FINAL REPORT

UPPER SAN GABRIEL VALLEY MUNICIPAL WATER DISTRICT

2015 Urban Water Management Plan

June 2016

UPPER DISTRICT

UPPER SAN GABRIEL VALLEY MUNICIPAL WATER DISTRICT



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1.0 INTRODUCTION AND OVERVIEW

1.1 BACKGROUND AND PURPOSE

The Upper San Gabriel Valley Municipal Water District (Upper District) is a wholesale water supplier and is required to prepare an Urban Water Management Plan (Plan) in accordance with the California Urban Water Management Planning Act (UWMP Act) which was established in 1983. The Act requires every "urban water supplier" to prepare and adopt a Plan, periodically review its Plan at least once every five years and make any amendments or changes which are indicated by the review. Pursuant to California Water Code Section 10617, an "Urban Water Supplier" is defined as 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. The primary objective of the UWMP Act is to direct urban water suppliers to evaluate their existing water conservation efforts and, to the extent practicable, review and implement alternative and supplemental water conservation measures. The UWMP Act is directed primarily at retail water purveyors where programs can be immediately affected upon the consumer**.** The UWMP Act, originally known as Assembly Bill (AB) 797, is included in Appendix A.

Section 10621(a) of the California Water Code states, "Each water supplier shall update its plan at least once every five years on or before December 31, in years ending in five and zero." However, due to recent changes in Urban Water Management Plan requirements, California State law has extended the deadline for the 2015 Plans to July 1, 2016. Upper District's 2015 Plan is an update to Upper District's 2010 Plan.

1.2 URBAN WATER MANAGEMENT PLANNING AND THE CALIFORNIA WATER CODE

1.2.1 URBAN WATER MANAGEMENT PLANNING ACT OF 1983

Upper District is a wholesale water supplier and is required to prepare a Plan in accordance with the UWMP Act established in 1983. The UWMP Act is included in the California Water Code (CWC) under Sections 10610 through 10656. A copy of the UWMP Act is provided in Appendix A. The UWMP Act requires water agencies develop UWMPs to provide a framework for long-term water planning as well as information regarding long-term resource planning to ensure sufficient water supplies are available to meet existing and future demands. Urban water suppliers are required to report, describe, and evaluate water deliveries and uses, water supply sources, efficient water uses, demand management measures, and water shortage contingency planning.

1.2.2 APPLICABLE CHANGES TO THE WATER CODE SINCE 2010

In compliance with the UWMP Act, Upper District last updated its Urban Water Management Plan in 2010. There have been new amendments added and some reorganization of the California Water Code sections since Upper District's last update. The following tabulation is a summary of the new requirements which were incorporated in the Upper District's 2015 Plan, as applicable:

Change Number	Topic	CWC Section	Legislative Bill	Summary	Guidebook Section
1	Demand Management Measures	10631 (f)(1) and (2)	AB 2067, 2014	Requires water suppliers to provide narratives describing their water demand management measures, as provided. Requires retail water suppliers to address the nature and extent of each water demand management measure implemented over the past 5 years and describe the water demand management measures that the supplier plans to implement to achieve its water use targets.	Chapter 9
2	Submittal Date	10621 (d)	AB 2067, 2014	Requires each urban water supplier to submit its 2015 plan to the Department of Water Resources by July 1, 2016.	Chapter 10
3	Electronic Submittal	10644 (a) (2)	SB 1420, 2014	Requires the plan, or amendments to the plan, to be submitted electronically to the department.	Chapter 10
4	Standardized Forms	10644 (a) (2)	SB 1420, 2014	Requires the plan, or amendments to the plan, to include any standardized forms, tables, or displays specified by the department.	CH 1, Section 1.4
5	Water Loss	10631 (e) (1) (J) and (e) (3) (A) and (B)	SB 1420, 2014	Requires a plan to quantify and report on distribution system water loss.	Appendix L
6	Estimating Future Water Savings	10631 (e) (4)	SB 1420, 2014	Provides for water use projections to display and account for the water savings estimated to result from adopted codes, standards, ordinances, or transportation and land use plans, when that information is available and applicable to an urban water supplier.	Appendix K
7	Voluntary Reporting of Energy Intensity	10631.2 (a) and (b)	SB 1036, 2014	Provides for an urban water supplier to include certain energy-related information, including, but not limited to, an estimate of the amount of energy used to extract or divert water supplies.	Appendix O
8	Defining Water Features	10632	AB 2409, 2010	Requires urban water suppliers to analyze and define water features that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, separately from swimming pools and spas.	CH 8, Section 8.2.4

Source: Department of Water Resources' March 2016 Final "Guidebook for Urban Water Suppliers", Appendix B.

1.2.3 WATER CONSERVATION ACT OF 2009 (SB X7-7)

As a wholesale agency, Upper District is not required by DWR to completed Section 1.2.3.

1.3 URBAN WATER MANAGEMENT PLANNING IN RELATION TO OTHER PLANNING EFFORTS

Upper District is a wholesale water agency and a member agency of the Metropolitan Water District of Southern California (Metropolitan). As a member agency, Upper District has coordinated with Metropolitan for the preparation of Metropolitan's Integrated Resources Plan

(IRP) and UWMP. In addition, Upper District's 2015 Plan has been made available for use by its sub-agencies.

1.4 UWMP ORGANIZATION

Upper District's 2015 Plan was prepared consistent with the recommended organization provided in the Department of Water Resources' (DWR) "Guidebook for Urban Water Suppliers", dated March, 2016. Upper District's 2015 Plan consists of the following Chapters:

Chapter 1 - Introduction and Overview
Chapter 2 - Plan Preparation
Chapter 3 - System Description
Chapter 4 - System Water Use
Chapter 5 - Baselines and Targets
Chapter 6 - System Supplies
Chapter 7 - Water Supply Reliability
Chapter 8 - Water Shortage Contingency Planning
Chapter 9 - Demand Management Measures
Chapter 10 - Plan Adoption, Submittal, and Implementation

Pursuant to California Water Code requirements, Upper District's 2015 Plan incorporates DWR's standardized tables for the reporting and submittal of UWMP data. The standardized DWR tables are provided in in this Plan. Upper District also submitted the UWMP data (standardized tables) electronically through DWR's Online Submittal Tool.

Upper District's 2015 Plan also provides supporting documents (appendices) including notification letters of the UWMP update, public notice of the UWMP hearing, adoption resolution from Upper District's governing body, Upper District's Water Shortage Contingency Plan, and the

California Urban Water Conservation Council (CUWCC) Best Management Practices (BMP) Reports. Further discussions regarding these supporting documents are provided within the individual Chapters of Upper District's 2015 Plan.

1.5 UWMP AND GRANT OR LOAN ELIGIBILITY

Pursuant to DWR's Final "Guidebook for Urban Water Suppliers", "*In order for an urban water supplier to be eligible for any water management grant or loan administered by DWR, the agency must have a current UWMP on file that has been determined by DWR to address the requirements of the CWC. A current UWMP must also be maintained by the water supplier throughout the term of any grant or loan administered by DWR… An UWMP may also be required in order to be eligible for other State funding, depending on the conditions that are specified in the funding guidelines.*" Upper District's 2015 Plan has been prepared in order to meet eligibility requirements for grants and loans administered by the State and / or DWR.

1.6 TIPS FOR UWMP PREPARERS

Upper District's 2015 Plan is considered an update to Upper District's 2010 Plan. However, the 2015 Plan is considered a stand-alone document. As discussed in Section 1.4, Upper District's 2015 Plan was prepared consistent with the recommended organization provided in DWR's Final "Guidebook for Urban Water Suppliers", dated March 2016 (see Appendix B). A checklist of specific UWMP requirements is included in Appendix C. The checklist includes the page number where the required elements are addressed to assist in DWR's review of the submitted Plan.

2.0 PLAN PREPARATION

2.1 BASIS FOR PREPARING A PLAN

CWC 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.

CWC 10620.

(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.

CWC 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, except as provided in subdivision (d).

(d) Each urban water supplier shall update and submit its 2015 plan to the department by July 1, 2016.

This Urban Water Management Plan (Plan) was prepared in accordance with the UWMP Act which was established in 1983. The UWMP Act requires every "urban water supplier" to prepare and adopt a Plan, to periodically review its Plan at least once every five years and make any amendments or changes which are indicated by the review. An "Urban Water Supplier" is defined as 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 (AF) of water annually. The primary objective of the UWMP Act is to direct urban water suppliers to prepare a plan that describes and evaluates sources of supply, reasonable and practical efficient uses, reclamation, and demand management activities. **The UWMP Act is directed primarily at retail water purveyors where programs can be immediately applied to the**

consumers. Sections 10610 through 10656 of the California Water Code, Urban Water Management Planning Act, were enacted in 1983. The UWMP Act, originally known as Assembly Bill (AB) 797, is included in Appendix A.

Section 10621(a) of the California Water Code states, "Each water supplier shall update its plan at least once every five years on or before December 31, in years ending in five and zero." However, because of recent changes in Urban Water Management Plan requirements, California State law has extended the deadline for the 2015 Plans to July 1, 2016.

Upper District is an "urban water supplier" pursuant to Section 10617 of the California Water Code and supplies more than 3,000 acre-feet per year (AFY) as wholesale for municipal purposes. This 2015 Plan is an update to Upper District's 2010 Plan.

2.1.1 PUBLIC WATER SYSTEMS

CWC 10644.

(a)(2) The plan, or amendments to the plan, submitted to the department … shall include any standardized forms, tables, or displays specified by the department.

CWC 10608.52.

(a) The department, in consultation with the board, the California Bay-Delta Authority or its successor agency, the State Department of Public Health, and the Public Utilities Commission, shall develop a single standardized water use reporting form to meet the water use information needs of each agency, including the needs of urban water suppliers that elect to determine and report progress toward achieving targets on a regional basis as provided in subdivision (a) of Section 10608.28. (b) At a minimum, the form shall be developed to accommodate information sufficient to assess an urban water supplier's compliance with conservation targets pursuant to Section 10608.24… The form shall accommodate reporting by urban water suppliers on an individual or regional basis as provided in subdivision (a) of Section 10608.28.

California Health and Safety Code 116275.

(h) "Public water system" means a system for the provision of water for human consumption through pipes or other constructed conveyances that has 15 or more service connections or regularly serves at least 25 individuals daily at least 60 days out of the year.

As a wholesale water agency, Upper District is not defined as a Public Water System (PWS) and is not required by DWR to provide PWS information.

2.1.2 AGENCIES SERVING MULTIPLE SERVICE AREAS / PUBLIC WATER SYSTEMS

Based upon their 2014-15 water production and imported water deliveries, the following urban water suppliers within or partially within Upper District's boundaries may be required to prepare a Plan:

- California American Water Company (Duarte System and San Marino)
- California Domestic Water Company
- City of Arcadia
- City of Azusa Light & Water
- City of Covina
- City of El Monte
- City of Glendora
- City of Monrovia
- City of South Pasadena
- City of Whittier
- Covina Irrigating Company
- Golden State Water Company (San Gabriel District)
- San Gabriel County Water District
- San Gabriel Valley Water Company
- Suburban Water Systems
- Sunny Slope Water Company
- Valley County Water District

2.2 REGIONAL PLANNING

Upper District has developed its 2015 Plan reporting solely on its service area to address all requirements of the California Water Code. Upper District's 2015 Plan was not developed as a Regional Plan. However, Upper District's UWMP draft is available for use and reference by its sub-agencies.

Metropolitan coordinates with its member agencies regarding the development of their UWMP. Likewise, Metropolitan's 2015 UWMP draft is available for use and reference by its member agencies and urban water suppliers within those member agencies.

2.3 INDIVIDUAL OR REGIONAL PLANNING AND COMPLIANCE

As shown in Table 2-2, Upper District's 2015 Plan is an "Individual UWMP". Upper District has developed its 2015 Plan reporting solely on its service area to address all requirements of the California Water Code. Upper District notified and coordinated with appropriate regional agencies and constituents (See Section 2.5).

2.3.1 REGIONAL UWMP

CWC 10620.

(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.

As indicated in Table 2-2, Upper District's 2015 Plan was developed as an "Individual UWMP" and not part of a Regional Plan. However, Upper District's UWMP draft is available for use and reference by its sub-agencies.

Metropolitan has prepared a prepared a draft Urban Water Management Plan (UWMP), dated February 2016. Metropolitan's 2015 UWMP draft is available for use and reference by its member agencies and urban water suppliers within those member agencies.

2.4 FISCAL OR CALENDAR YEAR AND UNITS OF MEASUREMENT

CWC 10608.20.

(a)(1) Urban retail water suppliers…may determine the targets on a fiscal year or calendar year basis.

2.4.1 FISCAL OR CALENDAR YEAR

The data provided in Upper District's 2015 Plan is reported on a fiscal year basis, unless noted otherwise, as shown in Table 2-3. A fiscal year begins on July 1 of every year.

2.4.2 REPORTING COMPLETE 2015 DATA

The data provided in Upper District's 2015 Plan is provided on a fiscal year basis through June 30, 2015.

2.4.3 UNITS OF MEASURE

As shown in Table 2-3, the data provided in the Upper District's 2015 Plan is reported in units of acre-feet (AF), unless noted otherwise.

2.5 COORDINATION AND OUTREACH

CWC 10631.

(j) An urban water supplier that relies 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).

2.5.1 WHOLESALE AND RETAIL COORDINATION

Upper District is a wholesale agency serving 27 sub-agencies in its service area. The following is a list of Upper District's sub-agencies:

- Amarillo Mutual Water Company
- California American Water Company (Duarte System and San Marino)
- California Domestic Water Company
- City of Arcadia
- City of Azusa Light & Water
- City of Covina
- City of El Monte
- City of Glendora

- City of Industry
- City of Monrovia
- City of South Pasadena
- City of Whittier
- Covina Irrigating Company
- Del Rio Mutual Water Company
- East Pasadena Water Co., Ltd.
- Golden State Water Company (San Gabriel District)
- Hemlock Mutual Water Company
- La Puente Valley County Water District and Industry Public Works
- Rurban Homes Mutual Water Company
- San Gabriel County Water District
- San Gabriel Valley Water Company
- Sterling Mutual Water Company
- Suburban Water Systems
- Sunny Slope Water Company
- Valencia Heights Water
- Valley County Water District
- Valley View Mutual Water Company

As indicated in Table 2-4, Upper District has provided its 2015 Plan to its sub-agencies which includes water use projections in five-year increments for normal, single dry, and multiple dry year conditions over the next 20 years.

2.5.2 COORDINATION WITH OTHER AGENCIES AND THE COMMUNITY

CWC 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.

CWC 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.

Upper District is a wholesale water supplier that provides treated imported water to its sub-agencies and untreated imported water to replenish groundwater supplies of the Main San Gabriel Basin (Main Basin). Main San Gabriel Basin Watermaster (Watermaster) is a Court appointed agency which has the authority to manage Main Basin surface and groundwater supplies. Upper District notified its sub-agencies (including Cities within its service area) and public agencies that share a common source of supply of the preparation of Upper District's 2015 Urban Water Management Plan. As discussed in Section 10.2, Upper District notified these agencies at least sixty (60) days prior to the public hearing of the preparation of the 2015 Plan and invited them to participate in the development of the Plan. A copy of the notification letter sent to these agencies is provided in Appendix D.

2.5.3 NOTICE TO CITIES AND COUNTIES

CWC 10621.

(b) Every urban water supplier required to prepare a plan pursuant to this part shall, at least 60 days before 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.

As discussed in Section 10.2, notification was provided to Upper District's sub-agencies and public agencies that share a common source of supply that Upper District was reviewing and considering amendments (updates) to the 2010 Plan, and as a result prepare the 2015 Plan Update. Notification was provided at least 60 days prior to the public hearing (see Appendix D).

3.0 SYSTEM DESCRIPTION

3.1 GENERAL DESCRIPTION

CWC 10631.

(a) Describe the service area of the supplier.

Upper District is a wholesale water agency and was incorporated on January 7, 1960 under the Municipal Water District Act. The Municipal Water District Act provides for, "The people of any county or counties, or of any portions thereof, whether such portions include unincorporated territory only or incorporated territory of any city or cities, or both such incorporated and unincorporated territories…" to organize municipal water districts. With respect to water supply, the Municipal Water District Act allows such a district to "…acquire, control, distribute, store, spread, sink, treat, purify, reclaim, recapture, and salvage any water, including sewage and storm waters, for the beneficial use or users of the District, its inhabitants, or the owners of rights to water in the District." Upper District is located within San Gabriel Valley in Los Angeles County and overlies the Main Basin. The boundaries of Upper District are shown on Figure 1. Upper District is governed by a five-member Board of Directors and is broken down into five divisions, which are shown on Figure 2. Upper District employs a general manager and office staff and retains an attorney and consulting engineer. As a wholesaler, Upper District supplies supplemental imported water, from Metropolitan, and recycled water to its sub-agencies.

Metropolitan is comprised of 26 member agencies that receive imported water from the State Water Project and/or the Colorado River. Upper District is a member agency of Metropolitan.

While Upper District is a water wholesaler with no retail customers of its own, Upper District's sub-agencies provide water to retail customers. Upper District's sub-agencies include a number of urban water suppliers that are required to prepare Management Plans. As a wholesaler, Upper District provides imported water service to sub-agencies through Metropolitan's distribution system and recycled water service through a local distribution system. The majority of the imported water delivered from Upper District to its sub-agencies is used for groundwater replenishment and delivered through service connection USG-3. Imported water can also be delivered, as necessary, through service connections CENB-48 and USG - SGP, although the majority of untreated imported water is delivered through USG-3.

Upper District supplies treated imported water from Metropolitan through the following service connections:

- USG-1: Golden State Water Company
- USG-2: City of South Pasadena
- USG-4: Suburban Water Systems
- USG-5: City of Alhambra
- USG-6: City of Arcadia
- USG-7: City of Monrovia
- USG-8: Azusa Light and Water
- USG-9: Valley County Water District

Upper District's service area is about 144 square miles and includes all or portions of the Cities of Arcadia, Azusa, Baldwin Park, Bradbury, Covina, Duarte, El Monte, Glendora, Industry,

Irwindale, La Puente, Monrovia, Rosemead, San Gabriel, South El Monte, South Pasadena, Temple City, and West Covina. The service area of Upper District is largely urbanized consisting of mainly residential, light industrial and commercial uses.

3.2 SERVICE AREA BOUNDARY MAP

As discussed in Section 3.1, Upper District's current service area covers approximately 144 square miles and overlies the Main San Gabriel Basin. A service area boundary map is provided in Figure 1.

3.2.1 MAP FORMAT RECOMMENDATIONS

Upper District's service area map was submitted online through DWR's Population Tool in a "KML" file format (i.e. Google Earth format). The KML file was originally created in a Geographical Information Systems (GIS) shape file format and converted into a KML format. To the extent information was available, metadata was included in the KML file (including map projection, contact information, start and end dates for which the map is valid, constraints, attribute table definitions, and digitizing base).

3.3 SERVICE AREA CLIMATE

CWC 10631.

(a) Describe the service area of the supplier, including… climate…

Historical average rainfall in the San Gabriel Valley is shown in Appendix E. Annual rainfall is determined as the average of rainfall at San Dimas (station 95), Pomona (station 356C), El Monte (station 108D), and Pasadena (station 610B).

The monthly historical average temperatures (including minimum and maximum), monthly historical average rainfall, and monthly evapotranspiration (ETo) in the vicinity of Upper District's service area is summarized in the tabulation below. Historical climate information was obtained from the Western Regional Climate Center (WRCC) and from DWR's California Irrigation Management Information System (CIMIS).

Month	Average Temperature	Average Min. Temperature	Average Max. Temperature	Average Total Precipitation	ETo
	(F)	(F)	(F)	(Inches)	(Inches)
January	55.6	41.9	69.1	3.69	2.20
February	57.0	43.7	70.2	3.92	2.41
March	58.9	45.9	71.7	2.99	3.71
April	62.1	49.1	75.2	1.21	4.36
May	65.7	53.5	77.7	0.27	5.29
June	69.9	57.2	82.5	0.09	5.78
July	74.9	61.1	88.7	0.02	6.55
August	75.6	61.6	89.7	0.13	6.02
September	73.9	59.5	88.1	0.34	4.87
October	68.2	53.8	82.2	0.57	3.40
November	61.0	46.4	75.3	1.65	2.38
December	55.9	41.9	69.8	2.33	1.90
Annual	64.7	51.3	78.4	17.20	48.87

Source Historical average monthly precipitation and temperature information was obtained from the Western Regional Climate Center (http://www.wrcc.dri.edu/) and is based on data collected from Station 047785 (San Gabriel Fire Department) from 1939 through 2015. Historical monthly average ETo information was obtained from the California Irrigation Management Information Systems (http://wwwcimis.water.ca.gov) and is based on data collected from Station 159 (Monrovia).

The service area and location of Upper District in the San Gabriel Valley has a dry climate and summers can reach average monthly temperatures in the high 80s. The average monthly precipitation taken from Station 047785 at the San Gabriel Fire Department is approximately 17.20 inches. Typically, outdoor water uses, including irrigation, account for about 50 percent of residential use. Although changes in climatic conditions will have an impact, the projected water supply demands will be based on average year, single dry year and multiple-dry years, based on historical data and projected demands.

3.3.1 CLIMATE CHANGE

DWR had deemed Section 3.3.1 as optional. Upper District is not required by DWR to complete this section. However, Metropolitan states that "changing climate patterns are predicted to shift precipitation patterns and possibly affect water supply" (Metropolitan 2015 UWMP). The impacts of climate change on demand and supply are discussed in greater detail in Section 4.6 and 6.10, respectively.

