quantities sufficient to offset annual evaporation and seepage losses of the reservoir at approximate elevation 942. |

## TABLE SHOWING NON-CONSUMPTIVE USERS

| Party | Nature of Right |
|---|---|
| Covina Irrigating Company<br>Azusa Valley Water Company<br>Azusa Agricultural Water Co.<br>Azusa Foot-Hill Citrus Co.<br>Monrovia Nursery Company | "Committee-of-Nine" Spreading Right<br>To continue to divert water from the San Gabriel River pursuant to the 1888 Settlement, and to spread in spreading grounds within the Basin all water thus diverted without the right to recapture water in excess of said parties' rights as adjudicated in Exhibit "E". |
| California-American Water Company (Duarte System) | Spreading Right<br>To continue to divert water from the San Gabriel River pursuant to the 1888 Settlement, and to continue to divert water from Fish Canyon and to spread said waters in its spreading grounds in the Basin without the right to recapture water in excess of said party's rights as adjudicated in Exhibit "E". |
| City of Glendora | Spreading Right<br>To continue to spread the water of Big and Little Dalton Washes, pursuant to License No. 2592 without the right to recapture water in excess of said party's rights as adjudicated in Exhibit "E". |
| San Gabriel Valley Protective Association | Spreading Right<br>To continue to spread San Gabriel River water pursuant to License Nos. 9991 and 12,209, without the right to recapture said water. |
| California Cities Water Company | Spreading Right<br>To continue to spread waters from San Dimas Wash without the right to recapture water in excess of said party's rights as adjudicated in Exhibit "E". |
| Los Angeles County Flood Control District | Temporary storage of storm flow for regulatory purposes;<br><br>Spreading and conservation for general benefit in streambeds, reservoirs and spreading grounds without the right to recapture said water.<br><br>Maintenance and operation of dams and other flood control works. |

EXHIBIT "H"

WATERMASTER OPERATING CRITERIA

1. Basin Storage Capacity. The highest water level at the end of a water year during the past 40 years was reached at the Key Well on September 30, 1944 (elevation 316). The State of California, Department of Water Resources, estimates that as of that date, the quantity of fresh water in storage in the Basin was approximately 8,600,000 acre-feet. It is also estimated by said Department that by September 30, 1960, the quantity of fresh water in storage had decreased to approximately 7,900,000 acre-feet (elevation 237) at the Key Well).

The lowest water level at the end of a water year during the past 40 years was reached at the Key Well on September 30, 1965 (elevation 209). It is estimated that the quantity of fresh water in storage in the Basin on that date was approximately 7,700,000 acre-feet.

Thus, the maximum utilization of Basin storage was approximately 900,000 acre-feet, occurring between September 30, 1944, and September 30, 1965 (between elevations 316 and 209 at the Key Well). This is not to say that more than 900,000 acre-feet of storage space below the September 30, 1944 water levels cannot be utilized. However, it demonstrates that pumpers have deepened their wells and lowered their pumps so that such 900,000 acre-feet of storage can be safely and economically utilized.

The storage capacity of the Basin between elevations of 200 and 250 at the Key Well represents a usable volume of approximately 400,000 acre-feet of water.

2. <u>Operating Safe Yield and Spreading.</u> Watermaster in determining Operating Safe Yield and the importation of Replacement Water shall be guided by water level elevations in the Basin. He shall give recognition to, and base his operations on, the following general objectives insofar as practicable:

(a) The replenishment of ground water from sources of supplemental water should not cause excessively high levels of ground water and such replenishment should not cause undue waste of local water supplies.

(b) Certain areas within the Basin are not at the present time capable of being recharged with supplemental water. Efforts should be made to provide protection to such areas from excessive ground water lowering either through the "in lieu" provisions of the Judgment or by other means.

(c) Watermaster shall consider and evaluate the long-term consequences on ground water quality, as well as quantity, in determining and establishing Operating Safe Yield. Recognition shall be given to the enhancement of ground water quality insofar as practicable, especially in the area immediately upstream of Whittier Narrows where degradation of water quality may occur when water levels at the Key Well are maintained at or below elevation 200.

(d) Watermaster shall take into consideration the comparative costs of supplemental and Make-up Water in determining the savings on a present value basis of temporary or permanent lowering or raising of water levels and other economic data and analyses indicating both the short-term and long-term

propriety of adjusting Operating Safe Yield in order to derive optimum water levels during any period. Watermaster shall utilize the provisions in the Long Beach Judgment which will result in the least cost of delivering Make-up Water.

3. Replacement Water -- Sources and Recharge Criteria. The following criteria shall control purchase of Replacement Water and Recharge of the Basin by Watermaster.

(a) Responsible Agency From Which to Purchase. Watermaster, in determining the Responsible Agency from which to purchase supplemental water for replacement purposes, shall be governed by the following:

(1) Place of Use of Water which is used primarily within the Basin or by cities within San Gabriel District in areas within or outside the Basin shall control in determining the Responsible Agency. For purposes of this subparagraph, water supplied through a municipal water system which lies chiefly within the Basin shall be deemed entirely used within the Basin; and

(2) Place of production of water shall control in determining the Responsible Agency as to water exported from the Basin, except as to use within San Gabriel District.

Any Responsible Agency may, at the request of Watermaster, waive its right to act as the source for such supplemental water, in which case Watermaster shall be free to purchase such water from the remaining Responsible Agencies which are the most beneficial and appropriate sources; provided, however, that a Responsible Agency shall not

authorize any sale of water in violation of the California Constitution.

(b) Water Quality. Watermaster shall purchase the best quality of supplemental water available for replenishment of the Basin, pursuant to subsection (a) hereof.

(c) Reclaimed Water. It is recognized that the technology and economic and physical necessity for utilization of reclaimed water is increasing. The purchase of reclaimed water in accordance with the Long Beach Judgment to satisfy the Make-up Obligation is expressly authorized. At the same time, water quality problems involved in the reuse of water within the Basin pose serious questions of increased costs and other problems to the pumpers, their customers and all water users. Accordingly, Watermaster is authorized to gather information, make and review studies, and make recommendations on the feasibility of the use of reclaimed water for replacement purposes; provided that no reclaimed water shall be recharged in the Basin by Watermaster without the prior approval of the court, after notice to all parties and hearing thereon.

4. Replacement Assessment Rates. The Replacement Assessment rates shall be in an amount calculated to allow Watermaster to purchase one acre-foot of supplemental water for each acre-foot of excess Production to which such Assessment applies.

EXHIBIT "J"

PUENTE NARROWS AGREEMENT

THIS AGREEMENT is made and entered into as of the 8th day of May, 1972, by and between PUENTE BASIN WATER AGENCY, herein called "Puente Agency", and UPPER SAN GABRIEL VALLEY MUNICIPAL WATER DISTRICT, herein called "Upper District".

A. RECITALS

1. Puente Agency. Puente Agency is a joint powers agency composed of Walnut Valley Water District, herein called "Walnut District", and Rowland Area County Water District, herein called "Rowland District". Puente Agency is formed for the purpose of developing and implementing a ground water basin management program for Puente Basin. Pursuant to said purpose, said Agency is acting as a representative of its member districts and of the water users and water right claimants therein in the defense and maintenance of their water rights within Puente Basin.

2. Upper District. Upper District is a municipal water district overlying a major portion of the Main San Gabriel Basin. Upper District is plaintiff in the San Gabriel Basin Case, wherein it seeks to adjudicate rights and implement a basin management plan for the Main San Gabriel Basin.

3. Puente Basin is a ground water basin tributary to the Main San Gabriel Basin. Said area was included within the scope of the San Gabriel Basin Case and substantially

all water rights claimants within Puente Basin were joined as defendants therein. The surface contribution to the Main San Gabriel Basin from Puente Basin is by way of the paved flood control channel of San Jose Creek, which passes through Puente Basin from the Pomona Valley area. Subsurface outflow is relatively limited and moves from the Puente Basin to the Main San Gabriel Basin through Puente Narrows.

4. Intent of Agreement. Puente Agency is prepared to assure Upper District that no activity within Puente Basin will hereafter be undertaken which will (1) interfere with surface flows in San Jose Creek, or (2) impair the subsurface flow from Puente Basin to the Main San Gabriel Basin. Walnut District and Rowland District, by operation of law and by express assumption endorsed hereon, assume the covenants of this agreement as a joint and several obligation. Based upon such assurances and the covenants hereinafter contained in support thereof, Upper District consents to the dismissal of all Puente Basin parties from the San Gabriel Basin Case. By reason of said dismissals, Puente Agency will be free to formulate a separate water management program for Puente Basin.

B. DEFINITIONS AND EXHIBITS

5. Definitions. As used in this Agreement, the following terms shall have the meanings herein set forth:

(a) Annual or Year refers to the fiscal year July 1 through June 30.

(b) Base Underflow. The underflow through

Puente Narrows which Puente Agency agrees to maintain, and on which accrued debits and credits shall be calculated.

(c) Make-up Payment. Make-up payments shall be an amount of money payable to the Watermaster appointed in the San Gabriel Basin Case, sufficient to allow said Watermaster to purchase replacement water on account of any accumulated deficit as provided in Paragraph 9 hereof.