3.4 SERVICE AREA POPULATION AND DEMOGRAPHICS

CWC 10631.

(a) Describe the service area of the supplier, including current and projected population... 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.

Upper District provides water service to an area with a current population of about 866,000. Table 3-1 presents the current and projected population of the area encompassed by Upper District from 2015 to 2040. Upper District's service area is projected to have a population

of approximately 962,000 by 2040. Projected populations in Upper District's service area were based on projections obtained from Metropolitan. Metropolitan determined its growth projects based in Southern California Association of Governments (SCAG) 2012 Regional Transportation Plan and San Diego Association of Governments (SANDAG) Series 13 Forecast.

3.4.1 OTHER DEMOGRAPHIC FACTORS

CWC 10631.

(a) Describe the service area of the supplier, including… other demographic factors affecting the supplier's water management planning.

No other demographic factors affect Upper District's water management planning. However, increased population will have an impact on water demand.

4.0 SYSTEM WATER USE

4.1 RECYCLED WATER VERSES POTABLE AND RAW WATER DEMAND

Chapter 4 addresses Upper District's potable water demands and raw water demands. Recycled water demands are addressed separately in Section 6.5; however, a summary is provided in Table 4-3.

4.2 WATER USES BY SECTOR

CWC 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).

Upper District is a wholesale water provider which provides water to retail urban water suppliers, but does not directly use water. Consequently, Upper District cannot segregate sales by type of sectors. Upper District has in its records total sales of treated imported water for

direct use, total sales of untreated imported water for groundwater replenishment and total sales of recycled water to its sub-agencies.

Upper District's current and projected water demands are provided in five-year increments through 2040 in Tables 4-1 and 4-2. Water demand sectors are also identified (see Section 4.2.1). Upper District's total water demand projections are based on Metropolitan's estimated demands for Upper District's service area. The development of Metropolitan's demand forecast is discussed in detail in Section 2.2. of Metropolitan's 2015 UWMP.

4.2.1 DEMAND SECTORS LISTED IN WATER CODE

As shown in Table 4-1, Upper District's service area includes the following water demand sectors listed in the California Water Code:

- Sales to other agencies (treated imported water for direct use, untreated imported water for groundwater replenishment)

Within Upper District's service area, there are eight treated imported water service connections with eight of its sub-agencies for direct use. The sub-agencies with treated imported water service connections for direct use rely on both the water supply from Upper District and the water produced from the Main Basin and Raymond Basin as their total supply for direct use. The total treated imported water sales for direct use for fiscal year 2014-15 was 9,069 acre-feet. However, much of the treated imported water deliveries reflect a shift away from groundwater productions in excess of water rights. In effect, treated imported water deliveries are made instead of untreated imported water.

As discussed in Section 6.2.2, Upper District is one of the Responsible Agencies from which the Watermaster purchases Supplemental Water, which is used for groundwater replenishment

purposes. Upper District delivers untreated imported water for groundwater replenishment primarily through its service connection, USG-3, but also through service connections CEN B-48 and USG-SGP. The untreated imported water sales as replenishment water for fiscal year 2014-15 was 38,841 acre-feet.

4.2.2 DEMAND SECTORS IN ADDITION TO THOSE LISTED IN THE WATER CODE

Upper District does not include any additional demand sectors not listed in the California Water Code.

4.3 DISTRIBUTION SYSTEM WATER LOSSES

CWC 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:…

(J) Distribution system water loss

CWC 10631(e)(3).

(A) For the 2015 urban water management plan update, the distribution system water loss shall be quantified for the most recent 12-month period available. For all subsequent updates, the distribution system water loss shall be quantified for each of the five years preceding the plan update.

(B) The distribution system water loss quantification shall be reported in accordance with a worksheet approved or developed by the department through a public process. The water loss quantification worksheet shall be based on the water system balance methodology developed by the American Water Works Association.

Each treated imported water connection has only one meter reported by Metropolitan to Upper District. Therefore, from an accounting standpoint for Upper District, there are no

unaccounted-for system losses. However, Metropolitan and Upper District's sub-agencies may experience unaccounted-for system losses and would be discussed in their own UWMPs. Likewise, USG-3 has only one reading reported by Metropolitan to Upper District. Therefore, from an accounting standpoint for Upper District, there are no unaccounted-for system losses.

4.4 ESTIMATED FUTURE WATER SAVINGS

CWC 10631(e)(4).

(A) If available and applicable to an urban water supplier, water use projections may display and account for the water savings estimated to result from adopted codes, standards, ordinances, or transportation and land use plans identified by the urban water supplier, as applicable to the service area.

(B) To the extent that an urban water supplier reports the information described in subparagraph (A), an urban water supplier shall do both of the following: (i) Provide citations of the various codes, standards, ordinances, or transportation and land use plans utilized in making the projections. (ii) Indicate the extent that the water use projections consider savings from codes, standards, ordinances, or transportation and land use plans. Water use projections that do not account for these water savings shall be noted of that fact.

As a wholesale agency, Upper District is not required by DWR to complete Section 4.4.

4.5 WATER USE FOR LOWER INCOME HOUSEHOLDS

CWC 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.

California Health and Safety Code 50079.5.

(a) "Lower income households" means persons and families whose income does not exceed the qualifying limits for lower income families… In the event the federal standards are discontinued, the department shall, by regulation, establish income limits for lower income households for all

geographic areas of the state at 80 percent of area median income, adjusted for family size and revised annually.

As a wholesale agency, Upper District is not required by DWR to complete Section 4.5.

4.6 CLIMATE CHANGE

Climate change imposes new uncertainties and potential constraints on demands in Metropolitan's service area, and likewise Upper District's service area. Climate change can potentially change urban and agricultural demand levels and patterns. Metropolitan states that "new solutions are available in the form of dramatically improved water-use efficiency, indirect and direct potable use of recycled water, and large-scale application of ocean desalinization" (Metropolitan 2015 UWMP). Additional information on climate change impacts on Metropolitan's supplies and demands are discussed in Section 2.6 of Metropolitan's 2015 UWMP.

5.0 SB X 7-7 BASELINE AND TARGETS

The Water Conservation Act of 2009 (or SB X7-7) required retail urban water suppliers to determine target water use for the years 2015 and 2020 in order to help the State achieve a 20 percent reduction in urban water use by the year 2020. Methodologies for calculating baseline and compliance daily urban per capita water use for the consistent implementation of the Water Conservation Act of 2009 were previously published by DWR's "Methodologies for Calculating Baseline and Compliance Urban Per Capita Water Use", dated October 1, 2010. As an Urban Wholesale Water Supplier, Upper District will discuss in the following sections how SB X7-7 was assessed in present and proposed future measures, programs and policies.

5.1 GUIDANCE FOR WHOLESALE AGENCIES

CWC 10608.12(r).

Urban wholesale water supplier" means a water supplier, either publicly or privately owned, that provides more than 3,000 acre-feet of water annually at wholesale for potable municipal purposes.

CWC 10608.36.

Urban wholesale water suppliers shall include in the urban water management plans… an assessment of their present and proposed future measures, programs, and policies to help achieve the water use reductions required by this part.

As a wholesale water agency, Upper District is not required to "establish and meet baseline and targets for daily per capita water use", nor is Upper District required to submit the SB X7-7 Verification Form (Department of Water Resources' Final "Guidebook for Urban Water Suppliers"). Nevertheless, according to the DWR's UWMP guidebook wholesale agencies, such as Upper District, are required to "provide an assessment of their present and proposed future measures, programs, and policies that will help the retails water suppliers in their wholesale service area achieve their SB X7-7 water use reduction targets".

Upper District has implemented water conservation measures that will assist its sub-agencies with reducing per capita water demands and ultimately achieve the Water Conservation Act of 2009 requirements. Water conservation activities are addressed in Chapter 9 (Demand Management Measures) and Chapter 6 (Recycled Water Opportunities). In addition, Upper District is a member of the CUWCC and has implemented its BMPs, which are discussed in Chapter 9 and Appendices Q through T.

Under the CUWCC BMP "BMP 1.1 Wholesale Agency Assistance Program," Upper District participates in wholesale agency programs, which provide financial incentives for water conservation, technical support through workshops, and available staff for conservation projects. Upper District provides financial incentives for water conservation through its many retrofit and rebate programs that replace high water-use fixtures with efficient water-use fixtures. Upper District provides technical support by conducting workshops for various water conservation programs. Upper District also provides support through available staff assigned to direct conservation measures. Regional programs are also in place that local agencies can participate in to encourage water conservation. Information regarding Upper District's wholesale agency programs is located in each of the CUWCC annual reports (Appendices Q through T). More details are discussed under Section 9.1.6.

Upper District's direct non-potable use recycled water program (discussed in greater detail in Chapter 6) is part of Upper District's effort to reduce reliance on imported water supplies, provide an economic benefit as well as enhance local water supply reliability. Upper District's existing recycled water program includes pipelines and a recycled water reservoir to provide tertiary treated recycled water to customers in Upper District's service area. Upper District's existing recycled water program is divided into the following systems: Phase I, Phase IIA – Whittier Narrows Project, Phase IIA – Rosemead Extension, and Phase IIB – Industry Project. During the past five years (2010 to 2014), Upper District has found retailers within its service area has increased its recycled water use by about 3,000 acre-feet.

5.2 UPDATING CALCULATIONS FROM 2010 UWMP

As a wholesale agency, Upper District is not required by DWR to complete Section 5.2 and subsequent subsections.

5.3 BASELINE PERIODS

As a wholesale agency, Upper District is not required by DWR to complete Section 5.3 and subsequent subsections.

5.4 SERVICE AREA POPULATION

As a wholesale agency, Upper District is not required by DWR to complete Section 5.4 and subsequent subsections.

5.5 GROSS WATER USE

As a wholesale agency, Upper District is not required by DWR to complete Section 5.5 and subsequent subsections.

5.6 BASELINE DAILY PER CAPITA WATER USE

As a wholesale agency, Upper District is not required by DWR to complete Section 5.6 and subsequent subsections.

5.7 2015 AND 2020 TARGETS

As a wholesale agency, Upper District is not required by DWR to complete Section 5.7 and subsequent subsections.

5.8 2015 COMPLIANCE DAILY PER CAPITA WATER USE

As a wholesale agency, Upper District is not required by DWR to complete Section 5.8 and subsequent subsections.

5.9 REGIONAL ALLIANCE

As a wholesale agency, Upper District is not required by DWR to complete Section 5.9 and subsequent subsections.

6.0 SYSTEM SUPPLIES

Upper District depends upon Metropolitan for its current and future imported water supplies. Metropolitan supplies imported water to Upper District, which in turn supplies that imported water to its sub-agencies. Treated imported water is delivered by Upper District to its sub-agencies for direct use from Upper District service connections on the Metropolitan distribution system. Untreated imported water is delivered to the Main Basin to satisfy its Replacement Water obligations required under the Main Basin Judgment (see Section 6.2.2). The reliability of future supplies of imported water historically has been impacted by the sources of supply available to Metropolitan. The reliability of these imported water supplies is discussed further in Section 7.1.2.

In addition, Upper District works with local water agencies to use recycled water for direct uses, which is obtained from the Sanitation Districts of Los Angeles County (CSD). Direct use of recycled water reduces groundwater production, and consequently, the need for an equivalent amount of imported water in many cases. Furthermore, Upper District is developing a recycled water project for groundwater replenishment in the Main Basin.

6.1 PURCHASED OR IMPORTED WATER

Metropolitan discusses the historical sources of water supply in Section 1.4 of its 2015 UWMP, which is incorporated by reference. Appendix F provides tables from Metropolitan's draft 2015 UWMP summarizing the historical sources of water supply available to Metropolitan, its supply capability and projected demands for an average year, single dry year, and multiple dry years, and its projections for Upper District. As shown in Appendix F, Metropolitan has sufficient water supplies to meet all of its member agencies projected supplemental demand for the next twenty years, even during multiple dry years. Metropolitan's greatest water demands, which

occur during a multiple dry year, will increase at a rate of approximately 0.6 percent per year from approximately 2,001,000 AFY, in 2020, to 2,258,000 AFY, in 2040.

Upper District's current and projected volumes of purchased water are provided in Tables 6-8 and 6-9 (see Section 6.9). Upper District's imported water supply sources, supplied by Metropolitan, are discussed below. The reliability of these imported water supplies is discussed further in Section 7.1.2.

Colorado River

Metropolitan owns and operates the Colorado River Aqueduct which conveys water from Lake Havasu on the Colorado River to water transmission pipelines and to Lake Skinner and Lake Matthews for storage. Metropolitan's Colorado River water right historically included a fourth and fifth priority under the 1931 Seven Party Agreement relating to California's share in the Colorado River water supply. Metropolitan is currently allotted an amount of 550,000 acre-feet under the fourth priority right and an amount of 662,000 AFY under the fifth priority right, but may receive additional supplies depending water supply conditions for any given year. MWD can receive water under the fifth priority right when the United States Secretary of the Interior determines that there is a surplus of water or if Arizona or Nevada does not use all of their allocated water. Metropolitan staff has indicated about 930,000 acre-feet of Colorado River water are available to Metropolitan during calendar year 2015.

State Water Project

Metropolitan contracts with the State of California, through the State Water Project, for the delivery of northern California water through the California Aqueduct. The State Water Project is a statewide water conveyance system that captures, stores and conveys water to 29 water agencies. The State Water Project's original total contractual commitment called for a capacity of 4.2 million acre-feet per year. Metropolitan has a maximum annual entitlement of 2,011,500 acre-feet. In order for the SWP to increases deliveries to the maximum amount of

contractual commitments to water, the SWP must expand its water conveyance facilities to divert greater flows from north of the San Francisco Bay -Sacramento River Delta area (Bay-Delta) area into the California Aqueduct.

Water Supply Allocation Plan (WSAP)

During calendar year 2007, critically dry conditions impacted Metropolitan's main water supply sources. In addition, a ruling in the Federal Courts in August 2007 provided protective measures for the Delta Smelt (and subsequently other aquatic species) in the Sacramento-San Joaquin River Delta resulting in restrictions on the availability of State Water Project water. As a result, Metropolitan adopted a Water Supply Allocation Plan (WSAP) in February 2008 to allocate available water supplies to its member agencies. Metropolitan revised the WSAP in December 2014. The WSAP establishes ten different shortage levels and a corresponding Allocation to each member agency (discussed further in Chapter 8.1). Based on the shortage level established by Metropolitan, the WSAP provides a reduced Allocation to a member agency for its Municipal and Industrial (M&I) retail demand and replenishment demand. The WSAP considers historical local water production, full service treated water deliveries, agricultural deliveries and water conservation efforts when calculating each member agency's Allocation.

In general, the WSAP process calculates total historical member agency demand. That historical demand is then compared to member agency projected local supply for a specific Allocation year. The balance required from Metropolitan, less an Allocation reduction factor, is the member agency's "Water Supply Allocation". When a member agency reduces its local demand through conservation or other means, the Allocation will increase. Because the demand has been eliminated, the Allocation can be used to purchase Full Service untreated water for replenishment deliveries.

Metropolitan did not declare any WSAP Allocations for fiscal years 2011-12, 2012-13, 2013-14 and 2014-15. However, due to the fourth consecutive year of below average rainfall

and critically dry conditions, Metropolitan declared a WSAP Allocation Level 3 for fiscal year 2015-16, which represents a regional reduction of 15 percent. The WSAP Allocation for M&I demand and Replenishment demand for Upper District is estimated to be around 27,900 acre-feet. The WSAP is discussed in Section 2.4 of Metropolitan's 2015 UWMP. Upper District is anticipated to require the total allocation for fiscal year 2015-16.

6.2 GROUNDWATER

Upper District's legal boundaries are within the San Gabriel Valley, as noted in Chapter 2, and overlie the Main Basin. Upper District has never produced groundwater from the Main Basin and currently does not have facilities to do so. However, Upper District's sub-agencies produce water from the Main Basin. The following provides a description of the sources of supply available to retail groundwater producers within Upper District and the multi-layer management structure that is in place to ensure long-term adequacy of the local water supply. The Main Basin has been adjudicated and management of the local water resources within the Main Basin is based on its adjudication. Upper District is one of the Responsible Agencies from which Watermaster purchases imported water to be used for groundwater replenishment. DWR Bulletin 118 does not identify the Main Basin as being in overdraft.

6.2.1 BASIN DESCRIPTION

CWC 10631.

(b) 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:

(2) A description of any groundwater basin or basins from which the urban water supplier pumps groundwater.

The San Gabriel Valley is located in southeastern Los Angeles County and is bounded on the north by the San Gabriel Mountains; on the west by the San Rafael and Merced Hills, on the south by the Puente Hills and the San Jose Hills, and on the east by a low divide between the San Gabriel River system and the Upper Santa Ana River system, as shown on Figure 3.

The San Gabriel River and its distributary, the Rio Hondo, drain an area of about 490 square miles upstream of Whittier Narrows. Whittier Narrows is a low gap between the Merced and Puente Hills, just northwest of the City of Whittier, through which the San Gabriel River and the Rio Hondo flow to the coastal plain of Los Angeles County. Whittier Narrows is a natural topographic divide and a subsurface restriction to the movement of groundwater between the Main Basin and the Coastal Plain. The approximately 490 square miles of drainage area upstream of Whittier Narrows consists of about 167 square miles of valley lands and about 323 square miles of mountains and foothills.

The Main Basin includes essentially the entire valley floor of the San Gabriel Valley with the exception of the Raymond Basin and Puente Basin. The boundaries of the Main Basin are the Raymond Basin on the northwest, the base of the San Gabriel Mountains on the north, the groundwater divide between San Dimas and La Verne and the lower boundary of the Puente Basin on the east, and the common boundaries between Upper District and Central District through Whittier Narrows on the southwest. The common water supply of the Main Basin does not include the Raymond Basin, the area northerly of Raymond Hill Fault, which was adjudicated in the Pasadena v. Alhambra case (Superior Court of the County of Los Angeles, 1944). The Puente Basin, although tributary to the Main Basin, is not included in the Main Basin administered by the Watermaster. Upper District's legal boundaries are within the San Gabriel Valley and overlie the Main Basin. Upper District has never produced groundwater from the Main Basin and currently does not have facilities to do so. However, Upper District's sub-agencies produce water from the Main Basin.

The Main Basin (administered by the Watermaster) is a large groundwater basin replenished by stream runoff from the adjacent mountains and hills, by rainfall directly on the surface of the valley floor, subsurface inflow from Raymond Basin and Puente Basin, and by return flow from water applied for overlying uses. Additionally, the Main Basin is replenished with imported water. The Main Basin serves as a natural storage reservoir, transmission system and filtering medium for wells constructed therein.

Upper District is one of three municipal wholesale water districts overlying and/or partially overlying the Main Basin. The three districts are Upper District, San Gabriel Valley Municipal Water District (San Gabriel District), and Three Valleys Municipal Water District (Three Valleys District). The boundaries of these water districts are shown on Figure 4.

Urbanization of the San Gabriel Valley began in the early part of the twentieth century, but until the 1940s, agricultural land use occupied more area than residential and commercial land use. After World War II, agricultural areas reduced rapidly and are now less than two thousand acres. The agricultural areas tend to be located in the easterly portion of the Main Basin and along power transmission rights of way adjacent to the San Gabriel River. Agricultural plots are discontinuous and relatively small. There are several major industrial areas adjacent to the San Gabriel River and within other portions of the valley. The greatest area of land use in the valley is for residential and commercial purposes. DWR Bulletin 118 does not identify the Main Basin as being in overdraft.

Geology

The Main Basin consists of a roughly bowl-shaped depression of bedrock, filled over millions of years with alluvial deposits. This bowl-shaped depression is relatively deep; the elevation at the base of the groundwater reservoir declines from about 800 feet above mean sea level (MSL) in the vicinity of San Dimas, at the northeast corner of the Main Basin, to about 2,200 feet below MSL in the vicinity of South El Monte (DWR, 1966, Plate II).

Most of the alluvium deposited within this depression is debris from the San Gabriel Mountains, washed and blown down from the side of the mountains over time. This process has also resulted in the materials of the Main Basin varying in size from relatively coarse gravel nearer the mountains to fine and medium-grained sand containing silt and clay as the distance from the mountains increases. The principal water-bearing formations of the Main Basin are unconsolidated and semi-consolidated sediments, which vary in size from coarse gravel to fine-grained sands. The interstices between these alluvial particles throughout the Main Basin fill with water and transmit water readily to wells. The thickness of the water-bearing materials in the Main Basin ranges from 200 to 300 feet in the northeastern portion of the Main Basin near the mountains (DPW, 1934, page 141) to nearly 4,000 feet in the South El Monte area (DWR, 1966, page 31).

The soils overlying the Main Basin average about six feet in depth. Soil depths are generally greater at the perimeter of the valley and decrease toward the center along the San Gabriel River. These soils are residual, formed in place through chemical, mechanical and plant weathering processes. The infiltration rates of these soils are greater along the natural channels and their adjacent flood plains. Lower infiltration rates are found in the perimeter areas of the valley. Since the valley is mostly urbanized, a significant portion of the area has been paved and many miles of stream channel have been lined for flood control purposes, thus decreasing infiltration of water through streambeds. Detailed basin geology is discussed in the report entitled "Planned Utilization of Ground Water Basins, San Gabriel Valley, Appendix A: Geo-hydrology" (DWR, 1966).