(d) Puente Narrows. The subsurface geologic constriction at the downstream boundary of Puente Basin, located as shown on Appendix "B".

(e) Main San Gabriel Basin, the ground water basin shown and defined as such in Exhibit "A" to the Judgment in the San Gabriel Basin Case.

(f) San Gabriel Basin Case. Upper San Gabriel Valley Municipal Water District v. City of Alhambra, et al., L. A. Sup. Ct. No. 924128, filed January 2, 1968.

6. Appendices. Attached hereto and by this reference made a part hereof are the following appendices:

"A" -- Location Map of Puente Basin, showing major geographic, geologic, and hydrologic features.

"B" -- Map of Cross-Section Through Puente Narrows, showing major physical features and location of key wells.

"C" -- Engineering Criteria, being a description of a method of measurement of subsurface outflow to be utilized for Watermaster purposes.

C. COVENANTS

7. Watermaster. There is hereby created a two member Watermaster service to which each of the parties to this agreement shall select one consulting engineer. The respective representatives on said Watermaster shall serve at the pleasure of the governing body of each appointing party and each party shall bear its own Watermaster expense.

a. Organization. Watermaster shall perform the duties specified herein on an informal basis, by unanimous agreement. In the event the two representatives are unable to agree upon any finding or decision, they shall select a third member to act, pursuant to the applicable laws of the State of California. Thereafter, until said issue is resolved, said three shall sit formally as a board of arbitration. Upon resolution of the issue in dispute, the third member shall cease to function further.

b. Availability of Information. Each party hereto shall, for itself and its residents and water users, use its best efforts to furnish all appropriate information to the Watermaster in order that the required determination can be made.

c. Cooperation With Other Watermasters. Watermaster hereunder shall cooperate and coordinate activities with the Watermasters appointed in the San Gabriel Basin Case and in Long Beach v. San Gabriel Valley Water Company, et al.

d. Determination of Underflow. Watermaster shall annually determine the amount of underflow from Puente Basin to the San Gabriel Basin, pursuant to Engineering Criteria.

e. Perpetual Accounting. Watermaster shall maintain a perpetual account of accumulated base underflow, accumulated subsurface flow, any deficiencies by reason of interference with surface flows, and the offsetting credit for any make-up payments. Said account shall annually show the accumulated credit or debit in the obligation of Puente Agency to Upper District.

f. Report. Watermaster findings shall be incorporated in a brief written report to be filed with the parties and with the Watermaster in the San Gabriel Basin Case. Said report shall contain a statement of the perpetual account heretofore specified.

8. Base Underflow. On the basis of a study and review of historic underflow from Puente Basin to the Main San Gabriel Basin, adjusted for the effect of the paved flood control channel and other relevant considerations, it is

mutually agreed by the parties that the base underflow is and shall be 580 acre feet per year, calculated pursuant to Engineering Criteria.

9. Puente Agency's Obligation. Puente Agency covenants, agrees and assumes the following obligation hereunder:

a. Noninterference with Surface Flow. Neither Puente Agency nor any persons or entities within the corporate boundaries of Walnut District or Rowland District will divert or otherwise interfere with or utilize natural surface runoff now or hereafter flowing in the storm channel of San Jose Creek; provided, however, that this covenant shall not prevent the use, under Watermaster supervision, of said storm channel by the Puente Agency or Walnut District or Rowland District for transmission within Puente Agency of supplemental or reclaimed water owned by said entities and introduced into said channel solely for transmission purposes. In the event any unauthorized use of surface flow in said channel is made contrary to the covenant herein provided, Puente Agency shall compensate Upper District by utilizing any accumulated credit or by make-up payment in the same manner as is provided for deficiencies in subsurface outflow from Puente Basin.

b. Subsurface Outflow. To the extent that

the accumulated subsurface outflow falls below the accumulated base underflow and the result thereof is an accumulated deficit in the Watermaster's annual accounting, Puente Agency agrees to provide make-up payments during the next year in an amount not less than one-third of the accumulated deficit.

c. Purchase of Reclaimed Water. To the extent that Puente Agency or Walnut District or Rowland District may hereafter purchase reclaimed water from the facilities of Sanitation District 21 of Los Angeles County, such purchaser shall use its best efforts to obtain waters originating within San Gabriel River Watershed.

10. Puente Basin Parties Dismissal. In consideration of the assumption of the obligation hereinabove provided by Puente Agency, Upper District consents to entry of dismissals as to all Puente Basin parties in San Gabriel Basin Case. This agreement shall be submitted for specific approval by the Court and a finding that it shall operate as full satisfaction of any and all claims by the parties within Main San Gabriel Basin against Puente Basin parties by reason of historic surface and subsurface flow.

IN WITNESS WHEREOF the parties hereto have caused this Agreement to be executed as of the day and date first above written.

Approved as to form:
CLAYSON, STARK, ROTHROCK & MANN

By _____
Attorneys for Puente Agency

PUENTE BASIN AGENCY

By _____
EDMOND M. BIEDERMAN
President

Approved as to form:

By _____
Attorney for Upper District

UPPER SAN GABRIEL VALLEY
MUNICIPAL WATER DISTRICT

By _____
Howard H. Hawkins
President

The foregoing agreement is approved and accepted, and the same is acknowledged as the joint and several obligation of the undersigned.

Approved as to form:

_____
Attorney for Walnut District

WALNUT VALLEY WATER DISTRICT

By _____
J. P. BOURDET
Vice President

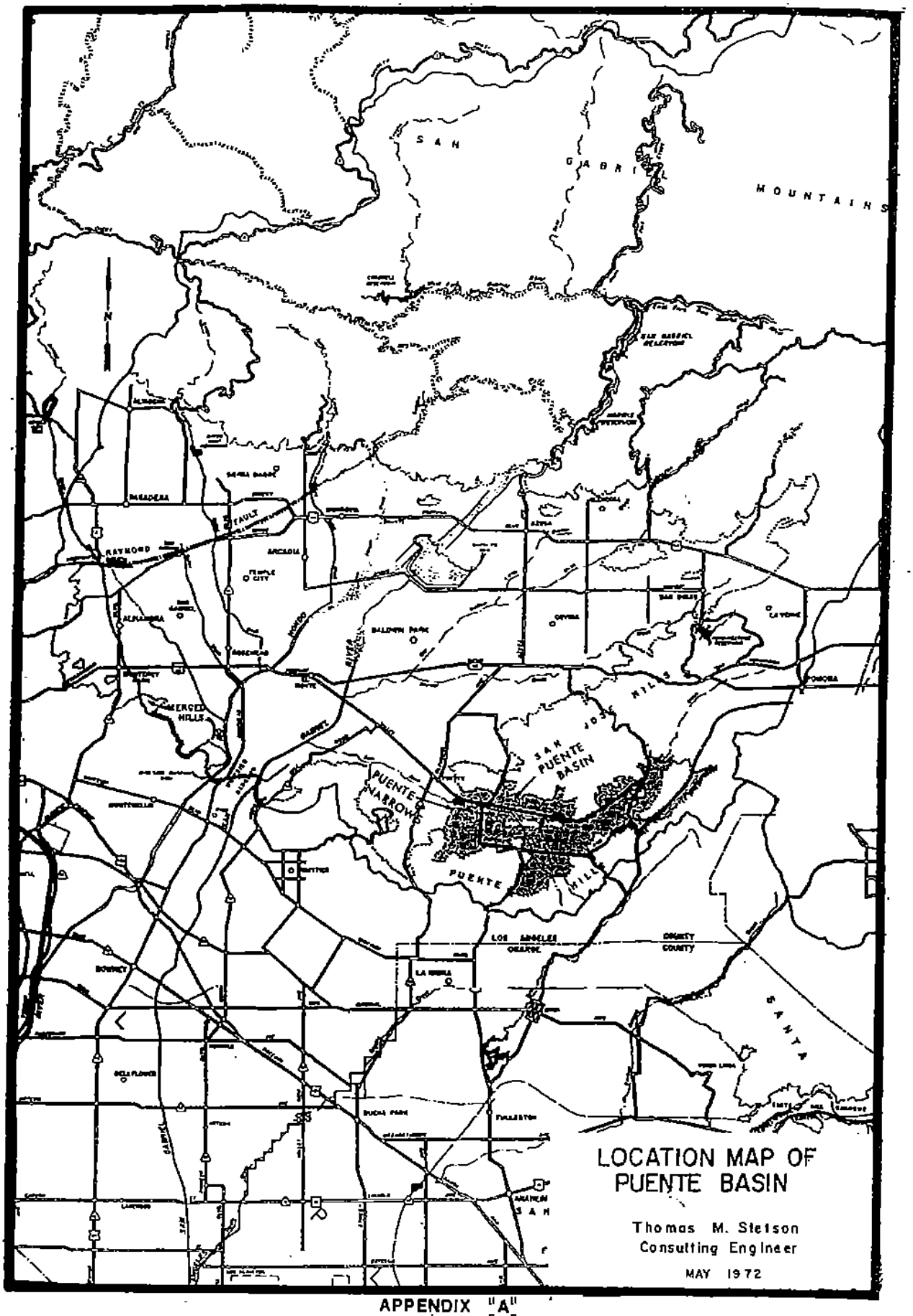
Approved as to form:

_____
Attorneys for Rowland District

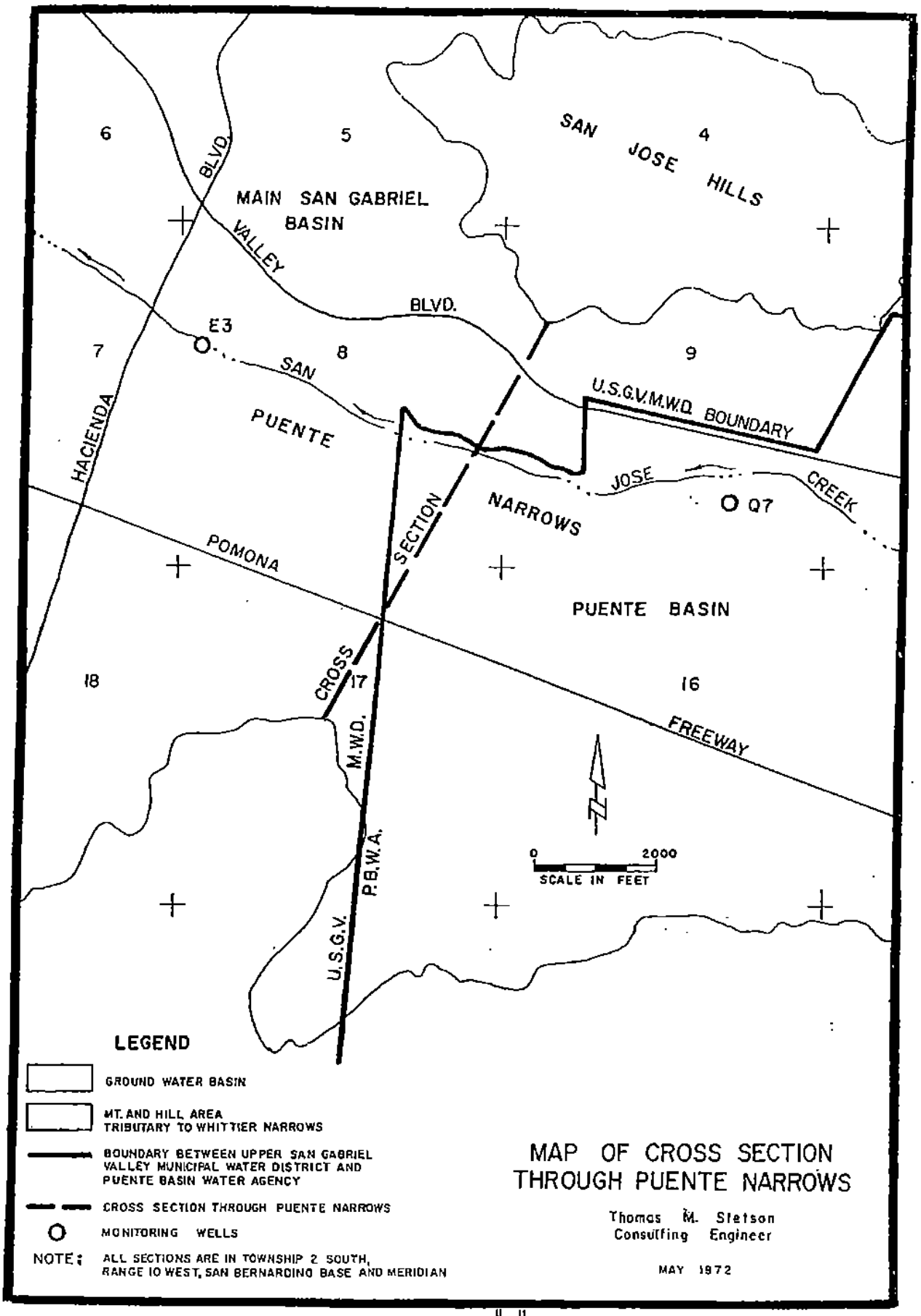
ROWLAND AREA COUNTY WATER
DISTRICT

By _____
President
Wm. A. Simmons

Exhibit "J"




APPENDIX "A"
EXHIBIT "J"




APPENDIX "B"
EXHIBIT "J"

ENGINEERING CRITERIA

APPENDIX "C"

1. Monitoring Wells. The wells designated as State Wells No. 2S/10W-9Q7 and 2S/10W-8E3 and Los Angeles County Flood Control District Nos. 3079M and 3048B, respectively, shall be used to measure applicable ground water elevations. In the event either monitoring well should fail or become unrepresentative, a substitute well shall be selected or drilled by Watermaster. The cost of drilling a replacement well shall be the obligation of the Puente Agency.

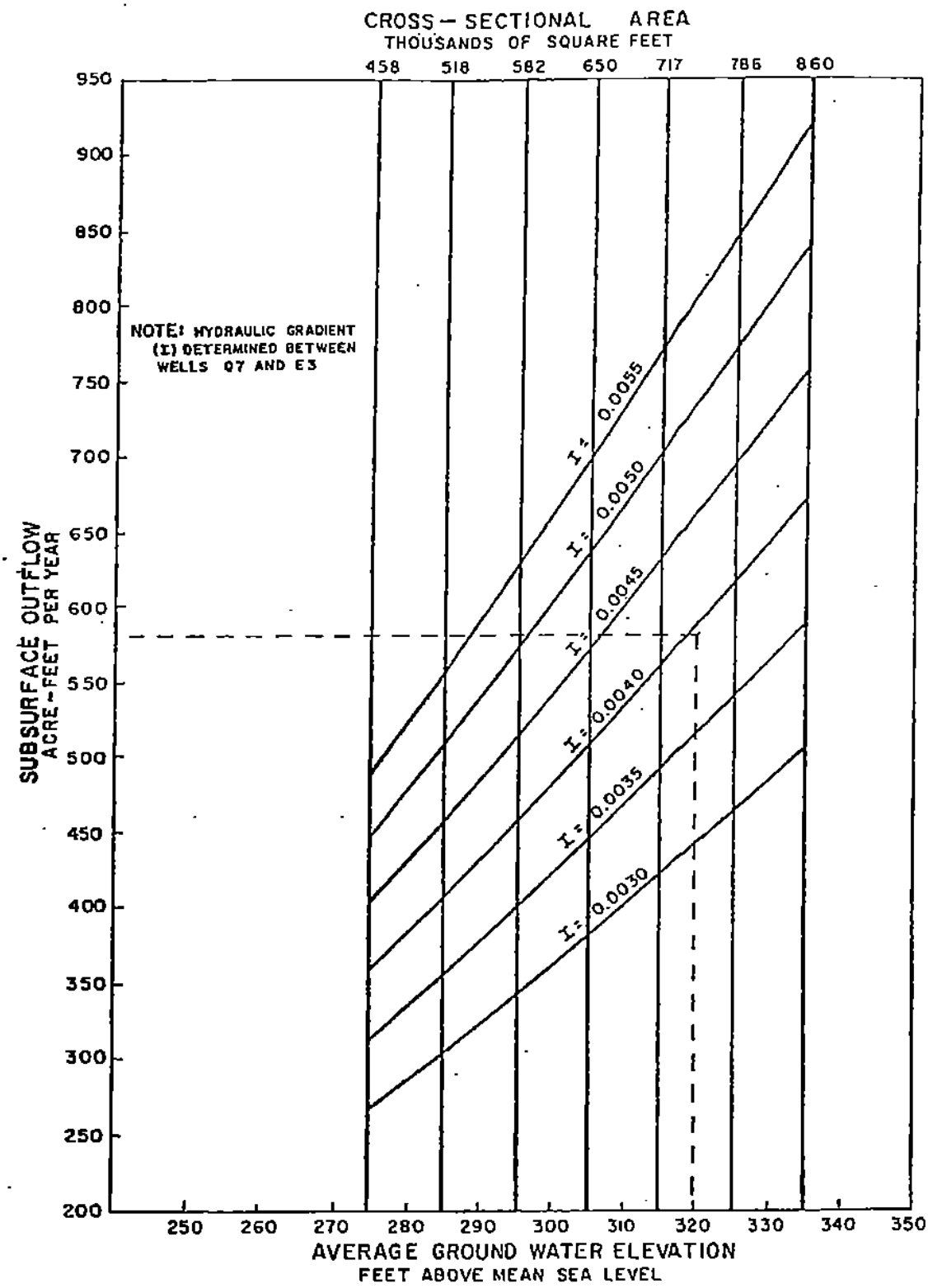
2. Measurement. Each monitoring well shall be measured and the ground water elevation determined semi-annually on or about April 1 and October 1 of each year. Prior to each measurement, the pump shall be turned off for a sufficient period to insure that the water table has recovered to a static or near equilibrium condition.

3. Hydraulic Gradient. The hydraulic gradient, or slope of the water surface through Puente Narrows, shall be calculated between the monitoring wells as the difference in water surface elevation divided by the distance, approximately 9,000 feet, between the wells. The hydraulic gradient shall be determined for the spring and fall and the average hydraulic gradient calculated for the year.