Hydrology

The total fresh water storage capacity of the Main Basin is estimated to be about 9.5 million acre-feet. Of that, about 1,100,000 acre-feet have been used historically in Main Basin operations. The change in groundwater elevation at the Key Well is representative of changes in

groundwater in the Main Basin. One foot of elevation change at the Key Well is roughly the equivalent of about 8,000 acre-feet of water storage. The location of the Key Well is shown on Figure 3 and the hydrograph of the Key Well is shown on Figure 5. The historical high groundwater elevation was recorded at over 329.1 feet in April 1916, at which time Main Basin storage was estimated to be about 8,700,000 acre-feet. The historical low was recorded in November 2015 at 174.0 feet, at which time Main Basin storage was estimated to be about 7,400,000 acre-feet. The Key Well hydrograph shown on Figure 5 illustrates the cyclic nature of basin replenishment and depletion. The hydrograph also illustrates the dramatic replenishment capability of the Main Basin during wet periods.

Generally, water movement in the Main Basin is from the San Gabriel Mountains on the north to Whittier Narrows to the southwest, as shown on Figure 6. Groundwater movement in the northern and northeastern regions of the Main Basin is affected by faulting. For example, the Raymond Fault located in the northwesterly portion of the Main Basin separates the Raymond Basin from the Main Basin.

The Main Basin is an unconfined aquifer. Although clay deposits appear mixed with the soils in several locations in the Main Basin and there are various clay lenses throughout the Main Basin, they do not coalesce to form a single impermeable barrier for the movement of subsurface water. The Main Basin therefore operates as a single, unconfined aquifer. As previously mentioned, a thorough discussion of basin hydrogeology is contained in the report "Planned Utilization of Ground Water Basins, San Gabriel Valley, Appendix A: Geo-hydrology" (DWR, 1966).

Within the Main Basin there are a number of identified sub-basins. These include the Upper San Gabriel Canyon Basin, Lower San Gabriel Canyon Basin, Glendora Basin, Foothill Basin, Way Hill Basin and San Dimas Basin. In addition, the Puente Basin is tributary to the Main Basin from the southeast, between the San Jose and Puente Hills, but is not included in the Main Basin adjudication. Figure 3 shows the location of the sub-basins within the Main Basin.

Groundwater Replenishment

The major sources of replenishment to the Main Basin are direct penetration of rainfall on the valley floor, percolation of runoff from the mountains, percolation of imported water and return flow from applied water. Rainfall occurs predominantly in the winter months and is more intense at higher elevations and closer to the San Gabriel Mountains. The tabulation Appendix E shows historical annual rainfall, which is highly variable from year to year, in the San Gabriel Valley. In water year 2013-14 the total rainfall (four station average) was about six inches, while in 2004-05 the total rainfall (four station average) was about 45 inches.

The magnitude of annual replenishment from direct penetration of local rainfall and return flow from applied water is not easily quantifiable. Percolation of runoff from the mountains and valley floor along with percolation of imported water has only been estimated. The DPW maintains records on the amount of local and imported water conserved in water spreading facilities and stream channels.

The San Gabriel River bisects the Main Basin. The San Gabriel River originates at the confluence of its west and east forks in the San Gabriel Mountains. It flows through the San Gabriel Canyon and enters the Main Basin at the mouth of the canyon north of the City of Azusa. The San Gabriel River flows southwesterly across the valley to Whittier Narrows, a distance of about 15 miles. It exits San Gabriel Valley at Whittier Narrows, and transverses the Coastal Plain in a southerly direction to reach the Pacific Ocean at Alamitos Bay near the City of Long Beach.

The San Gabriel River is joined and fed by tributary creeks and washes. In the Main Basin these include: Big Dalton Wash, which originates in the San Gabriel Mountains; Walnut Creek, which originates at the northeast end of the San Jose Hills; and San Jose Creek, which originates in the San Gabriel Mountains, but which travels around the southerly side of the San Jose Hills through the Puente Narrows before joining the San Gabriel River just above Whittier Narrows.

The channel of the San Gabriel River bifurcates in the upper middle portion of the Main Basin, forming a channel to the west of and parallel to the San Gabriel River, known as the Rio Hondo. Tributaries draining the westerly portion of the Main Basin, including Sawpit Wash, Santa Anita Wash, Eaton Canyon Wash, Rubio Wash and Alhambra Wash, all of which originate in the San Gabriel Mountains or the foothills, feed the Rio Hondo. The Santa Anita Wash, Eaton Canyon Wash, Rubio Wash and Alhambra Wash all cross the Raymond Basin area before entering the Main Basin. The channel of the Rio Hondo passes through Whittier Narrows westerly of the San Gabriel River, and then flows southwesterly to join the Los Angeles River on the Coastal Plain.

To protect residents of the San Gabriel Valley from flooding that can result during periods of intensive rainfall, the DPW and the U.S. Army Corps of Engineers (Corps of Engineers) have constructed an extensive system of dams, debris basins, reservoirs and flood control channels, which are shown on Figure 3. The dams and reservoirs also operate as water conservation facilities. The dams and reservoirs that control the flow of the San Gabriel River and the Rio Hondo include: Cogswell Reservoir on the west fork of the San Gabriel River, San Gabriel Reservoir at the confluence of the west and east forks of the San Gabriel River, Morris Reservoir near the mouth of the San Gabriel Canyon, Santa Fe Reservoir in the northerly portion of the Main Basin and Whittier Narrows Reservoir at the southwestern end of the San Gabriel Valley.

Many of the stream channels tributary to the San Gabriel River have been improved with concrete banks (walls) and concrete-lined bottoms. These stream channel improvements have significantly reduced the area of previous stream channels and reduce Main Basin replenishment. A number of off-stream groundwater replenishment facilities have been established along these stream channels to offset such reductions in replenishment. The locations of these water spreading facilities are shown on Figure 3. Some of these facilities are accessible to imported water supplies, while some facilities receive only local runoff.

The paths of the surface streams are mirrored in the soils and in the direction of groundwater movement in the Main Basin. The tributary creeks and washes, carrying smaller amounts of water, generally flow toward the center of the San Gabriel Valley, while the direction of flow of the major streams, the San Gabriel River and the Rio Hondo, is from the mountains in the north to Whittier Narrows in the southwest. In similar fashion, the primary direction of groundwater movement in the Main Basin is from the north to the southwest, with contributing movement generally from the east and west toward the center of the Main Basin as shown on Figure 6. The greatest infiltration and transmissivity rates of soils in the Main Basin are from north to south, with the maximum rates found in the center of the valley along the stream channels. Generally, the Main Basin directs groundwater to the southwest through Whittier Narrows.

6.2.2 GROUNDWATER MANAGEMENT

CWC 10631(b).

(b) 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 … or any other specific authorization for groundwater management.

(2) …For basins that 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.

Upper District has not adopted a specific groundwater management plan. The Main Basin has been adjudicated and management of the local water resources within the Main Basin is based on that adjudication. Management of the water resources in the Main Basin is based upon

Watermaster services under two Court Judgments: San Gabriel River Watermaster (River Watermaster)[1] and Main San Gabriel Basin Watermaster (Watermaster)[2].

Upper District is an intervener in the Long Beach Judgment and as such has significant participation. In addition, Upper District was the plaintiff in the court action that resulted in the creation of the Watermaster. Two members of the Upper District Board are appointed to serve on the Watermaster. Upper District is also included in Main Basin management described in the Watermaster document entitled "Five-Year Water Quality and Supply Plan."

The following sections provide a description of the two Judgments and the Five-Year Water Quality and Supply Plan that make up the groundwater management plan for the Main Basin. In addition, this section describes Upper District's and San Gabriel Basin Water Quality Authority's (WQA) policies to promote groundwater basin clean-up.

Main Basin – Long Beach Judgment

On May 12, 1959, the Board of Water Commissioners of the City of Long Beach, the Central Basin Municipal Water District (Central District), and the City of Compton, as plaintiffs, filed an action against San Gabriel and 24 other producers of groundwater from the San Gabriel Valley as defendants. This action sought a determination of the rights of the defendants in and to the waters of the San Gabriel River system and to restrain the defendants from an alleged interference with the rights of plaintiffs and persons represented by the Central District in such waters. After six years of study and negotiation a Stipulation for Judgment was filed on February 10, 1965, and the Judgment (Long Beach Judgment) was entered on September 24, 1965. Under the terms of the Long Beach Judgment, the water supply of the San Gabriel River system was

1 Board of Water Commissioners of the City of Long Beach, et al., v. San Gabriel Valley Water Company, et al., Los Angeles County Case No. 722647, Judgment entered September 24, 1965.
2 Upper San Gabriel Valley Municipal Water District v. City of Alhambra, et al., Los Angeles County Case No. 924128, Judgment entered January 4, 1973.

divided at Whittier Narrows between San Gabriel Valley upstream and the coastal plain of Los Angeles County downstream. A copy of the Long Beach Judgment can be found in Appendix G.

Under the terms of the Long Beach Judgment, the area downstream from Whittier Narrows (Lower Area), the plaintiffs and those they represent, are to receive a quantity of usable water annually from the San Gabriel River system comprised of usable surface flow, subsurface flow at Whittier Narrows and water exported to the Lower Area. This annual entitlement is guaranteed by the area upstream of Whittier Narrows (Upper Area), the defendants, and provision is made for the supply of Make-up Water by the Upper Area for years in which the guaranteed entitlement is not received by the Lower Area.

Make-up Water is imported water purchased by the Watermaster and delivered to agencies in Central District to satisfy obligations under the Long Beach Judgment. The entitlement of the Lower Area varies annually, dependent upon the 10-year average annual rainfall in the San Gabriel Valley for the 10 years ending with the year for which entitlement is calculated.

The detailed operations described in the Long Beach Judgment are complex and requires continuous compilation of data so that annual determinations can be made to assure compliance with the Long Beach Judgment. In order to do this, a three-member Watermaster was appointed by the Court, one representing the Upper Area parties nominated by and through Upper District, one representing the Lower Area parties nominated by and through the Central District, and one jointly nominated by Upper District and Central District. This three-member board is known as the River Watermaster.

The River Watermaster meets periodically during the year to adopt a budget, to review activities affecting water supply in the San Gabriel River system area, to compile and review data, to make determinations of usable water received by the Lower Area, and to prepare its annual

report to the Court. The River Watermaster has rendered annual reports for the water years 1963-64 through 2008-09 and operations of the river system under that Court Judgment and through the administration by the River Watermaster have been satisfactory since its inception.

One major result of the Long Beach Judgment was to leave the Main Basin free to manage its water resources so long as it meets its downstream obligation to the Lower Area under the terms of the Long Beach Judgment. Upper District intervened in the Long Beach case as a defendant to enforce the provisions of a Reimbursement Contract, which was incorporated into the Long Beach Judgment to assure that any Make-up Water obligations under the terms of the Long Beach Judgment would be satisfied.

Main Basin – Main Basin Judgment

The Upper Area then turned to the task of developing a water resources management plan to optimize the conservation of the natural water supplies of the area. Studies were made of various methods of management of the Main Basin as an adjudicated area and a report thereon was prepared for the Upper San Gabriel Valley Water Association, an association of water producers in the Main Basin. After due consideration by the Association, Upper District was requested to file as plaintiff, and did file, an action on January 2, 1968, seeking an adjudication of the water rights of the Main Basin and its Relevant Watershed. After several years of study (including verification of annual water production) and negotiations, a stipulation for entry of Judgment was approved by a majority of the parties, by both the number of parties and the quantity of rights to be adjudicated. Trial was held in late 1972 and the Judgment (Main Basin Judgment) was entered on January 4, 1973. A copy of the Main Basin Judgment can be found in Appendix H.

Under the terms of the Main Basin Judgment all rights to the diversion of surface water and production of groundwater within the Main Basin and its Relevant Watershed were adjudicated. The Main Basin Judgment provides for the administration of the provisions of the

Main Basin Judgment by a nine-member Watermaster. Six of those members are nominated by water producers (producer members) and three members (public members) are nominated by the Upper District and the San Gabriel District, which overlie most of the Basin. The nine-member board employs a staff, an attorney and a consulting engineer. The Watermaster holds public meetings on a regular monthly basis throughout the year. A copy of the Watermaster's Rules and Regulations is located in Appendix I.

The Main Basin Judgment does not restrict the quantity of water which parties may extract from the Main Basin. Rather, it provides a means for replacing all annual extractions in excess of a Party's annual right to extract water with Supplemental Water. The Watermaster annually establishes an Operating Safe Yield for the Main Basin which is then used to allocate to each Party its portion of the Operating Safe Yield which can be produced free of a Replacement Water Assessment. If a producer extracts water in excess of its right under the annual Operating Safe Yield, it must pay an assessment for Replacement Water, which is sufficient to purchase one acre-foot of Supplemental Water to be spread in the Main Basin for each acre-foot of excess production. All water production is metered and is reported quarterly to the Watermaster.

In addition to Replacement Water Assessments, the Watermaster levies an Administration Assessment to fund the administration of the Basin management program under the Court Judgment and a Make-up Obligation Assessment in order to fulfill the requirements for any make-up Obligation under the Long Beach Judgment and to supply fifty percent of the administration costs of the River Watermaster service. The Watermaster levies an In-lieu Assessment and may levy special Administration Assessments.

Water rights under the Main Basin Judgment are transferable by lease or purchase so long as such transfers meet the requirements of the Judgment. There is also provision for Cyclic Storage Agreements by which Parties and non-parties may store imported supplemental water

in the Main Basin under such agreements with the Watermaster pursuant to uniform rules and conditions and Court approval.

The Main Basin Judgment provides that the Watermaster will not allow imported water to be spread in the main part of the Main Basin when the groundwater elevation at the Baldwin Park Key Well[3] (Key Well) exceeds 250 feet; and that the Watermaster will, insofar as practicable, spread imported water in the Main Basin to maintain the groundwater elevation at the Key Well above 200 feet. One of the principal reasons for the limitation on spreading imported water when the Key Well elevation exceeds 250 feet is to reserve ample storage space in the Main Basin to capture native surface water runoff when it occurs and to optimize the conservation of such local water. Under the terms of the Long Beach Judgment, any excess surface flows that pass through the Main Basin at Whittier Narrows to the Lower Area (which is then conserved in the Lower Area through percolation to groundwater storage) is credited to the Upper Area as Usable Surface Flow.

Operations of the Groundwater Basin

Through the Long Beach Judgment and the Main Basin Judgment, operations of the Main Basin are optimized to conserve local water to meet the needs of the parties of the Main Basin Judgment.

Upper District is one of the Responsible Agencies from which Watermaster purchases Supplemental Water. The Supplemental Water purchased from Upper District is for groundwater replenishment purposes (Replacement Water for excess production by a Producer) or Make-up Water for delivery to the Lower Area under the terms of the Long Beach Judgment. Upper District sells imported water, delivered by Metropolitan, to its sub-agencies and to the Watermaster. Such water is delivered from Metropolitan's transmission facilities. Imported water can currently

3 The Baldwin Key Well is a water-level monitoring well located in the City of Baldwin Park used to determine when imported water may or may not be spread in the Basin.

be delivered for use by Upper District and its sub-agencies through nine service connections. Treated imported water is delivered through USG-1, USG-2, USG-4, USG-5, USG-6, USG-7, USG-8, and USG-9, while untreated water is delivered through USG-3.

Imported water is sold by Upper District for three purposes: direct use (treated), groundwater replenishment (untreated) and Make-Up Water (untreated) under the terms of the Long Beach Judgment.

Typically, water producers within Upper District rely upon groundwater from Main Basin for their water supply. The City of Alhambra has agreed to receive treated, imported water as part of the Cooperative Water Exchange Agreement (CWEA) to reduce the groundwater extractions from the western portion of the Main Basin and the associated drawdown concerns.

Imported water for groundwater replenishment is delivered through the flood control channels and diverted and spread at spreading grounds through Watermaster's agreement with the Los Angeles County Department of Public Works (DPW). Groundwater replenishment utilizes imported water and is considered Replacement Water under the terms of the Main Basin Judgment. It can be stored in the Main Basin through Cyclic Storage agreements, authorized by terms of the Main Basin Judgment, but such stored water may be used only to supply Supplemental Water to the Watermaster.

The Watermaster has entered into a Cyclic Storage Agreement with each of the three municipal water districts. One is with Metropolitan and Upper District, which permits Metropolitan to deliver and store imported water in the Main Basin in an amount not to exceed 100,000 acre-feet for future Replacement Water use. The second Cyclic Storage Agreement is with Three Valleys District and permits Metropolitan to deliver and store 40,000 acre-feet for future Replacement Water use. The third is with San Gabriel District and contains generally the

same conditions as the agreement with Metropolitan except that the stored quantity is not to exceed 40,000 acre-feet.

Imported Make-up Water has been delivered to lined stream channels and conveyed to the Lower Area. Make-up Water is required to be delivered to the Lower Area by the Upper Area when the Lower Area entitlement under the Long Beach Judgment exceeds the usable water received by the Lower Area. Imported water is used to fulfill the Make-up Water Obligation when the amount of Make-up Water cannot be fulfilled by reimbursing the Lower Area interests for their purchase of recycled water. The amount of recycled water for which reimbursement may be made as a delivery of Make-up Water is limited by the terms of the Long Beach Judgment to the annual deficiency in Lower Area Entitlement water or to 14,735 acre-feet, whichever is the lesser quantity.

Fiver-Year Water Quality and Supply Plan

The Watermaster was created in 1973 to resolve water issues that had arisen among water users in the San Gabriel Valley. Watermaster's mission was to generally manage the water supply of the Main Basin. During the late1970s and early 1980s, significant groundwater contamination was discovered in the Main Basin. The contamination was caused in part by past practices of local industries that had carelessly disposed of industrial solvents referred to as Volatile Organic Compounds (VOCs) as well as by agricultural operations that infiltrated nitrates into the groundwater. Cleanup efforts were undertaken at the local, state, and federal level.

Local water agencies adopted a joint resolution in 1989 regarding water quality issues that stated Watermaster should coordinate local activities aimed at preserving and restoring the quality of groundwater in the Main Basin. The joint resolution also called for a cleanup plan. In 1991, the Court granted Watermaster the authority to control pumping for water quality purposes. Accordingly, Watermaster added Section 28 to its Rules and Regulations regarding water quality management. The new responsibilities included development of a Five-Year Water

Quality and Supply Plan, updating it annually, submitting it to the California Regional Water Quality Control Board, Los Angeles Region, and making it available for public review by November 1 of each year. A copy of the most recent Five-Year Water Quality and Supply Plan (excluding its appendices) is located in Appendix J.

Watermaster prepares and annually updates the Five-Year Water Quality and Supply Plan in accordance with the requirements of Section 28 of the Rules and Regulations. The objective is to coordinate groundwater-related activities so that both water supply and water quality in the Main Basin are protected and improved. Many important issues are detailed in the Five-Year Plan, including how Watermaster plans to:

1. Monitor groundwater supply and quality;
2. Develop projections of future groundwater supply and quality;
3. Review and cooperate on cleanup projects, and provide technical assistance to other agencies;
4. Assure that pumping does not lead to further degradation of water quality in the Basin;
5. Address Perchlorate, N-nitrosodimethylamine (NDMA), and other emerging contaminants in the Basin;
6. Develop a cleanup and water supply program consistent with the U.S. Environmental Protection Agency (USEPA) plans for its San Gabriel Basin Superfund sites; and
7. Coordinate and manage the design, permitting, construction, and performance evaluation of the Baldwin Park Operable Unit (BPOU) cleanup and water supply plan.

The Watermaster, in coordination with Upper District, has worked with state and federal regulators, along with local water companies to clean up water supplies. Section 28 of the Watermaster's Rules and Regulations require all producers (including San Gabriel) to submit an application to 1) construct a new well, 2) modify an existing well, 3) destroy a well, or 4) construct

a treatment facility. The Watermaster prepares a report on the implications of the proposed activity. As a party to the Main Basin Judgment, San Gabriel reviews a copy of these reports and is provided the opportunity to submit comments on the proposed activity before the Watermaster Board takes final action.

Upper District Policy No. 9-00-8

Upper District adopted Policy No. 9-00-8 which established criteria and conditions under which the Upper District Board of Directors will consider providing funding, exclusively or in cooperation with WQA, Watermaster and other interested parties, for the construction of water treatment facilities and/or groundwater remediation projects in the Main Basin. This policy also establishes the general manner and methodology by which such funding can be distributed by Upper District for approved projects and programs. A copy of this policy is in Appendix K.

Within its statutory authority, budgetary limitations and policy objectives, Upper District will provide financial assistance for the procurement and/or construction of water treatment facilities at sites in the San Gabriel Valley. The principle objectives are:

1. Optimize utilization of local water resources.
2. Reduce or eliminate local reliance on treated, non-interruptible imported water supplies.
3. Maximize local water supply reliability
4. Provide for wholesale water supply price efficiency.
5. Protect public health and safety.

Projects to be considered for approval by the Board must meet the guidelines of this program and satisfy certain criteria to qualify for funding under this program. That criterion is listed as follows:

1. The project must be located within the boundaries of Upper District.

2. The project must be considered in a manner so as to reactivate, or maintain operation of, an existing local water source that otherwise could not continue operation because of excessive contamination.
3. The project must be designed such that its operation presents a significant water supply benefit to the public served.
4. The project must be designed such that its operation provides a significant groundwater remediation benefit if applicable.
5. The project must employ proven or CDHS certified treatment technology to allow for a high probability of success.
6. The project must be structured such that either Upper District has a reasonable probability of substantial cost recovery from parties responsible for groundwater contamination, or it addresses an urgent and immediate public health and safety crisis that cannot be resolved in a more efficient and effective manner.
7. The project must be reviewed by Upper District's Engineer.

Funding can be provided in several forms depending upon the circumstances surrounding the project. When structuring the distribution of funds, factors such as the likelihood of cost recovery, the future availability of other sources of funding and the preliminary goals of the project will be considered. To maximize the potential for cost recovery and securing funding from other sources, Upper District project funds will be distributed through the WQA's project accounts where possible.

Water Quality Authority 406 Plan

The WQA was established by the State Legislature on February 11, 1993 to develop, finance and implement groundwater treatment programs in the Main Basin. Section 406 of the WQA Act requires the WQA "to develop and adopt a basinwide groundwater quality management and remediation plan" that is required to be consistent with the EPA's National Contingency Plan ("NCP") and Records of Decision ("ROD") and all requirement of the Los Angeles

Regional Water Quality Control Board ("LARWQCB"). According to the WQA Act, the Section 406 Plan, which is incorporated in this Plan by reference, must include:

1. Characterization of Basin contamination;
2. A comprehensive cleanup plan;
3. Strategies for financing the design, construction, operation and maintenance of groundwater cleanup facilities;
4. Provision for a public information program; and
5. Coordination of activities with federal, state, and local entities.

WQA reviews and adopts the Section 406 Plan on an annual basis and as necessary, makes revisions according to changing regulatory, political and/or funding environments. A copy of this policy is in Appendix L.

In support of the Section 406 Plan, WQA also adopts an annual fiscal year budget (July 1 through June 30) which includes all projects (actual or planned) WQA is facilitating through its participation during that time period. The budget identifies the various funding sources, and combinations thereof, to ensure full funding for each project (capital and/or O&M) can be achieved.

Sustainable Groundwater Management Act

The 2014 Sustainable Groundwater Management Act (SGMA) directed DWR to establish initial groundwater basin priorities for the basins identified and defined in DWR's Bulletin 118. DWR finalized the basin prioritization in June 2014 through the California Statewide Groundwater Elevation Monitoring (CASGEM)[4] program. The CASGEM basin prioritization program is being used by DWR to focus resources towards implementing legislation to require all groundwater basins be monitored for seasonal and long-term groundwater elevation trends. DWR plans to

[4] http://www.water.ca.gov/groundwater/casgem/basin_prioritization.cfm

evaluate the status of groundwater level monitoring in "High" or "Medium" priority groundwater basins. If DWR determines that groundwater levels in all or part of a High or Medium Priority basin are not being monitored, DWR will work cooperatively with local entities to establish a monitoring program. Compliance with DWR requirements allows the basin monitoring entities to be eligible to receive State water grants or loans. The Main Basin (Basin 4-13) has been identified through CASGEM as a "high" priority and will be required to comply with specific SGMA regulations when they are available.

6.2.3 OVERDRAFT CONDITIONS

CWC 10631(b).

(2) 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.

The Main Basin is an adjudicated basin; therefore, it is not required to complete this section.

6.2.4 HISTORICAL GROUNDWATER PUMPING

CWC 10631(b).

(b) 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:

(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.

As discussed in Section 6.2, Upper District has never produced groundwater from the Main Basin and currently does not have facilities to do so (see Table 6-1). However, Upper District's sub-agencies produce water from the Main Basin. In fiscal year 2014-15, approximately 129,900 acre-feet of groundwater was produced from the Main Basin by Upper District's sub-agencies.

As noted in Section 6.2.2, the Main Basin is managed by the Watermaster. Section 42, Basin Operating Criteria, of the Main Basin Judgment states in part "…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)." Figure 5 shows the historical fluctuation of the Key Well elevation and illustrates since the Main Basin was adjudicated in 1973, it generally operated between an elevation 250 feet and 200 feet above MSL. Furthermore, at elevation 200 feet above MSL at the Key Well, the Main Basin has about 7,600,000 acre-feet of available storage. During the period of management under the Judgment, significant drought events have occurred from 1969 to 1977, 1983 to 1991, 1998 to 2004, 2006 to 2009, and. In each drought cycle the Main Basin has been managed to maintain water levels.

6.3 SURFACE WATER

Upper District does not use surface water supplies to meet its water demands. However, surface water is captured and conserved by the Los Angeles County Flood Control District and Department of Public Works for groundwater replenishment within Upper District's service area.

6.4 STORMWATER

Upper District does not use stormwater to meet its water demands. However, stormwater is captured and conserved by the Los Angeles County Flood Control District and Department of Public Works for groundwater replenishment within Upper District's service area.

6.5 WASTEWATER AND RECYCLED WATER

Upper District currently delivers recycled water to its sub-agencies for direct (irrigation) use only. Upper District is currently expanding its direct use system and developing its Indirect Reuse Replenishment Project (IRRP) for indirect potable reuse. The IRRP will provide up to 10,000 AFY of tertiary treated recycled water from the San Jose Creek Water Reclamation Plant for groundwater replenishment at the Santa Fe Spreading Grounds, which will augment imported water supplies currently used for groundwater replenishment in the Main Basin.

6.5.1 RECYCLED WATER COORDINATION

CWC 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…

Reclamation of wastewater in the Main Basin has been extensively reviewed in both local and regional studies. In 1976 Upper District and San Gabriel District completed a study entitled "Potential Use of Reclaimed Water for Groundwater Replenishment in the Basin." This study was updated at the request of the Watermaster in 1980 and again in March 1987. In 1979, a

cooperative study was completed by Metropolitan and others entitled "Orange and Los Angeles Counties Water Reuse Study." During calendar year 1994, Upper District participated in a study to identify potential direct non-potable users of recycled water. In October 1994, a draft report of the study entitled, "Direct Reuse Study" was released, which identified the potential for recycled water use within the Main San Gabriel Basin. The Direct Reuse Study identified over 600 potential recycled water users within the San Gabriel Valley consisting of schools, parks, golf courses, nurseries, sand and gravel companies and cemeteries.

These potential direct users of recycled water would be serviced by their retail water agencies. These studies concluded that water reuse in the Basin could be feasible; however, the cost of utilizing recycled water varies widely with the quantity to be used and the distance required to transport the water from the treatment plant to the point of use.

6.5.2 WASTEWATER COLLECTION, TREATMENT, AND DISPOSAL

CWC 10633(a).

(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.

CWC 10633(b).

(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.

6.5.2.1 WASTEWATER COLLECTED WITHIN SERVICE AREA

As a wholesaler, Upper District is not required to complete Section 6.5.2.1.

6.5.2.2 WASTEWATER TREATMENT AND DISCHARGE WITHIN SERVICE AREA

There are two water reclamation plants located within Upper District's service area; the Whittier Narrows Water Reclamation Plan (WNWRP) and the San Jose Creek Water Reclamation Plant (SJCWRP). CSD operates both of these facilities. The location of these reclamation plants are shown on Figure 7. The method of disposal when treated recycled water is not used (non-recycled) is discharge to the San Gabriel River/Rio Hondo and eventually flows to the ocean.

The WNWRP began operations in 1962 and has a treatment capacity of about 15 million gallons per day (MGD). The WNWRP provides coagulated, filtered and disinfected tertiary effluent. All wastewater treated at the WNWRP meets recycled water standards. The WNWRP serves a population of approximately 150,000 people. During the fiscal year 2013-14, the total recycled water production from this plant was about 9,639 acre-feet.

The SJCWRP began operations in 1973 and currently has a treatment capacity of about 100 MGD. The SJCWRP provides coagulated, filtered and disinfected tertiary effluent. The SJCWRP has room for an expansion of an additional 25 MGD, although there is no schedule for such an expansion. The SJCWRP plant serves a population of approximately 1 million people, largely a residential population. During fiscal year 2013-14, the total recycled water production from this plant was about 66,589 acre-feet.

Upper District does not provide supplemental treatment to recycled water produced from the WNWRP or the SJCWRP before delivery for direct use. Therefore, the DWR does not require Table 6-3 to be completed.

6.5.3 RECYCLED WATER SYSTEM

Section 10633

(c) (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

Upper District's direct non-potable use recycled water program is part of Upper District's effort to reduce reliance on imported water supplies, provide an economic benefit as well as enhance local water supply reliability. Upper District's existing recycled water program includes pipelines and a recycled water reservoir to provide tertiary treated recycled water to customers in Upper District's service area. Upper District's existing recycled water program is divided into the following systems: Phase I, Phase IIA – Whittier Narrows Project, Phase IIA – Rosemead Extension, and Phase IIB – Industry Project. The locations of Upper District's recycled water users are provided in Figure 7.

In addition to the recycled water supplied by Upper District through its direct use recycled water system, other purveyors within Upper District's service area supply recycled water for irrigation use as well.

Phase I

Upper District's Phase I recycled water system has a capacity of approximately 1,600 AFY and provides service to customers in the City of Whittier. Recycled water from the SJCWRP is currently supplied to San Gabriel Valley Water Company (SGVWC) at a discounted recycled water rate. SGVWC serves the recycled water to various customers for landscape irrigation. During fiscal year 2014-15, the Phase I system delivered approximately 657 acre-feet of recycled water from the SJCWRP to Mills Elementary School, Rio Hondo College, Rose Hills Memorial Park, and Gateway Pointe Industrial Park.

Phase IIA – Whittier Narrows Project and Rosemead Extension

Upper District's Phase IIA recycled water system is divided into the Whittier Narrows Project and Rosemead Extension. Recycled Water from the WNWRP is currently supplied to SGVWC and Golden State Water Company to serve recycled water to various customers for landscape irrigation. During fiscal year 2014-15, the Phase recycled water system delivered approximately 1,105 acre-feet of recycled water from the WNWRP to parks, schools, medians, and commercial complexes.

Upper District's Phase IIA - Whittier Narrows Project recycled water system has a capacity of 2,500 AFY and provides service to customers in the City of South El Monte and the Whittier Narrows Recreation Area. Upper District's Phase IIA - Rosemead Extension recycled water system has a capacity of 720 AFY and provides service to customers in the City of Rosemead.

Phase IIB – Industry

Upper District's Phase IIB - Industry recycled water system has a capacity of approximately 3,700 AFY and provides service to customers in the City of West Covina. Recycled Water from the SJCWRP is currently supplied to Suburban Water System and Valencia Heights Water Company to serve recycled water to various customers for landscape irrigation. During fiscal year 2014-15, the Phase IIB-Industry system delivered approximately 826 acre feet of recycled water from the SJCWRP to parks, schools, and medians.

6.5.4 RECYCLED WATER BENEFICIAL USES

Section 10633

(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

Recycled water users within Upper District's service area include several schools, parks, and commercial areas. Recycled water is produced by CSD's SJCWRP and WNWRP treatment plants. Use of recycled water allows Upper District's sub-agencies to reduce the amount of imported water purchases required and groundwater production required from the Main San Gabriel. The amount of recycled water supplied by Upper District in 2015, along with projected recycled water demands through 2040, are provided in Table 6-4.

6.5.4.1 CURRENT AND PLANNED USES OF RECYCLED WATER

Current Uses

As discussed in Section 6.5.3, Upper District's existing recycled water program is divided into the following systems: Phase I, Phase IIA – Whittier Narrows Project, Phase IIA – Rosemead Extension, and Phase IIB – Industry Project.

In the Phase I system, SGVWC serves the recycled water to various customers for landscape irrigation. During fiscal year 2014-15, the Phase I system delivered approximately 657 acre-feet of recycled water from the SJCWRP to Mills Elementary School, Rio Hondo College, Rose Hills Memorial Park, and Gateway Pointe Industrial Park.

Upper District's Phase IIA recycled water system supplies recycled water from the WNWRP to SGVWC and Golden State Water Company to serve recycled water to various customers for landscape irrigation. During fiscal year 2014-15, the Phase recycled water system delivered approximately 1,105 acre-feet of recycled water from the WNWRP to parks, schools, medians, and commercial complexes.

Upper District's Phase IIB - Industry recycled water system supplies recycled water to Suburban Water System and Valencia Heights Water Company to serve recycled water to various customers for landscape irrigation. During fiscal year 2014-15, the Phase IIB-Industry system delivered approximately 826 acre feet of recycled water from the SJCWRP to parks, schools, and medians.

Planned Uses

Upper District is currently expanding its direct use recycled water system with the addition of the South El Monte Recycled Water Expansion Project, the La Puente Valley County Water District Recycled Water Project, and the Rose Hills Expansion.

The proposed South El Monte Recycled Water Expansion Project will provide up to 661.4 AFY of recycled water service to 48 customers within the Cities of South El Monte, El Monte, Industry, and Pico Rivera for landscape irrigation. The South El Monte Recycled Water Project is divided into five packages; the first package is expected to be completed prior to 2020 and will deliver approximately 100 AFY. San Gabriel Valley Water Company will be a project partner and eventual system operator of the South El Monte Recycled Water Expansion Project.

The proposed La Puente Valley County Water District Recycled Water Project is estimated to supply 360 AFY of recycled water to approximately 27 customers in the Cities of Industry and La Puente. The La Puente Valley County Water District Recycled Water Project is divided into three phases; the first phase is expected to be completed prior to 2020 and will deliver 130 AFY. La Puente Valley County Water District will be a project partner and eventual system operator of the LPVCWD Recycled Water Project.

The proposed Rose Hills Expansion is estimated to supply 600 AFY of recycled water to the Rose Hills Memorial Park. It is anticipated to be completed prior to 2020.

Upper District is also developing the IRRP with the goal of replenishing the Main Basin while offsetting imported water demands. The IRRP will provide up to 10,000 AFY of treated recycled water from the SJCWRP for groundwater replenishment at the Santa Fe Spreading Grounds to be used for indirect potable use. Construction of the IRRP is anticipated to be completed by the year 2020. The location of the IRRP is shown on Figure 8.

6.5.4.2 PLANNED VERSUS ACTUAL USE OF RECYCLED WATER

The total projected 2015 recycled water demand in Upper District's service area was estimated in Upper District's 2010 Plan to be approximately 3,000 AFY. The projection was based on planning documents prepared by Upper District. The actual recycled water demand in 2015 was approximately 2,590 AF. A comparison of the actual and projected recycled water use for 2015 is shown in Table 6-5.

6.5.5 ACTIONS TO ENCOURAGE AND OPTIMIZE FUTURE RECYCLED WATER USE

Upper District's current recycled water rates vary depending upon Upper District's actual cost of delivery to the end user. The recycled water rates are established through long-term contracts with the participating retail agency. The rates are set to create an economic incentive to maximize the use of recycled water for irrigation applications, while reducing demand on potable supplies, for irrigation applications.

Section 10633

(f) (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.

(g) (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.

As a wholesale agency, Upper District is not required by DWR to complete Section 6.5.5.

6.6 DESALINATED WATER OPPORTUNITIES

Section 10631(h)

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

As previously discussed, Upper District's sub-agencies produce groundwater from the Main Basin. Groundwater produced from the Main Basin has acceptable Total Dissolved Solids (TDS) concentrations (less than secondary Maximum Contaminant Level (MCL) of 1,000 milligrams per liter or mg/l) and does not require desalination. The annual average TDS value is for San Gabriel's Main Basin Wells is approximately 338 mg/L, according to the draft Main Basin Salt and Nutrient Management Plan, which is below its secondary MCL. The State Water Resources Control Board Division of Drinking Water (DDW)[5] recommended level is 500 mg/l and water can be provided for long-term domestic use with TDS concentrations of up to 1,000 mg/l. Due to the high quality (low TDS concentration) of the groundwater, Upper District and its sub-agencies have not been required to investigate the use of desalination to develop or reestablish a new long-term supply for the Main Basin. However, Upper District is looking for new sources

5 The Division of Drinking Water was formally under the California Department of Public Health Drinking Water Program.

of water supply and is receptive in coordinating with other agencies that have ocean water desalination programs.

6.7 TRANSFER OPPORTUNITIES

Section 10631(d)

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

Upper District participates in a long-term Cooperative Water Exchange Agreement (CWEA) with the City of Alhambra, Metropolitan, San Gabriel District and the Watermaster. Upper District is the representative member agency for Metropolitan in that exchange. The CWEA was negotiated to solve a local problem near the City of Alhambra, referred to as the Alhambra Pumping Hole. The Alhambra Pumping Hole is located in an area of the Main Basin that gets little replenishment due to its location and hydrogeologic characteristics. Seven producers extract water from the Alhambra Pumping Hole and this resulted in declining water level elevations. Six of the producers are sub-agencies of Upper District. The seventh producer, the City of Alhambra, is a member agency of San Gabriel District. This exchange is cooperatively financed by the City of Alhambra, San Gabriel District and Upper District. It was agreed the City of Alhambra would receive direct delivery of water from Metropolitan and in exchange would reduce its extractions from the Alhambra Pumping Hole by an equivalent quantity. Currently, the Watermaster levies an In-lieu Assessment to provide reimbursement to the City of Alhambra for increased incremental costs, which are incurred by the City. The City of Alhambra receives about 3,000 acre-feet per year of direct deliveries from Metropolitan.

Upper District, through Metropolitan, is active in the long-term cyclic storage of water in the Main Basin. Metropolitan is able to deliver water for groundwater replenishment purposes

in advance of Upper District's specific requirement for such water. Water delivered to the Main Basin in advance of its requirement is credited to the Cyclic Storage Account and the credited deliveries are accrued from year to year. When the Watermaster requires Replacement Water from Upper District, a transfer can then be made from the Cyclic Storage Account to Watermaster in-lieu of actual delivery of imported water for that purpose, at the discretion of Metropolitan. Because water is often in Cyclic Storage for many years before being required as Replacement Water, the Cyclic Storage program, although technically a conjunctive use operation, may be considered an exchange or transfer program in that it takes advantage of surplus water, when available, and stores it in the Main Basin for future use.

6.8 FUTURE WATER PROJECTS

Section 10631

(g) …The urban water supplier shall include a detailed description of expected future projects and programs… 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.

Upper District receives imported supplemental water from Metropolitan and supplies such water to its sub-agencies. Upper District's sub-agencies also have rights to water supplies of the Main Basin. The management structure of the Main Basin ensures a reliable future water supply. Section 6.2 provides an extensive description of the Main Basin and provides information on its management. The management structure of the Basin provides a reliability of supply in average, single-dry and multiple-dry water years. Although Upper District overlies a well-managed groundwater basin, it participates in a variety of programs intended to enhance regional water supply.

In 2012, Upper District, in collaboration with stakeholders, prepared an Integrated Resources Plan (IRP) to address projected water supply and demand issues. After screening the potential projects discussed in IRP, Upper District determined the most beneficial strategy for reducing demands on imported water is through an adaptive management strategy that involves the implementation of a suite of projects including direct and indirect recycled water reuse, stormwater capture, water transfers, and conservation measures that can be phased over time. Upper District evaluated these options based on yield, cost, reliability, and impact to the environment in order to develop strategies to meet projected water demands.

Upper District's direct use recycled water program has been developed as part of Upper District's continuing effort to augment Metropolitan's imported water supply. As discussed in Section 6.5.4.1, Upper District's direct use recycled water program is currently being expanded to include the South El Monte Recycled Water Expansion Project, the La Puente Valley County Water District Recycled Water Project, and the Rose Hills Expansion. This project will reduce local demands on groundwater produced from the Main Basin.

Upper District is also developing the IRRP with the goal of replenishing the Main Basin while offsetting imported water demands. The IRRP will provide up to 10,000 AFY of treated recycled water from the SJCWRP for groundwater replenishment at the Santa Fe Spreading Grounds to be used for indirect potable use. These recycled water supplies used for groundwater replenishment will augment imported water supplies currently used for groundwater replenishment in the Main Basin.

These above mentioned future water projects are shown on Table 6-7. The current direct use recycled water project and the indirect potable reuse recycled water project are aligned with the strategies proposed in the IRP and ultimately reduce the reliance of both imported water and local groundwater. In the future, Upper District may develop additional projects and programs

aligned with the overall adaptive management strategy proposed in the IRP. These projects and programs may include the following:

- Expand and develop recycled water projects
- Enhance existing stormwater capture facilities
- Construct new stormwater capture facilities
- Encourage and develop decentralized stormwater capture programs (cisterns, bioretention areas, etc.)
- Develop storage and transfer agreements with other agencies

6.9 SUMMARY OF EXISTING AND PLANNED SOURCES OF WATER

Section 10631

(b) Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five-year increments described in subdivision 10631(a).

(4) (Provide 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.

Upper District depends upon Metropolitan for its current and future imported water supplies. Metropolitan supplies imported water to Upper District, which in turn supplies that imported water to its sub-agencies. Treated imported water is delivered by Upper District to its sub-agencies for direct use from Upper District service connections on the Metropolitan distribution system. Untreated imported water is delivered to the Main Basin to satisfy its Replacement Water obligations required under the Main Basin Judgment (see Section 6.2.2). The reliability of future supplies of imported water historical has been impacted by the sources of

supply available to Metropolitan. The reliability of these imported water supplies is discussed further in Section 7.1.2.

In addition, Upper District works with local water agencies to use recycled water for direct uses, which is obtained from the CSD. Direct use of recycled water reduces groundwater production, and consequently, the need for an equivalent amount of imported water in many cases. Furthermore, Upper District is currently expanding its direct use recycled water system and is developing a groundwater replenishment project that would utilize recycled water. These projects will offset imported water demands.