4. Ground Water Elevation at Puente Narrows Cross Section. The ground water elevation at the Puente Narrows

cross section midway between the monitoring wells shall be the average of the ground water elevation at the two wells. This shall be determined for the spring and fall and the average annual ground water elevation calculated for the year.

5. Determination of Underflow. The chart attached is a photo-reduction of a full scale chart on file with the Watermaster. By applying the appropriate average annual hydraulic gradient (I) to the average annual ground water elevation at the Puente Narrows cross section (involving the appropriate cross-sectional area [A]), it is possible to read on the vertical scale the annual acre feet of underflow.




RELATIONSHIP OF AVERAGE GROUND WATER ELEVATION AT PUENTE NARROWS AND APPLICABLE CROSS-SECTIONAL AREA WITH SUBSURFACE OUTFLOW THROUGH PUENTE NARROWS FOR VARIOUS HYDRAULIC GRADIENTS

Thomas M. Stetson
Consulting Engineer
MAY 1972

EXHIBIT "K"

OVERLYING RIGHTS

I. NATURE OF OVERLYING RIGHT

An "Overlying Right" is the right to Produce water from the Main San Gabriel Basin for use on the overlying lands hereinafter described. Such rights are exercisable without quantitative limit only on said overlying land and cannot be separately conveyed or transferred apart therefrom. The exerciser of such right is assessable by Watermaster as provided in Paragraph 21 of the Amended Judgment herein (prior Paragraph 14.5 of the Judgment herein) and is subject to the other provisions of said Paragraph.

II. OVERLYING LANDS (Description)

The overlying lands to which Overlying Rights are appurtenant are described as follows:

> "Those portions of Lots 1 and 2 of the lands formerly owned by W.A. Church, in the Rancho San Francisquito, in the City of Irwindale, County of Los Angeles, State of California, as shown on recorder's filed map No. 509, in the office of the County Recorder of said County, lying northeasterly of the northeasterly line and its southeasterly prolongation of Tract 1888, as shown on map recorded in Book 21 page 183 of Maps, in the office of the County Recorder of said County.
>
> "EXCEPT the portions thereof lying northerly and northwesterly of the center line of Arrow Highway described 'Sixth' and the center line of Live Oak Avenue described 'Third' in a final decree of condemnation, a certified copy of which was recorded August 18, 1933 as Instrument No. 354, in Book 12289, Page 277, Official Records.
>
> "ALSO EXCEPT that portion of said land described in the final decree of condemnation entered in Los Angeles County Superior Court Case No. 805008, a certified copy of which was recorded September 21, 1964, as Instrument No. 3730, in Book D-2634, Page 648, Official Records."

## III. PRODUCERS ENTITLED TO EXERCISE OVERLYING RIGHTS AND THEIR RESPECTIVE CONSUMPTIVE USE PORTIONS

The persons entitled to exercise Overlying Rights are both the owners of Overlying Rights and persons and entities licensed by such owners to exercise such Overlying Rights. The persons entitled to exercise Overlying Rights and their respective Consumptive Use portions are as follows:

| OWNER PRODUCERS | CONSUMPTIVE USE PORTION |
|---|---|
| BROOKS GIFFORD, SR.<br>BROOKS GIFFORD, JR.<br>PAUL MNOIAN<br>JOHN MGRDICHIAN<br>J. EARL GARRETT | 3.5 acre-feet per year |
| Present User:<br>Nu-Way Industries | |

PRODUCERS UNDER LICENSE

| | | |
|---|---|---|
| A. | WILLIAM C. THOMAS and EVELYN F. THOMAS, husband and wife, and MALCOLM K. GATHERER and JACQUELINE GATHERER, husband and wife, doing business by and through B & B REDI-I-MIX CONCRETE, INC., a corporation | 45.6 acre-feet per year |
| B. | PRE-STRESS CRANE RIGGING & TRUCK CO., INC., a corporation | 1.0 acre-foot per year |
| | Present Users:<br>Pre-Stress Crane Rigging & Truck Co., Inc., a corporation | |
| | Total | 50.1 acre-feet per year |

## IV. ANNUAL GROSS AMOUNT OF PRODUCTION FROM WHICH CONSUMPTIVE USE PORTIONS WERE DERIVED

183.65 acre-feet

Exhibit "L"

## LIST OF PRODUCERS AND THEIR DESIGNEES
June, 1989

| Producer Name | Designee |
|---|---|
| **A** | |
| Adams Ranch Mutual Water Company | Goji Iwakiri |
| Alhambra, City of | T. E. Shollenberger |
| Amarillo Mutual Water Company | Ester Guadagnolo |
| Anderson, Ray | Ray Anderson |
| Andrade, Macario, et al. | Macario R. Andrade |
| Arcadia, City of | Eldon Davidson |
| AZ-Two, Inc. | R. S. Chamberlain |
| Azusa, City of | William H. Redcay |
| Azusa Ag. Water Company | Robert E. Talley |
| Azusa Valley Water Company | Edward Heck |
| **B** | |
| Baldwin Park County Water District (See Valley County Water District) | - |
| Banks, Gale C. | Gale C. Banks |
| Base Line Water Company | Everett W. Hughes, Jr. |
| Beverly Acres Mutual Water User's Assn. (Formerly Beverly Acres Mutual Water Co.) | Eloise A. Moore |
| Burbank Development Company | Darrell A. Wright |
| **C** | |
| Cadway, Inc. | P. Geoffrey Nunn |
| California-American Water Company (San Marino System) | Andrew A. Krueger |
| California-American Water Company (Duarte System) | Andrew A. Krueger |
| California Country Club | Henri F. Pellissier |
| California Domestic Water Company | P. Geoffrey Nunn |
| Cedar Avenue Mutual Water Company | Austin L. Knapp |

Exhibit "L"

| Producer Name | Designee |
|---|---|
| Champion Mutual Water Company | Margaret Bauwens |
| Chevron, USA, Inc. | Ms. Margo Bart |
| Clayton Manufacturing Company | Don Jones |
| Conrock Company | Gene R.Block |
| Corcoran Brothers | Ray Corcoran |
| County Sanitation District No. 18 | Charles W. Curry |
| Covell, et al. | Darr Jobe |
| Covell, Ralph | Ralph Covell |
| Covina, City of | Wayne B. Dowdey |
| Covina Irrigating Company | William R. Temple |
| Crevolin, A. J. | A. J. Crevolin |
| Crown City Plating Company | N. G. Gardner |
| **D** | |
| Davidson Optronics, Inc. | James McBride |
| Dawes, Mary Kay | Mary Kay Dawes |
| Del Rio Mutual Water Company | Gonzalo Galindo |
| Driftwood Dairy | James E. Dolan |
| Dunning, George | George Dunning |
| **E** | |
| East Pasadena Water Company | Robert D. Mraz |
| El Monte, City of | Robert J. Pinniger |
| El Monte Cemetery Association | Linn E. Magoffin |
| **F** | |
| Faix, Ltd. | Henri F. Pellissier |
| **G** | |
| Glendora, City of | Arthur E. Cook |
| Green, Walter | Dr. Walter Green |
| **H** | |
| Hansen, Alice | Alice Hansen |

Exhibit "L"

| Producer Name | Designee |
|---|---|
| Hartley, David | David Hartley |
| Hemlock Mutual Water Company | Bud Selander |
| Hunter, Lloyd F. | Lloyd F. Hunter |
| **I** | |
| Industry Waterworks System, City of | Mary L. Jaureguy |
| **K** | |
| Kiyan Farm<br>Kiyan, Hideo | Mrs. Hideo Kiyan |
| Kirklen Family Trust | Dawn Kirklen |
| Knight, Kathryn M. | William J. Knight |
| **L** | |
| Landeros, John | John Landeros |
| La Puente Valley County Water District | Mary L. Jaureguy |
| La Verne, City of | N. Kathleen Hamm |
| Livingston-Graham | Gary O. Tompkins |
| Los Angeles, County of | Robert L. Larson |
| Loucks, David | David Loucks |
| **M** | |
| Maddock, A. G. | Ranney Draper, Esq. |
| Maechtlen, Trust of J. J. | Jack F. Maechtlen |
| Maple Water Company, Inc. | Charles King |
| Martinez, Francis Mercy | Francis Mercy Martinez |
| Metropolitan Water District of Southern California | Fred Vendig, Esq. |
| Miller Brewing Company | Dennis B. Puffer |
| Mnoian, Paul, et al. | Mal Gatherer |
| Monrovia, City of | Robert K. Sandwick |
| Monrovia Nursery | Miles R. Rosedale |
| Monterey Park, City of | Nels Palm |

Exhibit "L"

| Producer Name | Designee |
|---|---|
| N | |
| Nick Tomovich & Sons | Nick Tomovich |
| O | |
| Owl Rock Products Company | Peter L. Chiu |
| P | |
| Phillips, Alice B., et al. | Jack F. Maechtlen |
| Pico County Water District | Robert P. Fuller |
| Polopolus, et al. | Christine Chronis |
| R | |
| Rados Brothers | Alexander S. Rados |
| Richwood Mutual Water Company | Bonnie Pool |
| Rincon Ditch Company | K. E. Nungesser |
| Rincon Irrigation Company | K. E. Nungesser |
| Rose Hills Memorial Park Association | Allan D. Smith |
| Rosemead Development, Ltd. | John W. Lloyd |
| Rurban Homes Mutual Water Company | George W. Bucey |
| Ruth, Roy | Roy Ruth |
| S | |
| San Dimas - La Verne Recreational Facilities Authority | R. F. Griszka |
| San Gabriel Country Club | Fran Wolfe |
| San Gabriel County Water District | Philip G. Crocker |
| San Gabriel Valley Municipal Water District | Bob Stallings |
| San Gabriel Valley Water Company | Robert H. Nicholson, Jr. |
| Sloan Ranches | Larry R. Sloan |
| Sonoco Products Company | Elaine Corboy |
| South Covina Water Service | Anton C. Garnier |
| Southern California Edison Company | S. R. Shermoen |