Colorado River

Metropolitan owns and operates the Colorado River Aqueduct which conveys water from Lake Havasu on the Colorado River to water transmission pipelines and to Lake Skinner and Lake Matthews for storage. Metropolitan's Colorado River water right historical included a fourth and fifth priority under the 1931 Seven Party Agreement relating to California's share in the Colorado River water supply. Metropolitan is currently allotted an amount of 550,000 acre-feet, but may receive additional supplies depending water supply conditions for any given year.

State Water Project

Metropolitan contracts with the State of California, through the State Water Project, for the delivery of northern California water through the California Aqueduct. The State Water Project is a statewide water conveyance system that captures, stores and conveys water to 29 water agencies. The State Water Project's original total contractual commitment called for a capacity of 4.2 million acre-feet per year. Metropolitan has a maximum annual entitlement of 2,011,500 acre-feet. In order for the SWP to increases deliveries to the maximum amount of contractual commitments to water, the SWP must expand its water conveyance facilities to divert greater flows from north of the Bay-Delta area into the California Aqueduct.

Metropolitan discusses the historical sources of water supply in Section 1.4 of its 2015 UWMP, which is incorporated by reference. Appendix F summarizes the historical sources of water supply available to Metropolitan.

Water Supply Allocation Plan

Metropolitan adopted a WSAP in February 2008 to allocate available water supplies to its member agencies. Metropolitan revised the WSAP in December 2014. The WSAP establishes ten different shortage levels and a corresponding Allocation to each member agency. Based on the shortage level established by Metropolitan, the WSAP provides a reduced Allocation to a member agency for its Municipal and Industrial (M&I) retail demand and replenishment demand. The WSAP considers historical local water production, full service treated water deliveries, agricultural deliveries and water conservation efforts when calculating each member agency's Allocation.

Metropolitan did not declare any WSAP Allocations for fiscal years 2011-12, 2012-13, 2013-14 and 2014-15. However, due to the fourth consecutive year of below average rainfall and critically dry conditions, Metropolitan declared a WSAP Allocation for fiscal year 2015-16. The WSAP Allocation for M&I demand and Replenishment demand for Upper District is estimated to be around 27,900 acre-feet. Upper District is anticipated to require the total allocation for fiscal year 2015-16.

6.10 CLIMATE CHANGE IMPACTS TO SUPPLY

Metropolitan's 2015 UWMP states that "as a major steward of the region's water supply resources, Metropolitan is committed to performing its due diligence with respect to climate change". The impacts of climate change to Metropolitan's supplies are uncertain and pose challenges for long-term planning. However, Metropolitan benefits from having historic hydrological data dating back almost one hundred to use in supply and demand forecasting.

Metropolitan's 2015 UWMP lists the following areas of concern for California water planners related to climate change impacts:

- Reduction in Sierra Nevada snowpack
- Increased intensity and frequency of extreme weather events
- Rising sea levels resulting in:
    - Impacts to coastal groundwater basins due to seawater intrusion
    - Increased risk of damage from storms, high-tide events, and the erosion of levees,
    - Potential pumping cutbacks on the SWP and Central Valley Project

In response to these concerns regarding climate change, Metropolitan has engaged in resources planning, knowledge sharing and research support, implementation of current research information into its programs and policies. Additional information regarding impacts of climate change and Metropolitan's related activities can be found in Metropolitan's 2015 UWMP Section 2.6.

7.0 WATER SUPPLY RELIABILITY ASSESSMENT

7.1 CONSTRAINTS ON WATER SOURCES

Section 10631(c)

(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 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.

The water supply to Upper District's sub-agencies meets all state and federal water quality standards. The potable water supply within Upper District comes from two main sources: the Main Basin and Metropolitan.

7.1.1 GROUNDWATER FROM THE MAIN BASIN

Water produced within the Main Basin historically had been impacted by man-made contaminants in certain areas and at varying depths. The Watermaster, in coordination with Upper District, has worked with state and federal regulators, along with local water companies to clean up water supplies. As of fiscal year 2014-15, the Main Basin has about 30 treatment facility sites which have been constructed and operated to remove contaminants from the groundwater. Wells which pump potable water from the Main Basin meet the State Water

Resources Control Board – Division of Drinking Water's (DDW's) drinking water standards. Therefore, the existing quality of the groundwater does not affect the groundwater supply within Upper District boundaries for 2015, 2020, 2025, 2030, 2035 and 2040.

As discussed in detail in Section 6.2.2, the Watermaster prepares and annually updates the Five-Year Water Quality and Supply Plan in accordance with the requirements of Section 28 of its Rules and Regulations. The objective of the Five-Year Water Quality and Supply Plan is to coordinate groundwater-related activities so that both water supply and water quality in the Main Basin are protected and improved. Many important issues are detailed in the Five-Year Plan, including how Watermaster plans to:

1. Monitor groundwater supply and quality;
2. Develop projections of future groundwater supply and quality;
3. Review and cooperate on cleanup projects, and provide technical assistance to other agencies;
4. Assure that pumping does not lead to further degradation of water quality in the Basin;
5. Address Perchlorate, N-nitrosodimethylamine (NDMA), and other emerging contaminants in the Basin;
6. Develop a cleanup and water supply program consistent with the U.S. Environmental Protection Agency (USEPA) plans for its San Gabriel Basin Superfund sites; and
7. Coordinate and manage the design, permitting, construction, and performance evaluation of the Baldwin Park Operable Unit (BPOU) cleanup and water supply plan.

Current and projected water quality of the Main Basin is discussed in the Main Basin's Five-Year Water Quality and Supply Plan, which is attached in Appendix J.

7.1.2 IMPORTED WATER FROM METROPOLITAN

Water from Metropolitan is delivered by Upper District to its sub-agencies within its service area for direct use and groundwater replenishment. Metropolitan's water quality meets all state and federal water quality standards. Water quality plays a vital role in Metropolitan's availability of a useful water supply. Water quality affects the reliability of groundwater storage, recycled water and impacts the Bay-Delta. To the extent possible, Metropolitan responds to water quality concerns by concentrating on protecting the quality of the source water and developing water management programs that maintain and enhance water quality. Metropolitan's efforts and water quality data are explained in Sections 4 of its 2015 UWMP, which is incorporated by reference. As discussed in Metropolitan's 2015 UWMP, Metropolitan anticipates no significant reductions in water supply availability from these sources due to water quality concerns. Metropolitan discusses the reliability of its existing and planned sources of water supply in Section 2 of its 2015 UWMP, which is incorporated by reference.

Colorado River

Through farm and irrigation conservation programs, improved reservoir system operations, land management programs, and water transfer and exchanges, Metropolitan has increased the reliable supply from the Colorado River Aqueduct.

Although Colorado River water may be delivered as Supplemental Water to the Basin, there are issues which must be addressed prior to delivery. Quagga mussels are in Colorado River water and have the potential to grow exponentially unless the Colorado River water is isolated and allowed to dry out, which effectively eliminates the Quagga mussels. The conditions which would allow an area to dry out do not exist on the San Gabriel River when delivering water through USG-3; however, Watermaster is coordinating with Upper District, Metropolitan and the Los Angeles County Department of Public Works to develop a solution to mitigate the Quagga mussel issue in order to deliver Colorado River water through CEN B-48. A second concern is the

high TDS concentration in Colorado River water, which would need to be addressed through Watermaster's "Criteria for Delivery of Supplemental Water".

State Water Project

The SWP may not be able to fulfill all of its contractual water delivery requirements in the future. In order for the State Water Project to deliver all of the water contracted, additional water supplies must be developed. Water diverted at the Sacramento-San Joaquin Delta by the SWP must be water that is surplus to the needs of the areas of origin. As local use of water in northern California increases, the supply to the SWP may be reduced. The Bay-Delta is a part of the SWP water delivery system. The reliability of the Bay-Delta to deliver water may be impacted by potential risks associated with endangered species, earthquakes, levee failure, and climate change. In order to mitigate these potential risks, State and federal resources and environmental protection agencies and a broad range of stakeholders are involved in a multiyear planning process referred to as the CALFED process to develop programs to greatly improve the capacity and reliability of the SWP and the environmental conditions of the Bay-Delta.

The Bay Delta Conservation Plan (BDCP) grew out of the CALFED Bay-Delta Plan's Ecosystem Restoration Program Conservation Strategy. A draft BDCP was prepared through a collaboration of state, federal, and local water agencies, state and federal fish agencies, and a broad range of stakeholders. The BDCP identifies conservation strategies, water flow, and habitat restoration actions in California's Sacramento-San Joaquin Delta. The goal of the BDCP is to provide for both species/habitat protection and improved reliability of water supplies. The administrative draft BDCP documents are available. The Public Draft BDCP and Public Draft Environmental Impact Report / Environmental Impact Statement (EIR/EIS) was released for formal public review and comment in December 2013. The comment period began on December 13, 2013 and concluded on July 29, 2014. On August 27, 2014, DWR and the other state and federal agencies leading the BDCP announced that they will publish a partially Recirculated Draft BDCP, EIR/EIS, and Implementing Agreement (IA) in early 2015. The public will also have the

opportunity to review the final documents prior to their adoption and any decisions about the proposed actions. On April 30, 2015, State and Federal agencies proposed a new sub-alternative (Alternative 4A) which would replace Alternative 4 (the proposed BDCP) as the State's proposed project. Alternative 4A reflects the state's proposal to separate conveyance facility and habitat restoration measures. These efforts are a direct reflection of public comments. Alternative 4A will be evaluated in the Recirculated Draft BDCP, EIR/EIS that will be available for public review and comment in coming months. The public will also have opportunities to review the final documents prior to their adoption. The BDCP is intended to meet the standards of the Sacramento-San Joaquin Delta Reform Act of 2009.

DWR's "State Water Project Final Delivery Reliability Report 2013," dated December 2014, indicates the delivery reliability of SWP water is approximately 58 percent, on average, over the next 20 years. The DWR report incorporated future impacts on water deliveries as a result of climate change and potential limited pumping of the SWP to protect salmon, smelt, and other species in the Sacramento-San Joaquin Delta and Central Valley areas, including operational restrictions of the biological opinions issued by the U.S. Fish and Wildlife Service (USFWS) in December 2008 and the National Marine Fisheries Service (NMFS) in June 2009 governing the SWP and Central Valley Project (a Federal water storage and conveyance facility) operations. Subsequently, a U.S. District Court Judge remanded the biological opinions to the USFWS and NMFS for further review and analysis. The long term impact of these issues cannot be fully quantified at this time. DWR plans to develop additional water supply facilities in order for the SWP to deliver contracted water beyond historical delivery quantities.

7.2 RELIABILITY BY TYPE OF YEAR

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.

Information regarding the reliability of Upper District's supplies is based on the historical precipitation data in the vicinity of Upper District's service area. As indicated in Section 3.3, the historical average rainfall in the vicinity of Upper District's service area is about 17.20 inches. Fiscal year 2005-06 represents an average or normal water year for Upper District in which the total amount of rainfall was about 16.8 inches. A single dry year for Upper District was represented in fiscal year 2013-14 in which the total amount of rainfall was about 6.3 inches. A multiple dry year period for Upper District is represented from fiscal year 2011-12 to fiscal year 2013-14, where the total amount of rainfall was about 10.9 inches, 8.0 inches, and 6.3 inches, respectively. A tabulation of historical annual rainfall is provided in Appendix E. Table 7-1 summarizes these "base years" for average, single dry, and multiple dry years and provides the total amount of imported water supplies available to Upper District during those base years. Tables 7-2, 7-3, and 7-4 show that during these base years (for average year, single dry year and multiple dry years), supplies remained stable. Upper District relies on Metropolitan for its supplies of untreated and treated imported water and CSD for recycled water; consequently, a single dry year or a multiple dry year period will not compromise Upper District's ability to provide a reliable supply of water to its customers.

7.2.1 TYPES OF YEARS

Upper District's base years for average, single dry, and multiple dry years are provided in Section 7.2 and are summarized in Table 7-1. As indicated in Section 6.1, Upper District's water supplies were sufficient in meeting Upper District's historical water demands during normal, single, and multiple dry years. A normal or average year was based on a year during the past 20 years with a total precipitation similar to the historical average precipitation in the vicinity of

Upper District's service area. Because a single dry year or a multiple dry year period will not compromise Upper District's ability to provide a reliable supply of water to its customers, a single dry year in this Plan was selected based on the third year of a multiple dry year period during the past 20 years. The multiple dry year period was based on a period of three consecutive dry years during the past 20 years.

7.2.2 AGENCIES WITH MULTIPLE WATER SOURCES

Upper District primarily obtains its water supply from surface water from Metropolitan. In addition, Upper District obtains recycled water from CSD. Both types of water supply are included in Tables 7-2, 7-3 and 7-4. As discussed in Section 7.3 and shown in Table 7-2, Table 7-3, and Table 7-4, a single dry year or a multiple dry year period will not compromise Upper District's ability to provide a reliable supply of water to its customers.

In addition, Metropolitan's 2015 UWMP has concluded that the region can provide reliable water supplies under both the single driest year and the multiple dry year hydrologies for the next 20 years. The 2015 UWMP prepared by Metropolitan, which is incorporated by reference, should be referred to for more details on the reliability of Metropolitan's imported water supplies. Also, attached in Appendix F are tables comparing Metropolitan's demand and supplies during an average year, singe dry year and multiple dry years over the next 20 years in five year increments. The tables in Appendix F show that Metropolitan can meet its demands during average, single dry and multiple dry years.

7.3 SUPPLY AND DEMAND ASSESSMENT

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.

As previously discussed in Chapter 6, Upper District's sub-agencies rely on water supply from: 1) Metropolitan imported water supply; and 2) Main Basin groundwater. Upper District provides treated imported water for drinking water and provides untreated imported water for groundwater replenishment. The following sections will discuss the reliability of imported water supply from Metropolitan and groundwater from the Main Basin.

7.3.1 IMPORTED WATER FROM METROPOLITAN

Upper District is a wholesale agency that supplies treated imported water from Metropolitan to its sub-agencies for direct use and supplies untreated imported water for groundwater replenishment. Table 7-2 compares Upper District's demand and supply on treated and untreated imported water from Metropolitan during a normal year for the next 20 years. Table 7-2 shows that Upper District will be able to provide both treated imported water for direct deliveries and untreated imported water for Replacement Water for the next 20 years during a normal year.

It is assumed the WSAP is implemented when Metropolitan has restricted water supply during single dry and multiple dry years. As discussed in Section 6.9.1.2, the WSAP allocation is

based on local demand from the Main Basin, therefore, the WSAP allocation can be estimated for the next 20 years based on reduced capita water use from SB X7-7 previously discussed. Tables 7-3 and 7-4 compares Upper District's demand and supply on imported water from Metropolitan during single dry and multiple dry years. As shown in Tables 7-3 and 7-4, Upper District will be able to provide both treated imported water for direct deliveries and untreated imported water for Replacement Water within its WSAP allocation for the next 20 years during single dry and multiple dry years.

In addition, Metropolitan's 2015 UWMP has concluded that the region can provide reliable water supplies under both the single driest year and the multiple dry year hydrologies for the next 20 years. The 2015 UWMP prepared by Metropolitan, which is incorporated by reference, should be referred to for more details on the reliability of Metropolitan's imported water supplies. Also, attached in Appendix F are tables comparing Metropolitan's demand and supplies during an average year, singe dry year and multiple dry years over the next 20 years in five year increments. The tables in Appendix F show that Metropolitan can meet its demands during average, single dry and multiple dry years.

7.3.2 GROUNDWATER FROM THE MAIN BASIN

Upper District's sub-agencies produce water from the Main Basin. The amount of basin replenishment affects the elevation of the Key Well, which represents changes in the groundwater basin. As shown on Figure 5, the Main Basin historically goes through phases of drafting, which are followed by filling. As noted in Section 6.2, the Main Basin is a well-managed groundwater basin and can ensure long-term reliability of water supply. Additional information on the reliability of the groundwater basin and the elevation of the Key Well is discussed in Section 6.2.

7.4 REGIONAL SUPPLY RELIABILITY

Section 10620

(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.

This Plan describes the management tools and options used to maximize local resources and minimize the need to import water. In particular, Section 6.2 discusses the management of the groundwater basin, Chapter 9 discusses the Demand Management Measures (DMMs) implemented by Upper District, Section 6.8 describes future water supply projects within Upper District's service area and Section 6.5 discusses recycled water use and the potential plans to serve additional sub-agencies within Upper District's service area. As a wholesale water agency, Upper District delivers imported treated water to its sub-agencies for direct use and untreated imported water from groundwater replenishment and is committed to assisting its sub-agencies to maximize their local resources. As discussed in Chapter 9, Upper District participates in wholesale agency programs, which provide financial incentives for water conservation, technical support through workshops, and available staff for conservation projects. As discussed in Section 6.5, Upper District's direct non-potable use recycled water program is part of Upper District's effort to reduce reliance on imported water supplies, provide an economic benefit as well as enhance local water supply reliability.

8.0 WATER SHORTAGE CONTINGENCY PLAN

Section 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.

On October 21, 2014, Upper District's Board passed, approved, and adopted Resolution No. 10-14-543 to declare a water emergency in concurrence with Governor Brown's declared state of an emergency due to the current severe drought. The resolution is provided in Appendix M. The resolution, in part, resolved that Upper District would adopt water conservation actions as mandated by the State Water Resources Control Board and work with local water retailers to help them implement water conservation actions.

The following sections provide supplemental information regarding Upper District's future water supply during an unexpected problem or shortage and outlines the management structure proposed to meet the water supply requirements during an unforeseen event. Both the programs and projects described below, and in Chapter 6, collectively help manage Upper District's water supply and may be undertaken to help meet water supply requirements.

Upper District has cooperatively participated in several programs that serve to manage existing water supplies, as described below. These programs have been created to address water supply deficiencies that may arise due to conditions such as drought, failure of water transmission facilities as a result of an earthquake or regional power outage, and contamination of the underlying groundwater basin.

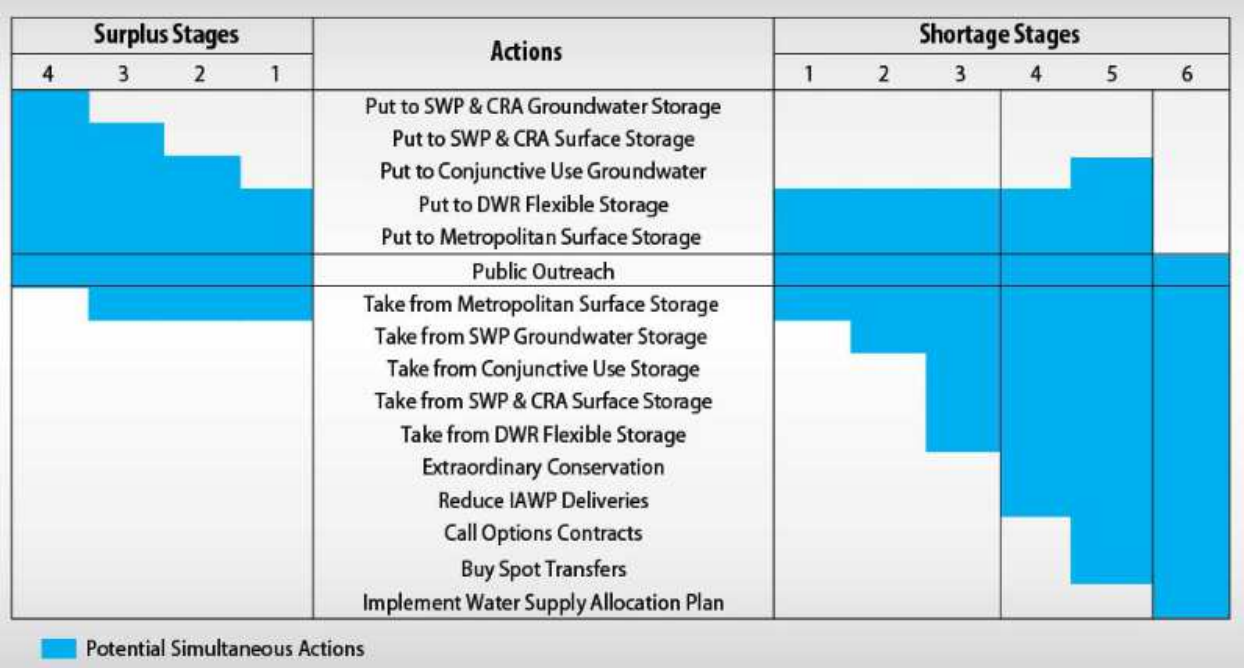
8.1 STAGES OF ACTION

Section 10632(a)

(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 which are applicable to each stage.

Upper District is a member agency of Metropolitan and as such relies on Metropolitan for all its imported water supplies. According to Metropolitan's draft 2015 UWMP, Metropolitan's supply is considered to be in surplus as long as net annual deliveries are made to the water storage programs. Metropolitan's supply is considered to be in a shortage condition when Metropolitan must withdraw water from storage to meet demands. Metropolitan has developed a Water Surplus and Drought Management (WSDM) Plan which is discussed further in the following section and is included in Section 2.4 of Metropolitan's 2015 UWMP, which is incorporated by reference.

The WSDM Plan was adopted in April 1999 as a management tool for planning during wet and dry years. Upper District participated in Metropolitan's WSDM Plan by jointly participating in the development of the plan through various workshops held by Metropolitan. The WSDM Plan addresses regional water management strategies. The WSDM Plan has specific management actions for six specific water shortage stages and four surplus situations. Shortages can be classified as "shortage", "severe shortage", or "extreme shortage". The following graphic provides a summary of Metropolitan's water shortage and water surplus stages.