Exhibit "L"

| Producer Name | Designee |
|---|---|
| Southern California Water Company -San Dimas District | J. F. Young |
| Southern California Water Company -San Gabriel Valley District | J. F. Young |
| South Pasadena, City of | John Bernardi |
| Southwestern Portland Cement Company | Dale W. Heineck |
| Standard Oil Company of California | John A. Wild |
| Sterling Mutual Water Company | Bennie L. Prowett |
| Suburban Water Systems | Anton C. Garnier |
| Sully-Miller Contracting Company | R. R. Munro |
| Sunny Slope Water Company | Michael J. Hart |
| **T** | |
| Taylor Herb Garden | Paul S. Taylor |
| Texaco, Inc. | E. O. Wakefield |
| Tyler Nursery | James K. Mitsumori, Esq. |
| **U** | |
| United Concrete Pipe Corporation | Doyle H. Wadley |
| United Rock Products Corporation | William S. Capps, Esq. |
| **V** | |
| Valencia Heights Water Company | Herman Weskamp |
| Valley County Water District (Formerly Baldwin Park County Water District) | Stanley D. Yarbrough |
| Valley View Mutual Water Company | Robert T. Navarre |
| Via, H., Trust of | Marverna Parton |
| **W** | |
| Ward Duck Company | Richard J. Woodland |
| W. E. Hall Company | Thomas S. Bunn, Jr., Esq. |
| White, June G., Trustee | June G. Lovelady |
| Whittier, City of | Neil Hudson |
| Wilmott, Erma M. | Erma M. Wilmott |

Exhibit "M"

WATERMASTER MEMBERS

FOR CALENDAR YEAR 1973

ROBERT T. BALCH (Producer Member), Chairman

LINN E. MAGOFFIN (Producer Member), Vice Chairman

RICHARD L. ROWLAND (Producer Member), Secretary

BOYD KERN (Public Member), Treasurer

WALKER HANNON (Producer Member)

HOWARD H. HAWKINS (Public Member)

M. E. MOSLEY (Producer Member)

CONRAD T. REIBOLD (Public Member)

HARRY C. WILLS (Producer Member)

STAFF

Carl Fossette, Assistant Secretary-Assistant Treasurer
Ralph B. Helm, Attorney
Thomas M. Stetson, Engineer

FOR CALENDAR YEAR 1974

ROBERT T. BALCH (Producer Member), Chairman

LINN E. MAGOFFIN (Producer Member), Vice Chairman

RICHARD L. ROWLAND (Producer Member), Secretary

BOYD KERN (Public Member), Treasurer

WALKER HANNON (Producer Member)

BURTON E. JONES (Public Member)

M. E. MOSLEY (Producer Member)

CONRAD T. REIBOLD (Public Member)

HARRY C. WILLS (Producer Member)

STAFF

Carl Fossette, Assistant Secretary-Assistant Treasurer
Ralph B. Helm, Attorney
Thomas M. Stetson, Engineer

## FOR CALENDAR YEAR 1975

ROBERT T. BALCH (Producer Member), Chairman

LINN E. MAGOFFIN (Producer Member), Vice Chairman

HARRY C. WILLS (Producer Member), Secretary

BOYD KERN (Public Member), Treasurer

WALKER HANNON (Producer Member)

BURTON E. JONES (Public Member)

D. J. LAUGHLIN (Producer Member)

M. E. MOSLEY (Producer Member)

CONRAD T. REIBOLD (Public Member)

### STAFF

Carl Fossette, Assistant Secretary-Assistant Treasurer
Ralph B. Helm, Attorney
Thomas M. Stetson, Engineer

## FOR CALENDAR YEAR 1976

ROBERT T. BALCH (Producer Member), Chairman

LINN E. MAGOFFIN (Producer Member), Vice Chairman

HARRY C. WILLS (Producer Member), Secretary

BOYD KERN (Public Member), Treasurer

WALKER HANNON (Producer Member)

BURTON E. JONES (Public Member)

D. J. LAUGHLIN (Producer Member)

M. E. MOSLEY (Producer Member)

CONRAD T. REIBOLD (Public Member)

### STAFF

Jane M. Bray, Assistant Secretary-Assistant Treasurer
Ralph B. Helm, Attorney
Thomas M. Stetson, Engineer

FOR CALENDAR YEAR 1977

ROBERT T. BALCH (Producer Member), Chairman

LINN E. MAGOFFIN (Producer Member), Vice Chairman

HARRY C. WILLS (Producer Member), Secretary

CONRAD T. REIBOLD (Public Member), Treasurer

WALKER HANNON (Producer Member)

BURTON E. JONES (Public Member)

BOYD KERN (Public Member)

D. J. LAUGHLIN (Producer Member)

R. H. NICHOLSON, JR. (Producer Member)

STAFF

Jane M. Bray, Assistant Secretary-Assistant Treasurer)
Ralph B. Helm, Attorney
Thomas M. Stetson, Engineer

FOR CALENDAR YEAR 1978

ROBERT T. BALCH (Producer Member), Chairman

LINN E. MAGOFFIN (Producer Member), Vice Chairman

D. J. LAUGHLIN (Producer Member), Secretary

CONRAD T. REIBOLD (Public Member), Treasurer

WALKER HANNON (Producer Member)

BURTON E. JONES (Public Member)

L. E. MOELLER (Producer Member)

R. H. NICHOLSON, JR. (Producer Member)

WILLIAM M. WHITESIDE (Public Member)

STAFF

Jane M. Bray, Assistant Secrretary-Assistant Treasurer
Ralph B. Helm, Attorney
Thomas M. Stetson, Engineer

## FOR CALENDAR YEAR 1979

LINN E. MAGOFFIN (Producer Member), Chairman

D. J. LAUGHLIN (Producer Member), Vice Chairman

R. H. NICHOLSON, JR. (Producer Member), Secretary

CONRAD T. REIBOLD (Public Member), Treasurer

WALKER HANNON (Producer Member)

BURTON E. JONES (Public Member)

L. E. MOELLER (Producer Member)

WILLIAM M. WHITESIDE (Public Member)

### STAFF

Jane M. Bray, Assistant Secretary-Assistant Treasurer
Ralph B. Helm, Attorney
Thomas M. Stetson, Engineer

## FOR CALENDAR YEAR 1980

LINN E. MAGOFFIN (Producer Member), Chairman

R. H. NICHOLSON, JR. (Producer Member), Vice Chairman

WILLIAM M. WHITESIDE (Pulic Member), Secretary

CONRAD T. REIBOLD (Public Member), Treasurer

ROBERT T. BALCH (Producer Member)

ROBERT G. BERLIEN (Producer Member)

ANTON C. GARNIER (Producer Member)

TRAVIS L. MANNING (Public Member)

L. E. MOELLER (Producer Member)

### STAFF

Jane M. Bray, Assistant Secretary-Assistant Treasurer
Ralph B. Helm, Attorney
Thomas M. Stetson. Engineer

## FOR CALENDAR YEAR 1981

LINN E. MAGOFFIN (Producer Member), Chairman

R. H. NICHOLSON, JR. (Producer Member), Vice Chairman

WILLIAM M. WHITESIDE (Public Member), Secretary

CONRAD T. REIBOLD (Public Member), Treasurer

ROBERT T. BALCH (Producer Member)

ROBERT G. BERLIEN (Producer Member)

ANTON C. GARNIER (Producer Member)

TRAVIS L. MANNING (Public Member)

L. E. MOELLER (Producer Member)

### STAFF

Jane M. Bray, Assistant Secretary-Assistant Treasurer
Ralph B. Helm, Attorney
Thomas M. Stetson, Engineer

## FOR CALENDAR YEAR 1982

LINN E. MAGOFFIN (Producer Member), Chairman

R. H. NICHOLSON, JR. (Producer Member), Vice Chairman

WILLIAM M. WHITESIDE (Public Member), Secretary

CONRAD T. REIBOLD (Public Member), Treasurer

ROBERT T. BALCH (Producer Member)

ROBERT G. BERLIEN (Producer Member)

ANTON C. GARNIER (Producer Member)

L. E. MOELLER (Producer Member)

ALFRED F. WITTIG (Public Member)

### STAFF

Jane M. Bray, Assistant Secrretary-Assistant Treasurer
Ralph B. Helm, Attorney
Thomas M. Stetson, Engineer

## FOR CALENDAR YEAR 1983

LINN E, MAGOFFIN (Producer Member), Chairman

R. H. NICHOLSON, JR. (Producer Member), Vice Chairman

ROBERT G. BERLIEN (Producer Member), Secretary

CONRAD T. REIBOLD (Public Member), Treasurer

ROBERT T. BALCH (Producer Member)