Source: The Metropolitan Water District of Southern California 2015 Urban Water Management Plan. Draft February 2016.

During a Shortage Stage 6 of the WSDM Plan, Metropolitan will implement the WSAP, discussed in Section 6.1. Depending on Metropolitan's available supply, Metropolitan can establish a specific WSAP shortage level. The shortage level causes a regional reduction and calculates an allocation for each of its member agency. Additional information about Metropolitan's WSAP is provided in Metropolitan's 2015 UWMP. The following is a summary of Metropolitan's water shortage levels:

Level 1 – Regional Percent Reduction of 5%

Level 2 – Regional Percent Reduction of 10%

Level 3 – Regional Percent Reduction of 15%

Level 4 – Regional Percent Reduction of 20%

Level 5 – Regional Percent Reduction of 25%

Level 6 – Regional Percent Reduction of 30%

Level 7 – Regional Percent Reduction of 35%

Level 8 – Regional Percent Reduction of 40%

Level 9 – Regional Percent Reduction of 45%

Level 10 – Regional Percent Reduction of 50%

These shortage level stages are shown in Table 8-1.

8.2 PROHIBITIONS ON END USES

Section 10632(a)

(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.

As a wholesale agency, Upper District is not required by DWR to complete Section 8.2.

8.2.1 LANDSCAPE IRRIGATION

As a wholesale agency, Upper District is not required by DWR to complete Section 8.2.1.

8.2.2 COMMERCIAL, INDUSTRIAL, AND INSTITUTIONAL (CII)

As a wholesale agency, Upper District is not required by DWR to complete Section 8.2.2.

8.2.3 WATER FEATURES AND SWIMMING POOLS

As a wholesale agency, Upper District is not required by DWR to complete Section 8.2.3.

8.2.4 DEFINING WATER FEATURES

Section 10632

(b) Commencing with the urban water management plan update due July 1, 2016, 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.

Health and Safety Code Section 115921

*As used in this article the following terms have the following meanings: **(a)** "Swimming pool" or "pool" means any structure intended for swimming or recreational bathing that contains water over 18 inches deep. "Swimming pool" includes in-ground and aboveground structures and includes, but is not limited to, hot tubs, spas, portable spas, and non-portable wading pools.*

As a wholesale agency, Upper District is not required by DWR to complete Section 8.2.4.

8.2.5 OTHER

As a wholesale agency, Upper District is not required by DWR to complete Section 8.2.5.

8.3 PENALTIES, CHARGES, OTHER ENFORCEMENT OF PROHIBITIONS

Section 10632(a)

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

As a wholesale agency, Upper District is not required by DWR to complete Section 8.3. However, Upper District passed Resolution 6-90-266, included as Appendix N, on June 6, 1990 to reduce demands within Upper District's service area. Upper District Resolution 6-90-266 stated, "There is a need to reduce total demands on all water supply entities within the Upper San Gabriel Valley Municipal Water District service area by 10 percent in 1990 as compared to 1989, to reduce the potential for shortages for this year and even more severe shortages next year". This Resolution was passed to reduce demands to mitigate the effects of the 1990 California drought. Upper District continues to urge its customer's to conserve water and promotes water conservation education through its educational programs and public awareness. However, as a wholesale water agency, Upper District cannot implement or enforce prohibitions, penalties or charges at the retail level.

8.4 CONSUMPTION REDUCTION METHODS

Section 10632(a)

(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.

As stated in Section 8.1, Metropolitan has established the WSAP and the WSDM Plan to establish water shortage levels and associated action plans with each shortage. The WSAP established 10 shortage levels, which can reduce its regional supply by up to 50 percent at Shortage Level 10. Because Upper District is a member agency of Metropolitan, the WSAP is also applied to Upper District.

8.4.1 CATEGORIES OF CONSUMPTION REDUCTION METHODS

As discussed in Section 8.4, there are 10 shortage stages in the WSAP that correspond to different regional supply reductions. Metropolitan has currently implemented a Shortage Level 3, representing a region wide reduction is 15 percent and therefore, Upper District's allocation has been reduced. Upper District's sub-agencies may encourage and implement additional consumption reduction methods to reduce demands.

8.5 DETERMINING WATER SHORTAGE REDUCTIONS

Section 10632(a)

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

Upper District has the ability to monitor water use within its boundaries. Upper District keeps track of local water on a quarterly basis and imported water use on a monthly basis. As discussed in Chapter 3.1, Upper District does not own any water facilities or meters but receives the data from its sub-agencies or from Metropolitan. Such data are then used to determine monthly, quarterly or annual fluctuations in water use. Upper District can compare total water use from one month, one quarter or one year to the next to determine actual reductions in water

use. Because the Main Basin is so reliant upon groundwater supplies, the determination of actual reductions in water use include groundwater production.

8.6 REVENUE AND EXPENDITURE REPORTS

Section 10632(a)

(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.

Upper District generates revenue from several sources including property taxes, a ready-to-serve charge, interest on accumulated funds, and surcharges on water sales. In the event of a water shortage, imported water sales may be reduced, which may impact: 1) revenue generated from surcharges on water sales; and 2) accumulated funds.

In 1995, Upper District passed Resolution 4-95-333, which was amended in 2009 by Resolution 2-09-465, to levy a surcharge on all water sales (see Appendix O). Through these Resolutions, Upper District initiated a program to levy a surcharge on all water sales to generate additional revenue. This program has continued and is still maintained today.

Revenue from water sales for Upper District is based on the surcharge for 1) treated direct use and 2) untreated water for groundwater replenishment. The calendar year 2015 rate for full-service, treated water was $1,014, of which about $91 was a surcharge. The calendar year 2015 rate for full-service, untreated water was $673, of which $91 was a surcharge.

In the event of a shortage of water supply, direct deliveries of treated water could be reduced by 50 percent. During the fiscal year 2014-15, Upper District's treated direct use sales

were about 9,000 acre-feet. If direct deliveries were reduced by 50 percent, Upper District's treated direct use requirement would decrease to about 4,500 acre-feet and it would result in a revenue reduction. Based on the current surcharge rate of $91 per acre-foot for direct deliveries, there would be a loss of revenue of about $410,000.

Upper District would experience a loss of revenue if there was a shortage of water supply; however, Upper District's projected demand for direct deliveries for the next 20 years shows a decreasing trend. Future demands on Metropolitan for direct deliveries are assumed to minimal. Upper District will rely more on untreated imported water for groundwater replenishment and will decrease its demands for treated imported water, as shown in Table 6-9.

In the event of a shortage of water supply, Replenishment Service water sales could be reduced by up to 50 percent. For planning purposes, Upper District has assumed its untreated imported water for groundwater replenishment sales will be about 30,000 AFY. If sales of untreated imported water for groundwater replenishment were reduced by 50 percent, it would result in a revenue reduction. Based on the current surcharge rate of $91 per acre-foot for full-service, untreated water, there would be a loss of revenue of about $1,365,000 for that year. However, the full-service, untreated water sales for the groundwater replenishment program continuously has periods of filling and drafting and the revenue from this program will eventually be received.

8.6.1 DROUGHT RATE STRUCTURE AND SURCHARGES

As a wholesale agency, Upper District is not required by DWR to complete Section 8.6.1.

8.6.2 USES OF FINANCIAL RESERVES

Upper District has reserve funds set aside in case of a decrease in water sales. In the event of a significant decrease in water sales, it may be necessary for Upper District to utilize these reserve funds to cover fixed operating expenses until normal operating revenues could be reestablished.

8.6.3 OTHER MEASURES

During a significant decrease in water sales, during which Upper District could not cover fixed operating expenses with reserve funds, it could be necessary for Upper District to postpone or otherwise impact established water supply project schedules.

8.7 RESOLUTION OR ORDINANCE

Section 10632(a)

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

As discussed in Section 8.0, Upper District's Board passed, approved, and adopted Resolution No. 10-14-543 to declare a water emergency in concurrence with Governor Brown's declared state of an emergency due to the current severe drought. The resolution is provided in Appendix M.

8.8 CATASTROPHIC SUPPLY INTERRUPTION

Section 10632(a)

(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.

The following sections discuss the actions to be taken for treated imported water supplies, untreated imported water supplies and recycled water supplies.

Treated Imported Water

As noted in Chapter 3, Upper District does not own any physical water facilities. All water facilities for treated imported water belong to Metropolitan and Upper District's sub-agencies. Appropriately, Metropolitan and the sub-agencies have developed actions to be taken during a catastrophic interruption and are discussed in Metropolitan's 2015 UWMP and in the sub-agencies' draft 2015 UWMPs.

In the event of a power outage or earthquake and treated imported water has ceased, Upper District's sub-agencies can produce the needed water from the Main Basin and from the Raymond Basin until the appropriate repairs have been made to the sub-agencies' connections. Chapter 6.2.2 discusses the management and reliability of the Main Basin, which Upper District's sub-agencies can rely on for their primary water supply in case of a catastrophic interruption.

Untreated Imported Water

As noted in Chapter 3, Upper District does not own any physical water facilities. In addition, Upper District does not own the pipelines and connection for untreated imported water. The pipeline and connection to USG-3 belong to Metropolitan. Appropriately, Metropolitan has developed actions to be taken during a catastrophic interruption and are discussed in Metropolitan's 2015 UWMP.

In the event of a catastrophic event and untreated imported water from USG-3 has ceased, the Main Basin can endure an event until appropriate repairs have been made to USG-3. Chapter 6.2.2 discusses the management and reliability of the Main Basin.

Recycled Water

The agencies that now rely on recycled water for irrigation historically produced groundwater. Therefore, in the event of a catastrophic event and recycled water has been interrupted, those agencies can produce the needed water from the Main Basin for irrigation purposes until the recycled water facility has been repaired. Chapter 6.2.2 discusses the management and reliability of the Main Basin, which Upper District's sub-agencies can rely on for their primary water supply in case of a catastrophic interruption.

8.9 MINIMUM SUPPLY NEXT THREE YEARS

Section 10632(a)

(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.

As previously discussed, Metropolitan established a WSAP due to critically dry conditions. Upper District is experiencing a multi-year dry year sequence from 2011-12 through 2014-15 and Metropolitan has established a WSAP Level 3 beginning fiscal year 2015-16. The WSAP calculates a reduced Allocation to each member agency. The reduced Allocation is also based on Upper District's sub-agencies' production. If it is assumed Metropolitan will establish a Shortage Level 3 and production for its sub-agencies is about average, then the estimated Allocation for Upper District is about 27,900 acre-feet. Therefore, it is assumed that Upper District's minimum water supply for the next three years from Metropolitan is about 27,900 acre-feet per year.

The minimum supply for the next three years in shown in Table 8-4.

9.0 DEMAND MANAGEMENT MEASURES

Upper District is a member of the California Urban Water Conservation Council (CUWCC). As a member of the CUWCC, Upper District signed a Memorandum of Understanding (MOU) pledging to implement "Best Management Measures", which are cost-effective conservation programs. CUWCC amended its MOU in December 2008. The 14 BMPs have now been organized into five categories. Two categories are Utility Operations and Education, which are referred to as "Foundational BMPs." The other three categories are referred to as "Programmatic BMPs" and are Residential, Commercial/Industrial/Institutional, and Landscape.

For purposes in this Plan the Best Management Practices (BMPs) are equivalent to Demand Management Measures (DMM). According to the UWMP Act, water suppliers that are members of the CUWCC may submit their annual reports to satisfy the requirements of subdivision (f) and (g). Upper District's annual reports for 2010 through 2014, along with CUWCC's coverage reports, are included in this Plan as Appendices P through T. A brief description of Upper District's conservation measures and DMMs follow in addition to the new BMP category referred under the CUWCC MOU.

9.1 DEMAND MANAGEMENT MEASURES FOR WHOLESALE AGENCIES

Section 10631

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

(1)(B) The narrative pursuant to this paragraph shall include descriptions of the following water demand management measures:

(ii) Metering.

(iv) Public education and outreach.

(vi) Water conservation program coordination and staffing support.

(vii) Other demand management measures that have a significant impact on water use as measured in gallons per capita per day, including innovative measures, if implemented.

(2) For an urban wholesale water supplier, as defined in Section 10608.12, (provide) a narrative description of the items in clauses (ii), (iv), (vi), and (vii) of subparagraph (B) of paragraph (1), and a narrative description of its distribution system asset management and wholesale supplier assistance programs.

9.1.1 METERING

The CUWCC refers to this BMP as "BMP 1.3 Metering with Commodity." Upper District, in coordination with Metropolitan, meters all water sales for direct use, groundwater replenishment, Make-up Water, and separately, for recycled water.

9.1.2 PUBLIC EDUCATION AND OUTREACH

The CUWCC refers to this BMP as "BMP 2.1 Public Outreach." Upper District promotes water conservation through its many public information programs. Upper District offers conservation brochures and posters, activity booklets, public outreach displays, oral presentations, and workshops to inform the public of conservation efforts. 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. Additional information regarding Upper District's public information programs is located in each of the CUWCC annual reports in Appendices P through T and also can be found on Upper District's website (http://upperdistrict.org). In addition, Upper District offers a link to a watering calculator on its website to estimate the right amount of water to use for landscaping and offers friendly gardening tips about water efficient gardening.

The CUWCC also refers to this BMP as "BMP 2.2 School Education Programs." 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. More information about these programs is located in each of the CUWCC annual reports (Appendices P through T). Upper District also participates in additional educational school programs through Metropolitan, which has extensive educational programs that includes schools within Upper District's boundaries. Metropolitan's educational programs meet state education framework requirements. A list of Metropolitan's school education programs and water conservation savings is included in Metropolitan's draft 2015 UWMP, which is incorporated by reference.

9.1.3 WATER CONSERVATION PROGRAM COORDINATION AND STAFFING SUPPORT

Upper District employs a Conservation Coordinator to promote water conservation issues and programs. The Conservation Coordinator position was created in September 1992 as a full time position. Over the years, Upper District's Conservation Coordinator has participated in various CUWCC committees which have included the CII committee, residential committee, membership committee, and educational committee, as well as assisting in authoring the first edition of the plumbing handbook published by the CUWCC. Upper District's Conservation Coordinator currently actively participates in the membership committee.

9.1.4 OTHER DEMAND MANAGEMENT MEASURES

There are no additional DMMs other than the ones discussed under Section 9.1.

9.1.5 ASSET MANAGEMENT

Upper District does not have its own distribution system, and relies on Metropolitan's distribution system for delivery of treated and untreated imported water to Upper District's sub-agencies. Therefore, Upper District is not required to fill out this information. However, information on Metropolitan's Asset Management can be found in Metropolitan's draft 2015 UWMP, which is incorporated by reference.

9.1.6 WHOLESALE SUPPLIER ASSISTANCE PROGRAMS

The CUWCC refers to this BMP as "BMP 1.1 Wholesale Agency Assistance Program." As a wholesaler, Upper District participates in wholesale agency programs, which provide financial incentives for water conservation, technical support through workshops, and available staff for conservation projects. Upper District provides financial incentives for water conservation through its many retrofit and rebate programs that replace high water-use fixtures with efficient water-use fixtures. Upper District provides technical support by conducting workshops for various water conservation programs. Upper District also provides support through available staff assigned to direct conservation measures. Regional programs are also in place that local agencies can participate in to encourage water conservation. Information regarding Upper District's wholesale agency programs is located in both each of the CUWCC annual reports (Appendices P through T).

Regional Program Implementation

When agreeable and beneficial, Upper District develops, secures funding for, implements, and manages regional BMP programs on behalf of its retail water agencies. This approach capitalizes on cost the economies of scale, ensures consistent programs guidelines, and maintains a consistent regional water use efficiency message to the public. Upper District implements a variety of regional programs including, but not limited to, large landscape surveys and retrofits,

public information outreach, school education program, public workshops, watershed restoration efforts, and model conservation ordinance assistance.

Local Program Assistance

Upper District also provides assistance for its sub-agencies to develop and implement local programs. Assistance may include: program design, targeting customer classes, acquiring funding from a variety of sources, program implementation, marketing, reporting, and program evaluation. Upper District provides assistance with a variety of local programs including, but not limited to, staff training workshops, public information, school education, and model conservation ordinances.

9.2 DEMAND MANAGEMENT MEASURES FOR RETAIL AGENCIES

Section 10631(f)

(A) The narrative shall describe the water demand management measure that the supplier plans to implement to achieve its water use targets pursuant to Section 10608.20.

(B) The narrative pursuant to this paragraph shall include descriptions of the following water demand management measures:
(i) Water waste prevention ordinances.
(ii) Metering.
(iii) Conservation pricing.
(iv) Public education and outreach.
(v) Programs to assess and manage distribution system real loss.
(vi) Water conservation program coordination and staffing support.
(vii) Other demand management measures that have a significant impact on water use as measured in gallons per capita per day, including innovative measures, if implemented.

As a wholesale agency, Upper District is not required by DWR to complete Section 9.2.

9.3 IMPLEMENTATION OVER THE PAST FIVE YEARS

CWC 10631

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

(1)(A)… a narrative description that addresses the nature and extent of each water demand management measure implemented over the past five years.

Upper District's annual reports for 2010 through 2014, along with CUWCC's coverage reports, are included in this Plan as Appendices P through T. The annual reports provide a more detail account of Upper District's implementation over the past five years including the monetary amounts for each program, details of the public outreach programs including the total number of ways Upper District reached the public, and information on the school education programs.

9.4 PLANNED IMPLEMENTATION TO ACHIEVE WATER USE TARGETS

CWC 10631

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

(1)(A) …The narrative shall describe the water demand management measures that the supplier plans to implement to achieve its water use targets pursuant to Section 10608.20.

As a wholesale agency, Upper District is not required by DWR to complete Section 9.4.

9.5 MEMBERS OF THE CALIFORNIA URBAN WATER CONSERVATION COUNCIL

CWC 10631

(i) 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 subdivision (f) 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.

Upper District is a member of CUWCC. For this Plan, Upper District provided both: describing the DMMs in this Plan and a copy of the CUWCC BMP Report. Upper District's annual reports for 2010 through 2014, along with CUWCC's coverage reports, are included in this Plan as Appendices P through T. The annual reports found in Appendices P though T show that Upper District is in full compliance with the CUWCC MOU.

10.0 PLAN ADOPTION, SUBMITTAL, AND IMPLEMENTATION

10.1 INCLUSION OF ALL 2015 DATA

The data provided in Upper District's 2015 Plan is provided on a fiscal year basis through June 30, 2015 (as discussed in Section 2.4.2).

10.2 NOTICE OF PUBLIC HEARING

10.2.1 NOTICE TO CITIES AND COUNTIES

CWC 10621.

(b) Every urban water supplier required to prepare a plan shall… at least 60 days prior to the public hearing on the plan … notify any city or county within which the supplier provides waters supplies that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan.

CWC 10642.

…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…

As discussed in Section 2.5.2. Upper District coordinated the preparation of the Urban Water Management Plan with water management agencies, relevant public agencies and other water suppliers. These interested parties include the following:

- Amarillo Mutual Water Company
- California American Water Company (Duarte System and San Marino)
- California Domestic Water Company
- City of Arcadia
- City of Azusa Light & Water
- City of Baldwin Park
- City of Bradbury
- City of Covina
- City of Duarte
- City of El Monte
- City of Glendora
- City of Industry
- City of Irwindale
- City of La Puente
- City of Monrovia
- City of Rosemead
- City of San Gabriel
- City of South El Monte
- City of South Pasadena
- City of Temple City
- City of West Covina
- City of Whittier
- County of Los Angeles
- Covina Irrigating Company
- Del Rio Mutual Water Company
- East Pasadena Water Co., Ltd.
- Golden State Water Company (San Gabriel District)
- Hemlock Mutual Water Company

- La Puente Valley County Water District and Industry Public Works
- Main San Gabriel Basin Watermaster
- Rurban Homes Mutual Water Company
- San Gabriel County Water District
- San Gabriel River Watermaster
- San Gabriel Valley Water Company
- Sterling Mutual Water Company
- Suburban Water Systems
- Sunny Slope Water Company
- Valencia Heights Water
- Valley County Water District
- Valley View Mutual Water Company

Upper District notified these agencies at least sixty (60) days prior to the public hearing of the preparation of the 2015 Plan and invited them to participate in the development of the Plan. A copy of the notification letter sent to these agencies is provided in Appendix D.

Additionally, a notice of the public hearing was sent to the above listed interested parties. Copies of the notice of the public hearing are provided in Appendix U. Table 10-1 summarizes the agencies which were provided notifications by the City.

10.2.2 NOTICE TO THE PUBLIC

CWC 10642.

…Prior to adopting a plan, the urban water supplier shall make the plan available for public inspection…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…

Government Code 6066.

Publication of notice pursuant to this section shall be once a week for two successive weeks. Two publications in a newspaper published once a week or oftener, with at least five days intervening between the respective publication dates not counting such publication dates, are sufficient. The period of notice commences upon the first day of publication and terminates at the end of the fourteenth day, including therein the first day.

Upper District encouraged the active involvement of the population within its service area prior to and during the preparation of the Plan. Pursuant to Section 6066 of the Government Code, Upper District published a notice of public hearing in the newspaper on May 24, 2016 and May 31, 2016. To ensure that the plan was available for review, Upper District made a copy of the 2015 draft Plan available at its office and made a copy available for review on its website.

10.3 PUBLIC HEARING AND ADOPTION

CWC 10642.

…Prior to adopting a plan, the urban water supplier shall hold a public hearing thereon.

CWC 10608.26.