DONALD F. CLARK (Public Member)

ANTON C. GARNIER (Producer Member)

L. E. MOELLER (Producer Member)

ALFRED R. WITTIG (Public Member)

### STAFF

Jane M. Bray, Assistant Secretary-Assistant Treasurer
Ralph B. Helm, Attorney
Thomas M. Stetson, Engineer

## FOR CALENDAR YEAR 1984

LINN E. MAGOFFIN (Producer Member), Chairman

R. H. NICHOLSON, JR. (Producer Member), Vice Chairman

ROBERT G. BERLIEN (Producer Member), Secretary

CONRAD T. REIBOLD (Public Member), Treasurer

ROBERT T. BALCH (Producer Member)

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ANTON C. GARNIER (Producer Member)

L. E. MOELLER (Producer Member)

ALFRED R. WITTIG (Public Member)

### STAFF

Jane M. Bray, Assistant Secretary-Assistant Treasurer
Ralph B. Helm, Attorney
Thomas M. Stetson, Engineer

FOR CALENDAR YEAR 1985

LINN E. MAGOFFIN (Producer Member), Chairman

R. H. NICHOLSON, JR. (Producer Member), Vice Chairman

ROBERT G. BERLIEN (Producer Member), Secretary

CONRAD T. REIBOLD (Public Member), Treasurer

ROBERT T. BALCH (Producr Member)

DONALD F. CLARK (Public Member)

ANTON C. GARNIER (Producer Member)

L. E. MOELLER (Producer Member)

ALFRED R. WITTIG (Public Member)

STAFF

Jane M. Bray, Assistant Secretary-Assistant Treasurer
Ralph B. Helm, Attorney
Thomas M. Stetson, Engineer

FOR CALENDAR YEAR 1986

LINN E. MAGOFFIN (Producer Member), Chairman

R. H. NICHOLSON, JR. (Producer Member), Vice Chairman

ROBERT G. BERLIEN (Producer Member), Secretary

CONRAD T. REIBOLD (Public Member), Treasurer

ROBERT T. BALCH (Producer Member)

DONALD F. CLARK (Public Member)

L. E. MOELLER (Producer Member)

REGINOLD A. STONE (Producer Member)

ALFRED R. WITTIG (Public Member)

STAFF

Jane M. Bray, Assistant Secretary-Assistant Treasurer
Ralph B. Helm, Attorney
Thomas M. Stetson, Engineer

## FOR CALENDAR YEAR 1987

LINN E. MAGOFFIN (Producer Member), Chairman

REGINALD A. STONE (Producer Member), Vice Chairman

L. E. MOELLER (Producer Member), Secretary

ALFRED R. WITTIG (Public Member), Treasurer

ROBERT T. BALCH (Producer Member)

GERALD J. BLACK (Producer Member)

DONALD F. CLARK (Public Member)

EDWARD R. HECK (Producer Member)

JOHN E. MAULDING (Public Member)

### STAFF

Robert G. Berlien, Assistant Secretary-Assistant Treasurer
Ralph B. Helm, Attorney
Thomas M. Stetson, Engineer

## FOR CALENDAR YEAR 1988

LINN E. MAGOFFIN (Producer Member), Chairman

REGINALD A. STONE (Producer Member), Vice Chairman

L. E. MOELLER (Producer Member), Secretary

ALFRED R. WITTIG (Public Member), Treasurer

ROBERT T. BALCH (Producer Member)

GERALD J. BLACK (Producer Member)

DONALD F. CLARK (Public Member)

EDWARD R. HECK (Producer Member)

JOHN E. MAULDING (Public Member)

### STAFF

Robert G. Berlien, Assistant Secretary-Assistant Treasurer
Ralph B. Helm, Attorney
Thomas M. Stetson, Engineer

FOR CALENDAR YEAR 1989

LINN E. MAGOFFIN (Producer Member), Chairman

REGINALD A. STONE (Producer Member), Vice Chairman

GERALD G. BLACK (Producer Member), Secretary

ALFRED R. WITTIG (Public Member), Treasurer

ROBERT T. BALCH (Producer Member) *

DONALD F. CLARK (Public Member)

EDWARD R. HECK (Producer Member)

BURTON E. JONES (Public Member)

NELS PALM (Producer Member) **

THOMAS E. SCHOLLENBERGER (Producer Member)

STAFF

Robert G. Berlien, Assistant Secretary-Assistant Treasurer
Ralph B. Helm, Attorney
Thomas M. Stetson, Engineer

* DECEASED APRIL 25, 1989

** Appointed August 24, 1989, for the balance of the calendar year term, to replace deceased member, Robert T. Balch.

Ralph B. Helm - Bar No. 022004
4605 Lankershim Boulevard, #214
North Hollywood, CA 91602

Telephone (818) 769-2002

Attorney for Watermaster - Petitioner

RECEIVED
FEB - 1 1991
STETSON ENGINEERS INC.

SUPERIOR COURT OF CALIFORNIA, COUNTY OF LOS ANGELES

| | |
|---|---|
| UPPER SAN GABRIEL VALLEY MUNICIPAL WATER DISTRICT, Plaintiff, vs. CITY OF ALHAMBRA, et al., Defendants. | No. 924129<br>ORDER AMENDING JUDGMENT TO EXPAND WATERMASTER'S POWERS TO INCLUDE MAINTENANCE, IMPROVEMENT, AND CONTROL OF BASIN WATER QUALITY WITH ALLOWABLE FUNDING THROUGH IN-LIEU ASSESSMENTS<br>Hearing: August 7, 1990<br>Department 38, 9:15 A. M. |

The Petition of the Main San Gabriel Basin Watermaster (Watermaster) for Amendment to Judgment herein to expand its powers to include maintenance, improvement, and control of Basin water quality by controlling pumping in the Basin, with allowable funding for associated costs to be paid through its In-Lieu Assessments, was continued on July 31, 1990, to August 7, 1990, when it duly and regularly came on for hearing, at 9:15 o'clock A. M. in Department 38 of the above entitled Court, the Honorable FLORENCE T. PICKARD, Assigned Judge Presiding. Ralph B. Helm appeared as Attorney for Watermaster - Petitioner; Wayne K. Lemieux appeared for Defendant, San Gabriel Valley Municipal Water District, in support of the Petition; Fred Vendig, General

Counsel, Karen L. Tachiki, Assistant General Counsel, and Victor E. Gleason, Senior Deputy General Counsel, by Victor E. Gleason, appeared for Defendant, The Metropolitan Water District of Southern California, in support of the Petition; Timothy J. Ryan appeared for Defendant, San Gabriel Valley Water Company, in opposition to the Petition; Lagerlof, Senecal, Drescher & Swift, by H. Jess Senecal, appeared for Defendants, Calmat Company, Livingston-Graham, Owl Rock Products, AZ-Two, Inc., and Sully-Miller Contracting Company, in opposition to the Petition; Ira Reiner, Los Angeles County District Attorney, by Jan Chatten-Brown, Special Assistant to the District Attorney, appeared in opposition to the Petition; and Sarah F. Bates and Laurens H. Silver, by Sarah F. Bates, appeared on behalf of Amicus Curiae Sierra Club, in opposition to the Petition.

The Court acknowledged receipt and consideration of: letters in support of the Petition by the California Regional Water Quality Control Board - Los Angeles Region and by the State Water Resources Control Board; a copy of a letter addressed to the Attorney for Petitioner, from the US Environmental Protection Agency - Region IX, by Mark J. Klaiman, Assistant Regional Counsel, regarding several matters of federal law which EPA believed might ultimately affect the subject Petition; a letter in opposition to the Petition by East Valleys Organization; and a FAX communication to the Court, in opposition to the Petition, from Congressman Esteban E. Torres, which was not communicated to nor seen by the parties.

Members of the public, present in Court, were invited to, and did, present oral testimony during the hearing.

Under date of December 10, 1990 the Court entered its Intended Decision Re Amendment To Judgment and, by minute order duly entered and mailed to Counsel for Petitioner, ordered copies thereof mailed forthwith to all appearing parties, including those appearing as friends of the court, and to all other affected parties on the case's current mailing list.

A Proof Of Service by mail on December 13, 1990, Of Intended Decision Re Amendment To Judgment, as ordered, has been filed with the Court.

Opposition to Petitioner's Proposed Order were filed by Amicus Curiae Sierra Club, Amicus Curiae Los Angeles District Attorney, and by Producer Parties Calmat Co., Livingston-Graham, Owl Rock Products Company, AZ-Two, Inc., and Sully-Miller Contracting Company.

Proof being made to the satisfaction of the Court and good cause appearing:

IT IS, HEREBY, ORDERED:

1. That the Amended Judgment herein be further amended by amending Subsection (j) of Section 10 thereof, Definitions, and Section 40 thereof, Division F, Physical Solution, to read as follows:

"10 (j) <u>In-Lieu Water Cost</u> - - The differential between a particular Producer's cost of Watermaster directed produced, treated, blended, substituted, or Supplemental Water delivered or substituted to, for, or taken by, such Producer in-lieu of his cost of otherwise normally Producing a like amount of Ground Water from the Basin.

"40. <u>Watermaster Control.</u> (Prior Judgment Section 32)

In order to develop an adequate and effective program of Basin management, it is essential that Watermaster have broad discretion in the making of Basin management decisions within the ambit hereinafter set forth. The maintenance, improvement, and control of the water quality and quantity of the Basin, withdrawal and replenishment of supplies of the Basin and Relevant Watershed, and the utilization of the water resources thereof, must be subject to procedures established by Watermaster in implementation of the Physical Solution provisions of this Judgment. Both the quantity and quality of said water resource are thereby preserved and its beneficial utilization maximized.

"(a) Watermaster shall develop an adequate and effective program of Basin management. The maintenance, improvement, and control of the water quality and quantity of the Basin, withdrawal and replenishment of supplies of the Basin and Relevant Watershed, and the utilization of the water resources thereof, must be subject to procedures established by Watermaster in implementation of the Physical Solution provisions of this Judgment. All Watermaster programs and procedures shall be adopted only after a duly noticed public hearing pursuant to Sections 37 and 40 of the Amended Judgment herein.

"(b) Watermaster shall have the power to control pumping in the Basin by water Producers therein for Basin cleanup and water quality control so that specific well production can be directed as to a lesser amount, to total cessation, as to an increased amount, and even to require pumping in a new location in the

Basin. Watermaster's right to regulate pumping activities of Producers shall be subordinate to any conflicting Basin cleanup plan established by the EPA or other public governmental agency with responsibility for ground water management or clean up.

"(c) Watermaster may act individually or participate with others to carry on technical and other necessary investigations of all kinds and collect data necessary to carry out the herein stated purposes. It may engage in contractual relations with the EPA or other agencies in furtherance of the clean up of the Basin and enter into contracts with agencies of the United States, the State of California, or any political subdivision, municipality, or district thereof, to the extent allowed under applicable federal or state statutes. Any cooperative agreement between the Watermaster and EPA shall require the approval of the appropriate Agency(s) of the State of California.

"(d) For regulation and control of pumping activity in the Basin, Watermaster shall adopt Rules and Regulations and programs to promote, manage and accomplish clean up of the Basin and its waters, including, but not limited to, measures to confine, move, and remove contaminants and pollutants. Such Rules and Regulations and programs shall be adopted only after a duly Noticed Public Hearing by Watermaster and shall be subject to Court review pursuant to Section 37 of the Amended Judgment herein.

"(e) Watermaster shall determine whether funds from local, regional, state or federal agencies are available for regulating pumping and the various costs associated with, or arising from such activities. If no public funds are available from local,

regional, state, or federal agencies, the costs shall be obtained and paid by way of an In-Lieu Assessment by Watermaster pursuant to Section 10 (j) of the Amended Judgment herein. Provided such In-Lieu Assessments become necessary, the costs shall be borne by all Basin Producers.

"(f) Watermaster is a Court empowered entity with limited powers, created pursuant to the Court's Physical Solution Jurisdiction under Article X, Section 2 of the California Constitution. None of the Powers granted herein to Watermaster shall be construed as designating Watermaster a political subdivision of the State of California or authorizing Watermaster to act as 'lead agency' to administer the federal Superfund for clean up of the Basin."

2. This Amended Judgment shall continue in full force and effect as hereby Ordered and Amended.

Dated: January 29, 1991.

/s/Florence T. Pickard
FLORENCE T. PICKARD
Judge of the Superior Court,
Specially Assigned

# Appendix G

## Summary of Population Based on Census Data

**Appendix G-1: Census Tracts within the South San Gabriel System**

| County | Subregion | City | Census Tract | Percentage of Tract in System |
|---|---|---|---|---|
| Los Angeles | San Gabriel Valley Assoc. of Cities | Rosemead city | 433602 | 4% |
| Los Angeles | San Gabriel Valley Assoc. of Cities | San Gabriel city | 481401 | 4% |
| Los Angeles | San Gabriel Valley Assoc. of Cities | San Gabriel city | 482301 | 61% |
| Los Angeles | San Gabriel Valley Assoc. of Cities | Rosemead city | 482303 | 88% |
| Los Angeles | San Gabriel Valley Assoc. of Cities | Rosemead city | 482304 | 100% |
| Los Angeles | San Gabriel Valley Assoc. of Cities | Rosemead city | 482401 | 25% |
| Los Angeles | San Gabriel Valley Assoc. of Cities | Rosemead city | 482402 | 60% |
| Los Angeles | San Gabriel Valley Assoc. of Cities | Rosemead city | 482502 | 100% |
| Los Angeles | San Gabriel Valley Assoc. of Cities | Rosemead city | 482503 | 100% |
| Los Angeles | San Gabriel Valley Assoc. of Cities | Rosemead city | 482521 | 100% |
| Los Angeles | San Gabriel Valley Assoc. of Cities | Unincorporated | 482521 | 45% |
| Los Angeles | San Gabriel Valley Assoc. of Cities | Monterey Park city | 482600 | 4% |

**Table G-2: Population, Household and Employment Projections for South San Gabriel System**

| Census Tract | County | Subregion | City | Population 2005 | 2010 | 2015 | 2020 | 2025 | 2030 | 2035 | Percentage of Tract in System |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 433602 | Los Angeles | San Gabriel Valley Assoc. of Cities | Rosemead city | 2,992 | 3,064 | 3,109 | 3,159 | 3,206 | 3,252 | 3,296 | 4% |
| 481401 | Los Angeles | San Gabriel Valley Assoc. of Cities | San Gabriel city | 6,382 | 6,411 | 6,649 | 6,782 | 6,932 | 7,076 | 7,221 | 4% |
| 482301 | Los Angeles | San Gabriel Valley Assoc. of Cities | San Gabriel city | 5,525 | 5,560 | 5,850 | 6,016 | 6,204 | 6,385 | 6,565 | 61% |
| 482303 | Los Angeles | San Gabriel Valley Assoc. of Cities | Rosemead city | 6,141 | 6,276 | 6,361 | 6,456 | 6,547 | 6,634 | 6,718 | 88% |
| 482304 | Los Angeles | San Gabriel Valley Assoc. of Cities | Rosemead city | 4,142 | 4,232 | 4,289 | 4,352 | 4,413 | 4,473 | 4,530 | 100% |
| 482401 | Los Angeles | San Gabriel Valley Assoc. of Cities | Rosemead city | 4,178 | 4,278 | 4,342 | 4,411 | 4,477 | 4,540 | 4,601 | 25% |
| 482402 | Los Angeles | San Gabriel Valley Assoc. of Cities | Rosemead city | 5,519 | 5,637 | 5,713 | 5,796 | 5,876 | 5,953 | 6,026 | 60% |
| 482502 | Los Angeles | San Gabriel Valley Assoc. of Cities | Rosemead city | 3,638 | 3,713 | 3,761 | 3,816 | 3,868 | 3,919 | 3,967 | 100% |
| 482503 | Los Angeles | San Gabriel Valley Assoc. of Cities | Rosemead city | 4,603 | 4,697 | 4,757 | 4,824 | 4,889 | 4,952 | 5,012 | 100% |
| 482521 | Los Angeles | San Gabriel Valley Assoc. of Cities | Rosemead city | 122 | 127 | 132 | 137 | 142 | 146 | 150 | 100% |
| 482521 | Los Angeles | San Gabriel Valley Assoc. of Cities | Unincorporated | 6,064 | 6,475 | 6,944 | 7,412 | 7,864 | 8,303 | 8,723 | 45% |
| 482600 | Los Angeles | San Gabriel Valley Assoc. of Cities | Monterey Park city | 7,202 | 7,684 | 8,127 | 8,517 | 8,872 | 9,186 | 9,504 | 4% |
| Total Population Based on SCAG | | | | 29,021 | 29,729 | 30,452 | 31,127 | 31,795 | 32,439 | 33,060 | |
| SCAG Growth Rate | | | | | | 2% | 2% | 2% | 2% | 2% | |