(a) In complying with this part, an urban retail water supplier shall conduct at least one public hearing to accomplish all of the following:

(1) Allow community input regarding the urban retail water supplier's implementation plan for complying with this part.

(2) Consider the economic impacts of the urban retail water supplier's implementation plan for complying with this part.

(3) Adopt a method, pursuant to subdivision (b) of Section 10608.20 for determining its urban water use target.

Prior to adopting the 2015 Plan, Upper District held a public hearing on June 7, 2016 which included input from the community regarding Upper District's draft 2015 Plan. As part of the public hearing, Upper District provided information regarding the economic impacts of meeting water use targets, including measures described in Section 8.6.

Upper District is committed to the implementation of the 2015 Plan in accordance with Section 10643 of the Act, including the water demand management measures (DMMs) (see Chapter 6). Upper District continues to be committed to the concept of good water management practice and intends to expand its water conservation program as budgets and staffing allow. Upper District's water conservation program will periodically be re-evaluated and modified to institute additional methods or techniques as the need arises. Upper District reviewed implementation of its 2010 Plan and incorporated changes to create the 2015 Plan.

10.3.1 ADOPTION

CWC 10642.

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

Following the public hearing, Upper District adopted the draft Plan as its 2015 Plan. A copy of the resolution adopting the 2015 Plan is provided in Appendix V.

10.4 PLAN SUBMITTAL

CWC 10621.

(d) An urban water supplier shall update and submit its 2015 plan to the department by July 1, 2016.

CWC 10644.

(a)(1) 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.

CWC 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.

10.4.1 SUBMITTING A UWMP TO DWR

Within 30 days of adoption of the 2015 Plan by Upper District's board and by July 1, 2016, Upper District will submit the adopted 2015 Plan to DWR. The 2015 Plan will be submitted through DWR's "Water Use Efficiency (WUE) Data Online Submittal Tool" website.

DWR previously provided a checklist to make determine if an Urban Water Management Plan has addressed the requirements of the California Water Code. Upper District has completed the DWR checklist by indicating where the required CWC elements can be found within Upper District's 2015 Plan (See Appendix C).

10.4.2 ELECTRONIC DATA SUBMITTAL

Within 30 days of adoption of the 2015 Plan, Upper District will also submit all data tables associated with the 2015 Plan through DWR's "Water Use Efficiency (WUE) Data Online Submittal Tool" website.

10.4.3 SUBMITTING A UWMP TO THE CALIFORNIA STATE LIBRARY

Within 30 days of adoption of the 2015 Plan by Upper District's Board, a copy (CD or hardcopy) of the 2015 Plan will be submitted to the State of California Library. A copy of the letter to the State Library will be maintained in the City's file. The 2015 Plan will be mailed to the following address if sent by regular mail:

California State Library
Government Publications Section
P.O. Box 942837
Sacramento, CA 94237-0001
Attention: Coordinator, Urban Water Management Plans

The 2015 Plan will be mailed to the following address if sent by courier or overnight carrier:

California State Library
Government Publications Section
914 Capitol Mall
Sacramento, CA 95814

10.4.4 SUBMITTING A UWMP TO CITIES AND COUNTIES

Within 30 days of adoption of the 2015 Plan by the Upper District Board, a copy of the 2015 Plan will be submitted to the County of Los Angeles Registrar / Recorders office. A copy of the letter to the County of Los Angeles will be maintained in Upper District's file.

10.5 PUBLIC AVAILABILITY

CWC 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.

Within 30 days after submittal of the 2015 Plan to DWR, Upper District will make the 2015 Plan available on Upper District's website and at its office.

10.6 AMENDING AN ADOPTED UWMP

CWC 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).

CWC 10644.

(a)(1) 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.

If Upper District amends the adopted 2015 Plan, the amended plan will undergo adoption by Upper District's governing board. Within 30 days of adoption, the amendment or revised Plan will then be submitted to DWR, the State of California Library and the County of Los Angeles Registrar / Recorders office.

TABLES

Table 2-2: Plan Identification (Select One)		
☑	Individual UWMP	
☐	Regional UWMP (RUWMP) *(checking this triggers the next line to appear)*	
	Select One:	
	☐	RUWMP includes a Regional Alliance
	☐	RUWMP does not include a Regional Alliance
NOTES:		

Table 2-3: Agency Identification	
Type of Agency (select one or both)	
☑	Agency is a wholesaler
☐	Agency is a retailer
Fiscal or Calendar Year (select one)	
☐	UWMP Tables Are in Calendar Years
☑	UWMP Tables Are in Fiscal Years
If Using Fiscal Years Provide Month and Day that the Fiscal Year Begins (dd/mm)	
01/07	
Units of Measure Used in UWMP (select from Drop down)	
Unit	AF
NOTES: Data provided on a fiscal basis through June 30, 2015.	

Table 2-4 Wholesale: Water Supplier Information Exchange (select one)	
☑	Supplier has informed more than 10 other water suppliers of water supplies available in accordance with CWC 10631. Completion of the table below is optional. If not completed include a list of the water suppliers that were informed.
Page 2-6	**Provide page number for location of the list.**
☐	Supplier has informed 10 or fewer other water suppliers of water supplies available in accordance with CWC 10631. **Complete the table below.**
Water Supplier Name *(Add additional rows as needed)*	
NOTES:	

Table 3-1 Wholesale: Population - Current and Projected						
Population Served	2015	2020	2025	2030	2035	2040*(opt)*
	865,598	878,904	895,073	926,489	943,758	961,998
NOTES:						

Table 4-1 Wholesale: Demands for Potable and Raw Water - Actual			
Use Type *(Add additional rows as needed)*	2015 Actual		
Use Drop down list *May select each use multiple times* *These are the only use types that will be recognized by the WUE data online submittal tool*	Additional Description *(as needed)*	Level of Treatment When Delivered *Drop down list*	Volume
Sales to other agencies	USG-3, CenB-48, USG-SGP	Raw Water	38,841
Sales to other agencies	USG-1, USG-2, USG-4, USG-5, USG-6, USG-7, USG-8, USG-9	Drinking Water	9,069
		TOTAL	47,910
NOTES:			

Table 4-2 Wholesale: Demands for Potable and Raw Water - Projected						
Use Type *(Add additional rows as needed)*	Additional Description *(as needed)*	Projected Water Use *Report To the Extent that Records are Available*				
Drop down list *May select each use multiple times These are the only Use Types that will be recognized by the WUEdata online submittal tool.*		2020	2025	2030	2035	2040 *(opt)*
Sales to other agencies	Raw Water (Replenishment)	32,000	32,000	32,000	32,000	32,000
Sales to other agencies	Drinking Water	11,436	10,351	9,441	9,288	8,903
	TOTAL	43,436	42,351	41,441	41,288	40,903
NOTES:						

Table 4-3 Wholesale: Total Water Demands						
	2015	2020	2025	2030	2035	2040*(opt)*
Potable and Raw Water *From Tables 4-1 and 4-2*	47,910	43,436	42,351	41,441	41,288	40,903
Recycled Water Demand *From Table 6-4*	2,589	13,385	13,735	13,820	13,940	14,180
TOTAL WATER DEMAND	50,499	56,821	56,086	55,261	55,228	55,083
NOTES:						

Table 4-4 Wholesale: 12 Month Water Loss Audit Reporting	
Reporting Period Start Date (mm/yyyy)	Volume of Water Loss
07/2015	0
NOTES:	

Table 6-1 Wholesale: Groundwater Volume Pumped						
☑	Supplier does not pump groundwater. The supplier will not complete the table below.					
Groundwater Type ***Drop Down List*** *May use each category multiple times*	Location or Basin Name	2011	2012	2013	2014	2015
TOTAL		0	0	0	0	0
NOTES:						

Table 6-3 Wholesale: Wastewater Treatment and Discharge Within Service Area in 2015										
☑	Wholesale supplier does not provide supplemental treatment to recycled water it distributes. The supplier will not complete the table below.									
Wastewater Treatment Plant Name	Discharge Location Name or Identifier	Discharge Location Description	Wastewater Discharge ID Number *(optional)*	Method of Disposal *Drop down list*	Does This Plant Treat Wastewater Generated Outside the Service Area?	Treatment Level *Drop down list*	2015 volumes			
							Wastewater Treated	Discharged Treated Wastewater	Recycled Within Service Area	Recycled Outside of Service Area
Add additional rows as needed										
						Total	0	0	0	0
NOTES:										

Table 6-4 Wholesale: Current and Projected Retailers Provided Recycled Water Within Service Area							
☐	Recycled water is not directly treated or distributed by the supplier. The supplier will not complete the table below.						
Name of Receiving Supplier or Direct Use by Wholesaler	Level of Treatment *Drop down list*	2015	2020	2025	2030	2035	2040 *(opt)*
Add additional rows as needed							
Rose Hills Memorial Park	Tertiary	0	600	600	600	600	600
La Puente Valley Municipal Water District	Tertiary	0	130	360	360	360	360
San Gabriel Valley Water Company (South El Monte Expansion)	Tertiary	0	95	215	300	420	660
San Gabiel Valley Water Company (Phase I)	Tertiary	657	650	650	650	650	650
San Gabriel Valley Water Company (Phase IIA)	Tertiary	1,004	1,000	1,000	1,000	1,000	1,000
Golden State Water Company (Phase IIA)	Tertiary	101	100	100	100	100	100
Suburban Water Systems (Phase IIB)	Tertiary	817	800	800	800	800	800
Valencia Heights Water Company (Phase IIB)	Tertiary	9	10	10	10	10	10
Indirect Potable Reuse (IRRP)	Tertiary	0	10,000	10,000	10,000	10,000	10,000
	Total	2,589	13,385	13,735	13,820	13,940	14,180
NOTES:							

Table 6-5 Wholesale: 2010 UWMP Recycled Water Use Projection Compared to 2015 Actual		
☐	Recycled water was not used or distributed by the supplier in 2010, nor projected for use or distribution in 2015. The wholesale supplier will not complete the table below.	
Name of Receiving Supplier or Direct Use by Wholesaler	2010 Projection for 2015	2015 actual use
Add additional rows as needed		
Direct Use Recycled Water Program	3,000	2,590
Total	3,000	2,590
NOTES:		

Table 6-7 Wholesale: Expected Future Water Supply Projects or Programs						
☐	No expected future water supply projects or programs that provide a quantifiable increase to the agency's water supply. Supplier will not complete the table below.					
☑	Some or all of the supplier's future water supply projects or programs are not compatible with this table and are described in a narrative format.					
Page 6-31, 6-35	Provide page location of narrative in the UWMP					
Name of Future Projects or Programs	Joint Project with other agencies?		Description *(if needed)*	Planned Implementation Year	Planned for Use in Year Type *Drop Down list User may select more than one.*	Expected Increase in Water Supply to Agency
	Drop Down Menu	*If Yes, Agency Name*				
Add additional rows as needed						
South El Monte Recycled Water Project	*Yes*	San Gabriel Valley Water Company	Recycled Water for Direct Use	2020	Average Year	95.00
La Puente Valley County Water District Recycled Water Project	*Yes*	La Puente Valley County Water District, City of Industry	Recycled Water for Direct Use	2020	Average Year	130.00
Rose Hills Expansion	*Yes*	Rose Hills Memorial Park	Recycled Water for Direct Use	2020	Average Year	600.00
IRRP	*Yes*	Los Angeles County Sanitation Districts, Los Angeles County Flood Control District	Recycled Water for Groundwater Replenishment	2020	Average Year	10,000.00

NOTES: The South El Monte Recycled Water Project and the La Puente Valley County Water District Recycled Water Project will be developed in multiple packages and phases in upcoming years. Package/Phase 1 of both projects is anticipated to be implemented prior to the year 2020.

Table 6-8 Wholesale: Water Supplies — Actual				
Water Supply	Additional Detail on Water Supply	2015		
Drop down list *May use each category multiple times.These are the only water supply categories that will be recognized by the WUEdata online submittal tool*		Actual Volume	Water Quality *Drop Down List*	Total Right or Safe Yield *(optional)*
Add additional rows as needed				
Surface water	Upper District receives treated imported surface water from Metropolitan	9,069	Drinking Water	
Surface water	Upper District receives untreated imported surface water from Metropolitan for groundwater replenishment.	39,841	Raw Water	
	Total	48,910		0
NOTES:				

Table 6-9 Wholesale: Water Supplies — Projected

Water Supply	Additional Detail on Water Supply	Projected Water Supply *Report To the Extent Practicable*									
		2020		2025		2030		2035		2040 *(opt)*	
Drop down list *May use each category multiple times. These are the only water supply categories that will be recognized by the WUEdata online submittal tool*		Reasonably Available Volume	Total Right or Safe Yield *(optional)*	Reasonably Available Volume	Total Right or Safe Yield *(optional)*	Reasonably Available Volume	Total Right or Safe Yield *(optional)*	Reasonably Available Volume	Total Right or Safe Yield *(optional)*	Reasonably Available Volume	Total Right or Safe Yield *(optional)*
Add additional rows as needed											
Surface water	Treated Imported Water from Metropolitan	11,436		10,351		9,441		9,288		8,903	
Surface water	Untreated Imported Water from Metropolitan for Groundwater Replenishment	42,000		42,000		42,000		42,000		42,000	
Recycled Water		18,984		19,896		20,332		20,731		21,124	
	Total	72,420	0	72,247	0	71,773	0	72,019	0	72,027	0
NOTES:											

Table 7-1 Wholesale: Basis of Water Year Data			
Year Type	Base Year	Available Supplies if Year Type Repeats Agency may provide volume only, percent only, or both	
		Volume Available	% of Average Supply
Average Year	2005-06	75,951.30	100%
Single-Dry Year	2013-14	34,779.00	46%
Multiple-Dry Years 1st Year	2011-12	25,401.10	33%
Multiple-Dry Years 2nd Year	2012-13	15,563.20	20%
Multiple-Dry Years 3rd Year	2013-14	34,779.20	46%
Multiple-Dry Years 4th Year *Optional*			
Multiple-Dry Years 5th Year *Optional*			
Multiple-Dry Years 6th Year *Optional*			
Agency may use multiple versions of Table 7-1 if different water sources have different base years and the supplier chooses to report the base years for each water source separately. If an agency uses multiple versions of Table 7-1, in the "Note" section of each table, state that multiple versions of Table 7-1 are being used and identify the particular water source that is being reported in each table.			
NOTES:			

Table 7-2 Wholesale: Normal Year Supply and Demand Comparison					
	2020	2025	2030	2035	2040 *(Opt)*
Supply totals *(autofill from Table 6-9)*	72,420	72,247	71,773	72,019	72,027
Demand totals *(autofill fm Table 4-3)*	56,821	56,086	55,261	55,228	55,083
Difference	15,599	16,161	16,512	16,791	16,944
NOTES:					

Table 7-3 Wholesale: Single Dry Year Supply and Demand Comparison					
	2020	2025	2030	2035	2040 (Opt)
Supply totals	73,121	72,933	72,440	72,683	72,675
Demand totals	63,121	62,933	62,440	62,683	62,675
Difference	10,000	10,000	10,000	10,000	10,000
NOTES:					

Table 7-4 Wholesale: Multiple Dry Years Supply and Demand Comparison						
		2020	2025	2030	2035	2040 (Opt)
First year	Supply totals	70,893	74,759	74,339	74,429	74,470
	Demand totals	60,893	64,759	64,339	64,429	64,470
	Difference	10,000	10,000	10,000	10,000	10,000
Second year	Supply totals	70,893	74,759	74,339	74,429	74,470
	Demand totals	60,893	64,759	64,339	64,429	64,470
	Difference	10,000	10,000	10,000	10,000	10,000
Third year	Supply totals	70,893	74,759	74,339	74,429	74,470
	Demand totals	60,893	64,759	64,339	64,429	64,470
	Difference	10,000	10,000	10,000	10,000	10,000
Fourth year *(optional)*	Supply totals					
	Demand totals					
	Difference	0	0	0	0	0
Fifth year *(optional)*	Supply totals					
	Demand totals					
	Difference	0	0	0	0	0
Sixth year *(optional)*	Supply totals					
	Demand totals					
	Difference	0	0	0	0	0
NOTES:						

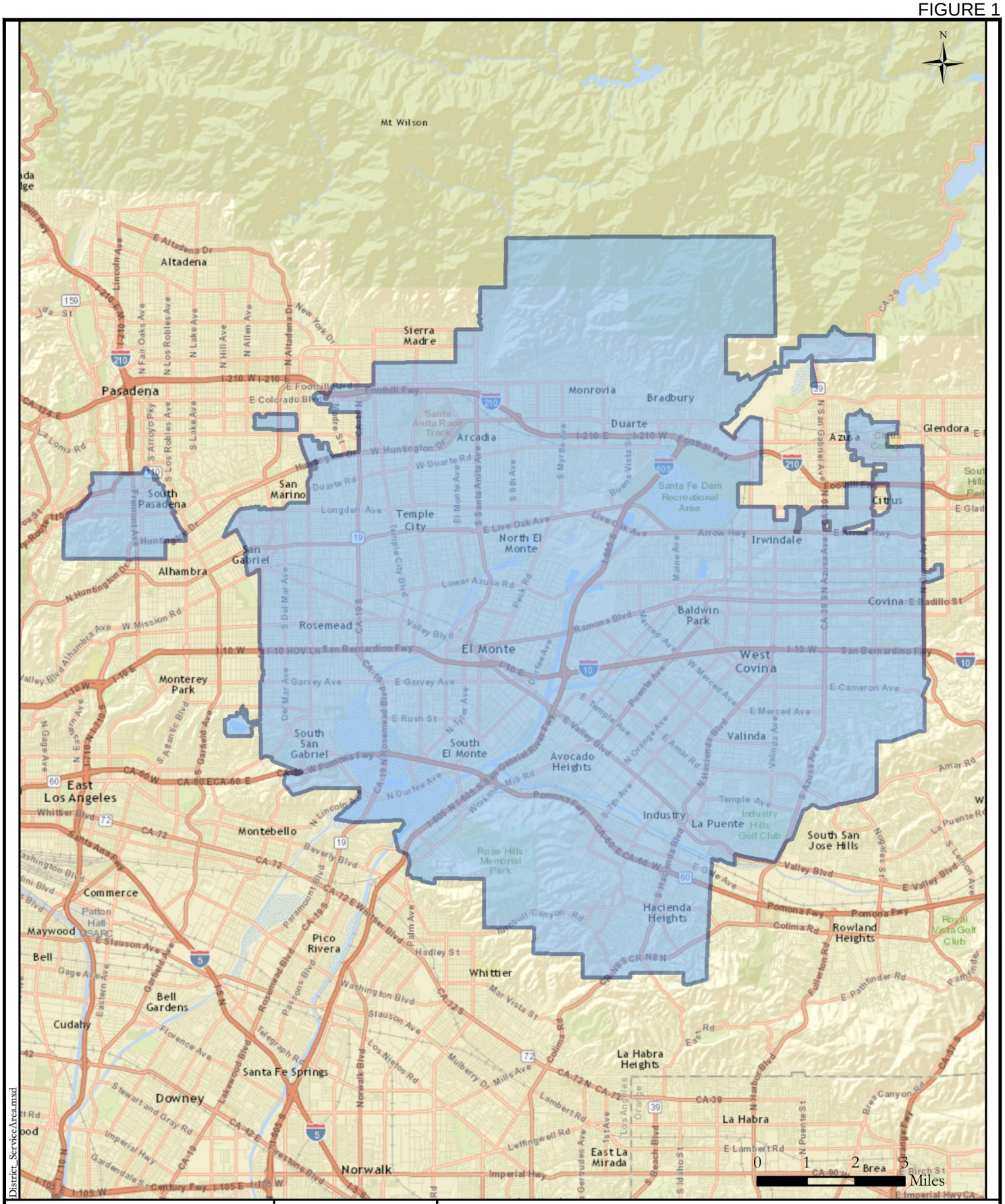
Table 8-1 Wholesale Stages of Water Storage Contingency Plan		
Stage	Complete Both	
	Percent Supply Reduction[1] *Numerical value as a percentage*	Water Supply Condition (*Narrative description)*
Add additional rows as needed		
Level 1	5%	Wholesale Minimum Supply Percentage: 92.5%
Level 2	10%	Wholesale Minimum Supply Percentage: 85.0%
Level 3	15%	Wholesale Minimum Supply Percentage: 77.5%
Level 4	20%	Wholesale Minimum Supply Percentage: 70.0%
Level 5	25%	Wholesale Minimum Supply Percentage: 62.5.%
Level 6	30%	Wholesale Minimum Supply Percentage: 55.0%
Level 7	35%	Wholesale Minimum Supply Percentage: 47.5%
Level 8	40%	Wholesale Minimum Supply Percentage: 40.0%
Level 9	45%	Wholesale Minimum Supply Percentage: 32.5%
Level 10	50%	Wholesale Minimum Supply Percentage: 25.0%
[1] *One stage in the Water Shortage Contingency Plan must address a water shortage of 50%.*		
NOTES:		

Table 8-4 Wholesale: Minimum Supply Next Three Years			
	2016	2017	2018
Available Water Supply	27,900	27,900	27,900
NOTES: Based on WSAP Level 3 Shortage.			