| Census Tract | County | Subregion | City | Households 2005 | 2010 | 2015 | 2020 | 2025 | 2030 | 2035 | Percentage of Tract in System |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 433602 | Los Angeles | San Gabriel Valley Assoc. of Cities | Rosemead city | 724 | 746 | 765 | 786 | 802 | 818 | 831 | 0% |
| 481401 | Los Angeles | San Gabriel Valley Assoc. of Cities | San Gabriel city | 1,877 | 1,886 | 1,989 | 2,055 | 2,107 | 2,157 | 2,196 | 0% |
| 482301 | Los Angeles | San Gabriel Valley Assoc. of Cities | San Gabriel city | 1,333 | 1,340 | 1,422 | 1,476 | 1,518 | 1,558 | 1,590 | 0% |
| 482303 | Los Angeles | San Gabriel Valley Assoc. of Cities | Rosemead city | 1,473 | 1,517 | 1,559 | 1,603 | 1,638 | 1,671 | 1,699 | 0% |
| 482304 | Los Angeles | San Gabriel Valley Assoc. of Cities | Rosemead city | 1,006 | 1,030 | 1,053 | 1,077 | 1,096 | 1,114 | 1,129 | 0% |
| 482401 | Los Angeles | San Gabriel Valley Assoc. of Cities | Rosemead city | 947 | 974 | 999 | 1,026 | 1,046 | 1,066 | 1,083 | 0% |
| 482402 | Los Angeles | San Gabriel Valley Assoc. of Cities | Rosemead city | 1,488 | 1,531 | 1,571 | 1,614 | 1,647 | 1,680 | 1,706 | 0% |
| 482502 | Los Angeles | San Gabriel Valley Assoc. of Cities | Rosemead city | 830 | 850 | 868 | 887 | 903 | 917 | 930 | 0% |
| 482503 | Los Angeles | San Gabriel Valley Assoc. of Cities | Rosemead city | 1,028 | 1,053 | 1,076 | 1,100 | 1,119 | 1,138 | 1,153 | 0% |
| 482521 | Los Angeles | San Gabriel Valley Assoc. of Cities | Rosemead city | 11 | 11 | 11 | 11 | 12 | 12 | 12 | 0% |
| 482521 | Los Angeles | San Gabriel Valley Assoc. of Cities | Unincorporated | 1,486 | 1,588 | 1,723 | 1,865 | 1,976 | 2,084 | 2,172 | 0% |
| 482600 | Los Angeles | San Gabriel Valley Assoc. of Cities | Monterey Park city | 2,283 | 2,325 | 2,392 | 2,429 | 2,455 | 2,484 | 2,504 | 0% |
| Total Population Based on SCAG | | | | 6,976 | 7,169 | 7,419 | 7,659 | 7,849 | 8,031 | 8,180 | |
| SCAG Growth Rate | | | | | | 3% | 3% | 2% | 2% | 2% | |

| Census Tract | County | Subregion | City | Employment 2005 | 2010 | 2015 | 2020 | 2025 | 2030 | 2035 | Percentage of Tract in System |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 433602 | Los Angeles | San Gabriel Valley Assoc. of Cities | Rosemead city | 4,464 | 4,535 | 4,592 | 4,627 | 4,669 | 4,713 | 4,756 | 0% |
| 481401 | Los Angeles | San Gabriel Valley Assoc. of Cities | San Gabriel city | 1,730 | 1,754 | 1,774 | 1,787 | 1,802 | 1,819 | 1,834 | 0% |
| 482301 | Los Angeles | San Gabriel Valley Assoc. of Cities | San Gabriel city | 280 | 351 | 408 | 443 | 484 | 529 | 571 | 0% |
| 482303 | Los Angeles | San Gabriel Valley Assoc. of Cities | Rosemead city | 419 | 422 | 425 | 427 | 429 | 431 | 434 | 0% |
| 482304 | Los Angeles | San Gabriel Valley Assoc. of Cities | Rosemead city | 671 | 691 | 708 | 718 | 731 | 744 | 757 | 0% |
| 482401 | Los Angeles | San Gabriel Valley Assoc. of Cities | Rosemead city | 540 | 558 | 573 | 582 | 593 | 605 | 617 | 0% |
| 482402 | Los Angeles | San Gabriel Valley Assoc. of Cities | Rosemead city | 1,613 | 1,714 | 1,793 | 1,841 | 1,898 | 1,958 | 2,016 | 0% |
| 482502 | Los Angeles | San Gabriel Valley Assoc. of Cities | Rosemead city | 551 | 563 | 572 | 578 | 585 | 592 | 599 | 0% |
| 482503 | Los Angeles | San Gabriel Valley Assoc. of Cities | Rosemead city | 989 | 1,000 | 1,008 | 1,013 | 1,020 | 1,027 | 1,033 | 0% |
| 482521 | Los Angeles | San Gabriel Valley Assoc. of Cities | Rosemead city | 295 | 312 | 325 | 334 | 345 | 357 | 368 | 0% |
| 482521 | Los Angeles | San Gabriel Valley Assoc. of Cities | Unincorporated | 322 | 345 | 361 | 370 | 380 | 390 | 400 | 0% |
| 482600 | Los Angeles | San Gabriel Valley Assoc. of Cities | Monterey Park city | 449 | 485 | 507 | 525 | 548 | 567 | 585 | 0% |
| Total Population Based on SCAG | | | | 4,559 | 4,745 | 4,892 | 4,983 | 5,092 | 5,207 | 5,318 | |
| 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 1, 2011

City of Monterey Park
Ray Hamada
Planning Manager
320 West Newmark Avenue
Monterey Park, CA 91754

Dear: Ray Hamada

**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 August 18, 2011. The 2010 UWMP was adopted in accordance with the Urban Water Management Planning Act and filed with DWR and the California Sate 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 1, 2011

City of Rosemead
Bradford Johnson
Planning Director
8838 Valley Boulevard
Rosemead, CA 91770

Dear: Bradford Johnson

**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 August 18, 2011. The 2010 UWMP was adopted in accordance with the Urban Water Management Planning Act and filed with DWR and the California Sate 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 1, 2011

City of San Gabriel
Carol Banet
Planning Manager
425 South Mission Drive
San Gabriel, CA 91776

Dear: Carol Banet

**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 August 18, 2011. The 2010 UWMP was adopted in accordance with the Urban Water Management Planning Act and filed with DWR and the California Sate 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 1, 2011

County of Los Angeles
Richard Brudckner
Director Department of Regional Planning
320 West Temple Street
Los Angeles, CA 90012

Dear: Richard Brudckner

**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 August 18, 2011. The 2010 UWMP was adopted in accordance with the Urban Water Management Planning Act and filed with DWR and the California Sate 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. Steve Sherman
Field Operations Superintendent
Covina Irrigating Company
146 E College Street
Covina, CA 91723

Subject: Golden State Water Company - Claremont, San Dimas, South Arcadia, and South San Gabriel System
2010 Urban Water Management Plan Preparation Notification and Supply Reliability Information Request

Dear Mr. Sherman:

Golden State Water Company (GSWC) is currently preparing its 2010 Urban Water Management Plan (UWMP) for the Claremont, San Dimas, South Arcadia, and South San Gabriel System as required by the Urban Water Management Planning Act (Act). Since Covina Irrigating Company 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 Claremont, San Dimas, South Arcadia, and South San Gabriel service area (if applicable) (Table 7)
8. Describe any regional desalination opportunities, if any for the Claremont, San Dimas, South Arcadia, and South San Gabriel 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

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Golden State
Water Company
A Subsidiary of American States Water Company

11 February 2011

Mr. Timothy C. Jochem
General Manager
Upper San Gabriel Valley Municipal Water District
11310 Valley Blvd.
El Monte, CA 91731

Subject: Golden State Water Company - South San Gabriel System
2010 Urban Water Management Plan Preparation Notification and Supply Reliability Information Request

Dear Mr. Jochem:

Golden State Water Company (GSWC) is currently preparing its 2010 Urban Water Management Plan (UWMP) for the South San Gabriel System as required by the Urban Water Management Planning Act (Act). Since Upper San Gabriel Valley 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 South San Gabriel service area (if applicable) (Table 7)
8. Describe any regional desalination opportunities, if any for the South San Gabriel 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

# Appendix J

Urban Water Management Plan Checklist

**Table I-2 Urban Water Management Plan checklist, organized by subject**

| No. | UWMP requirement [a] | Calif. 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(d)(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<br>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 | *Wholesalers:* Include an assessment of present and proposed future measures, programs, and policies to help achieve the water use reductions. *Retailers:* 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<br>10608.26(a) | Retailers and wholesalers have slightly different requirements | 4.6 | 4-8 |
| 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 | 3-8 |
| 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<br>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 |

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| 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 | 4-3 |
| 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 | 4-3 |
| 16 | Describe the groundwater basin. | 10631(b)(2) | | 4.3 | 4-3 |
| 17 | Indicate whether the groundwater basin is adjudicated? Include a copy of the court order or decree. | 10631(b)(2) | | 4.3 & Appendix F | 4-3 |
| 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 | 4-3 |
| 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 | 4-3 |
| 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 | 4-3 |
| 24 | Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis. | 10631(d) | | 4.4 | 4-7 |

| No. | UWMP requirement [a] | Calif. Water Code reference | Additional clarification | UWMP location | Page Number |
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| 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 | 4-7 |
| 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 | 4-9 |
| 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 | 4-9 |
| 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 | 4-11 |
| 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 | 4-11 |
| 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 | 4-11 |
| 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 | 4-12 |
| 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 | 4-9 |
| 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 | 4-13 |

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| 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 | 4-13 |
| WATER SHORTAGE RELIABILITY AND WATER SHORTAGE CONTINGENCY PLANNING [b] | | | | | |
| 5 | Describe water management tools and options to maximize resources and minimize the need to import water from other regions. | 10620(f) | | 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 | 6-6 |
| 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 |

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| 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 | 8-10 |
| 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 | 6-7 |
| 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 |

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| 29 | Evaluate each water demand management measure that is not currently being implemented or scheduled for implementation. The evaluation should include economic and non-economic factors, cost-benefit analysis, available funding, and the water suppliers' legal authority to implement the work. | 10631(g) | See 10631(g) for additional wording. | 7.2 | 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) | Signers of the MOU that submit the annual reports are deemed compliant with Items 28 and 29. | 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.