Table 10-1 Wholesale: Notification to Cities and Counties (select one)		
☑	Supplier has notified more than 10 cities or counties in accordance with CWC 10621 (b) and 10642. **Completion of the table below is not required. Provide a separate list of the cities and counties that were notified.**	
Page 10-2	Provide the page or location of this list in the UWMP.	
☐	Supplier has notified 10 or fewer cities or counties. **Complete the table below.**	
City Name	60 Day Notice	Notice of Public Hearing
Add additional rows as needed		
	☐	☐
	☐	☐
	☐	☐
County Name *Drop Down List*	60 Day Notice	Notice of Public Hearing
Add additional rows as needed		
	☐	☐
	☐	☐
	☐	☐
NOTES:		

FIGURES

FIGURE 1



District_ServiceArea.mxd

STETSON ENGINEERS INC.

861 VILLAGE OAKS DRIVE, SUITE 100
COVINA, CALIFORNIA 91724
TEL: (626) 967-6202
FAX: (626) 331-7065

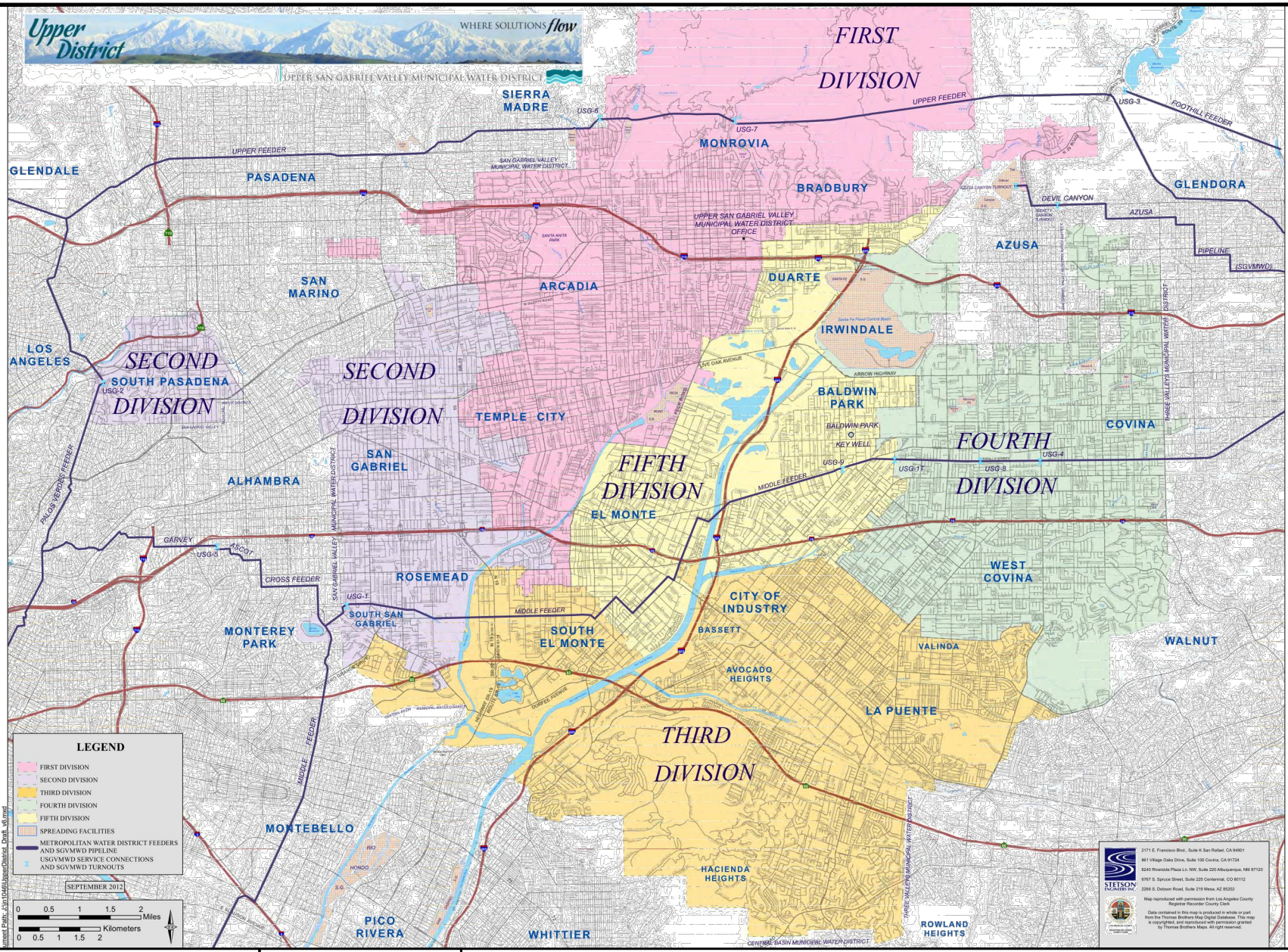
2171 E Francisco Blvd., Suite K
San Rafael California 94901

2651 W Guadalupe Rd., Suite A209
Mesa Arizona 85202

UPPER SAN GABRIEL VALLEY MUNICIPAL WATER DISTRICT

WATER SERVICE AREA BOUNDARY

J:\2533\5.02.001 - Urban Water Management Plan\03 Plates and Figures\FIGURE 1.dwg
NONE



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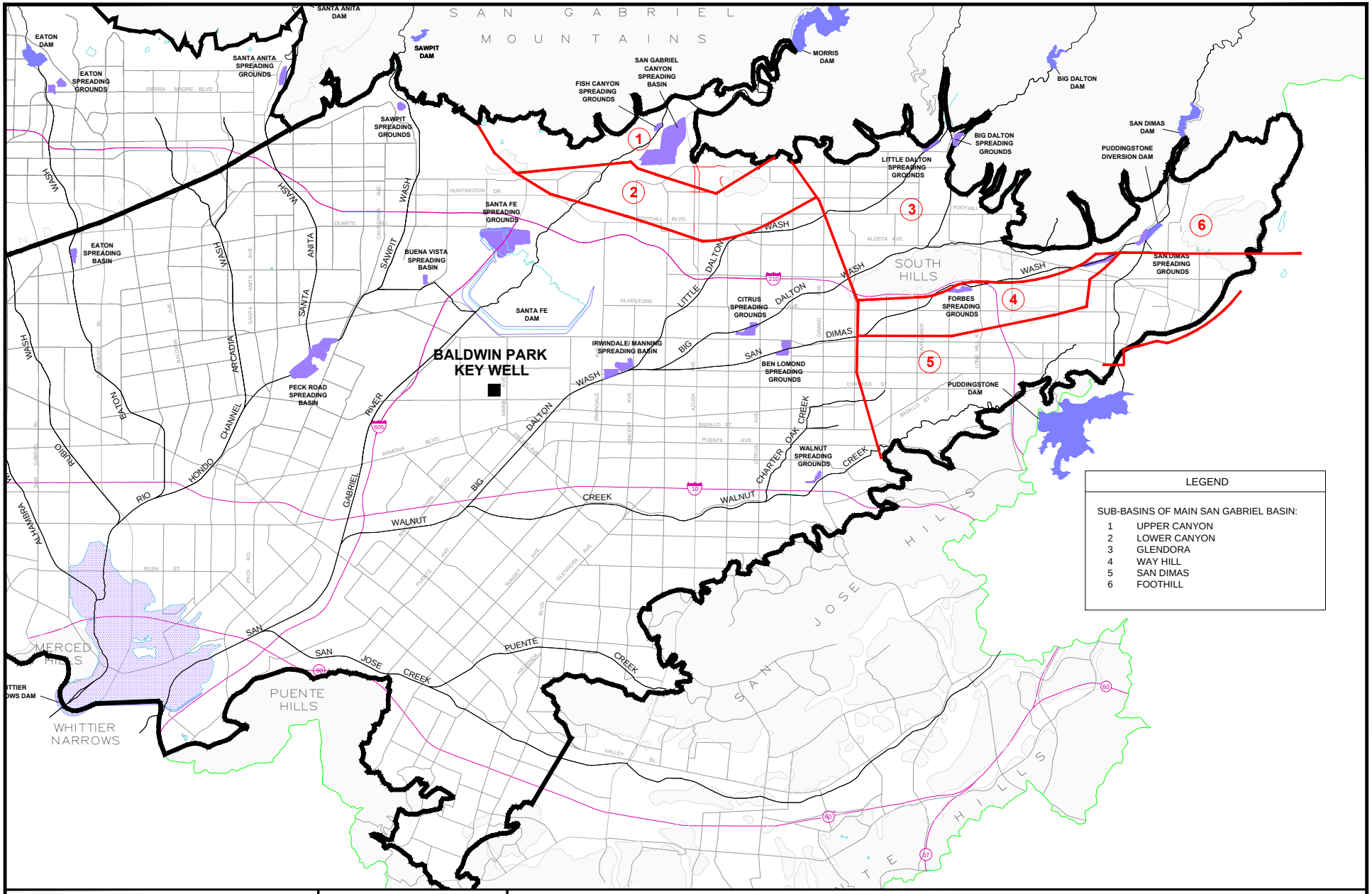
2651 W Guadalupe Rd., Suite A209
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UPPER SAN GABRIEL VALLEY MUNICIPAL WATER DISTRICT

DISTRICT DIVISIONS, FEEDERS AND CONNECTIONS

FIGURE 2

J:\2533\5.02.001 - Urban Water Management Plan\03 Plates and Figures\FIGURE 2.dwg
NONE



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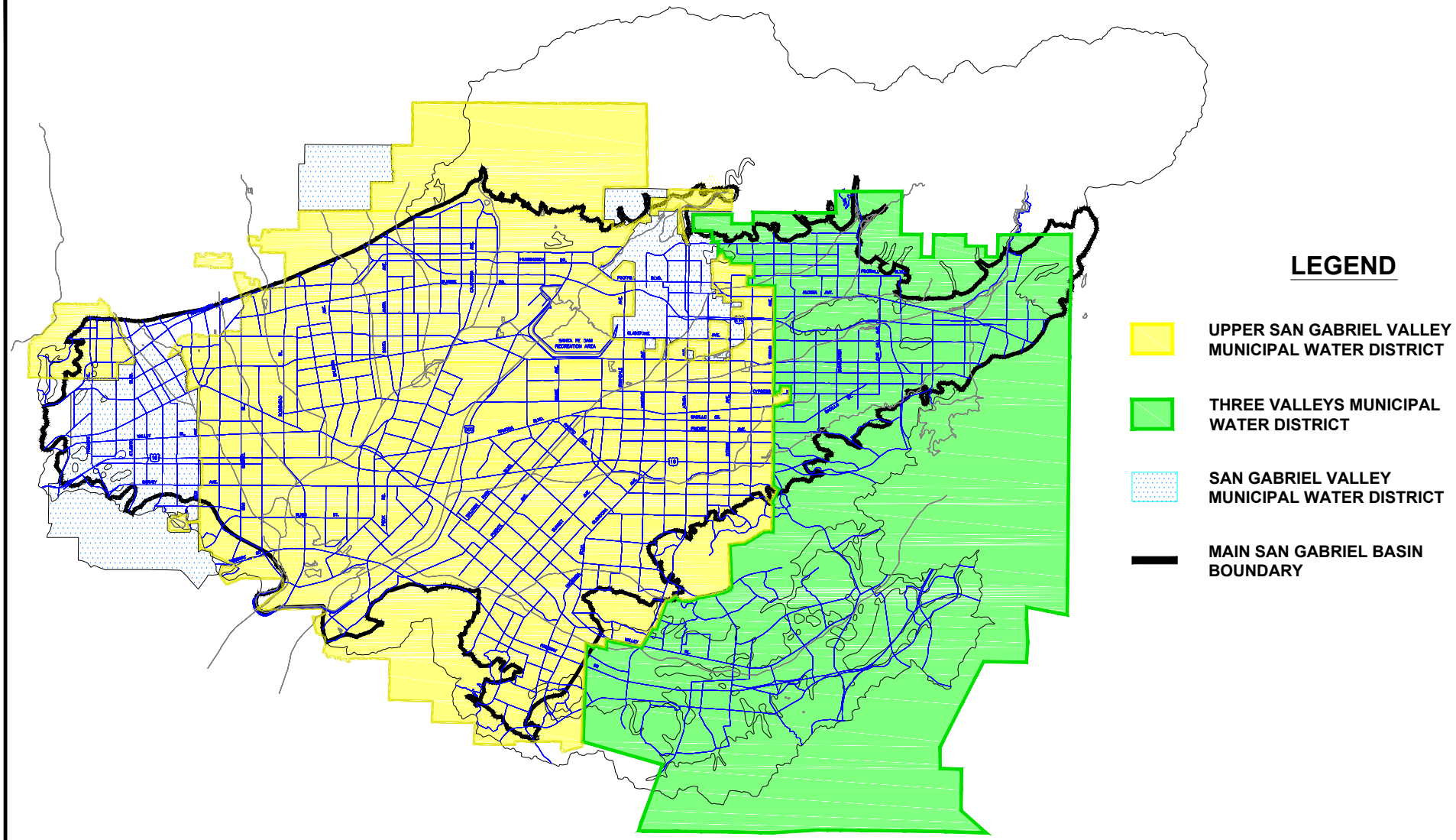
N.T.S.

UPPER SAN GABRIEL VALLEY MUNICIPAL WATER DISTRICT

LOCATION OF KEY WELL, SPREADING GROUNDS AND WATER CHANNELS MAIN SAN GABRIEL BASIN

FIGURE 3

\\SERVER2\Data\Jobs\2533\5.02.001 - Urban Water Management Plan\03 Plates and Figures\FIGURE 4.dwg
NONE



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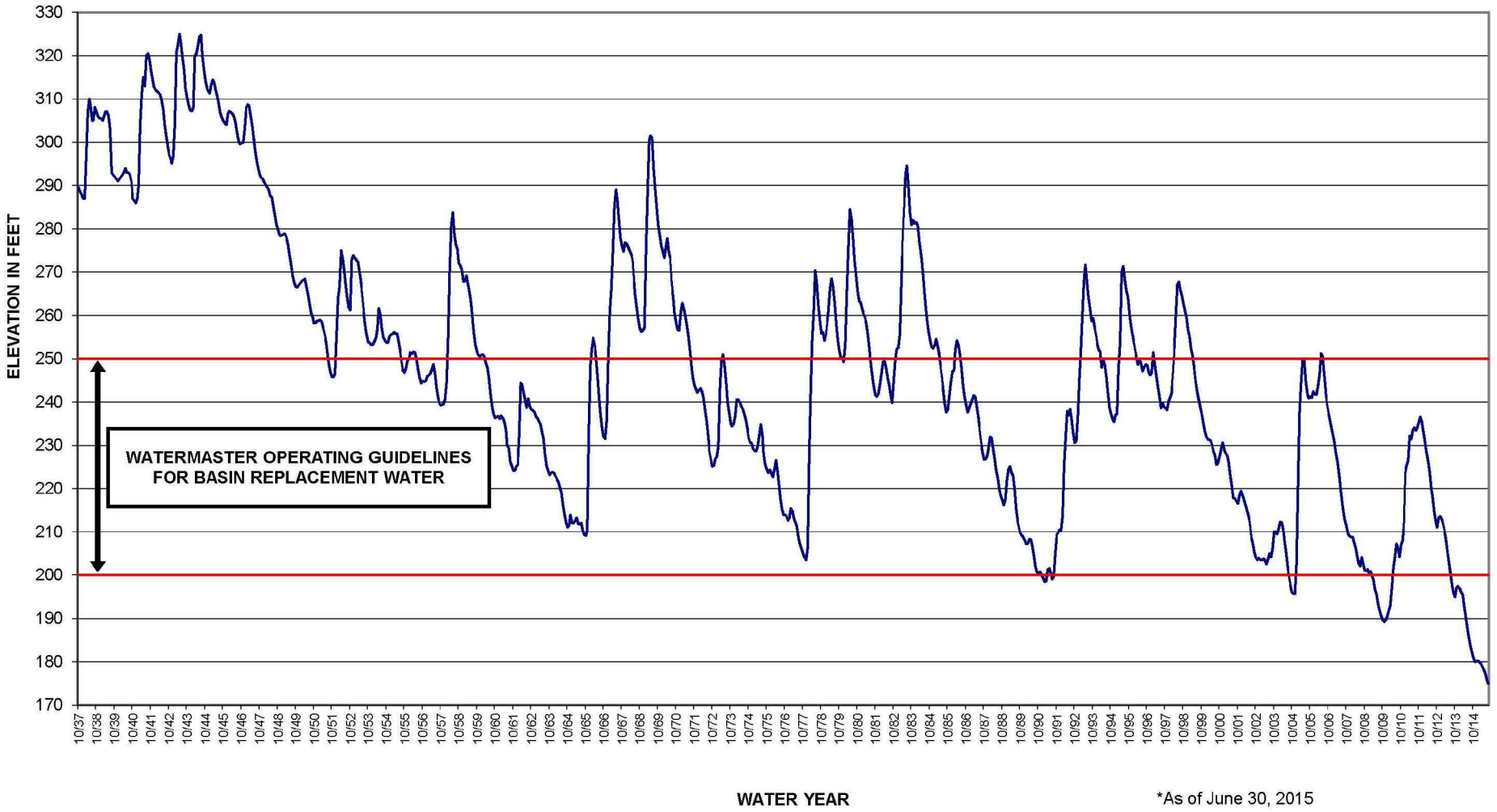
N.T.S.

UPPER SAN GABRIEL VALLEY MUNICIPAL WATER DISTRICT

MUNICIPAL WATER DISTRICT BOUNDARIES

FIGURE 4

\\SERVER2\Data\Jobs\2533\5.02.001 - Urban Water Management Plan\03 Plates and Figures\FIGURE 3.dwg
NONE



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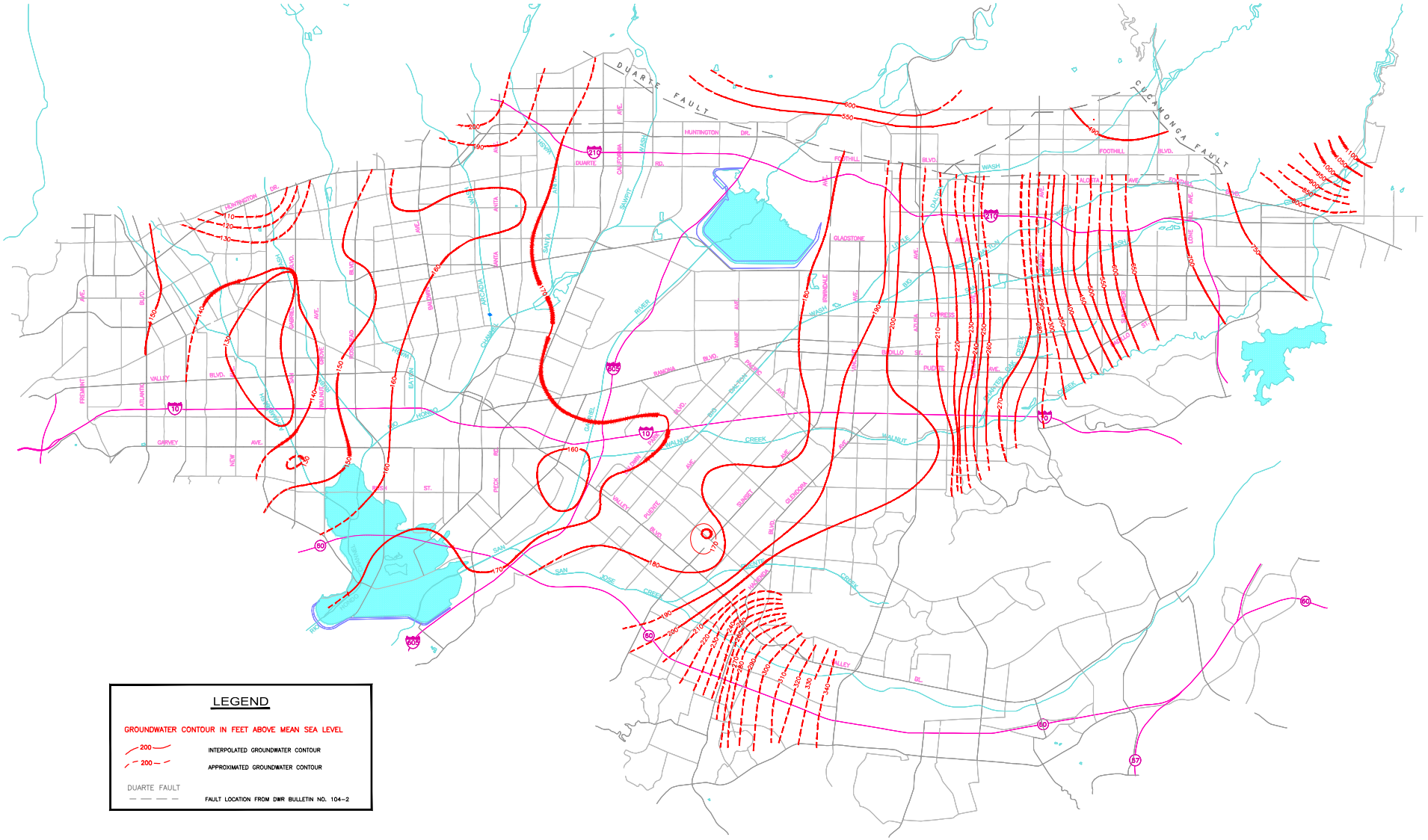
2651 W Guadalupe Rd., Suite A209
Mesa Arizona 85202

UPPER SAN GABRIEL VALLEY MUNICIPAL WATER DISTRICT

HISTORICAL BALDWIN PARK KEY WELL ELEVATIONS

FIGURE 5

J:\2533\5.02.001 - Urban Water Management Plan\03 Plates and Figures\FIGURE 5.dwg
NONE



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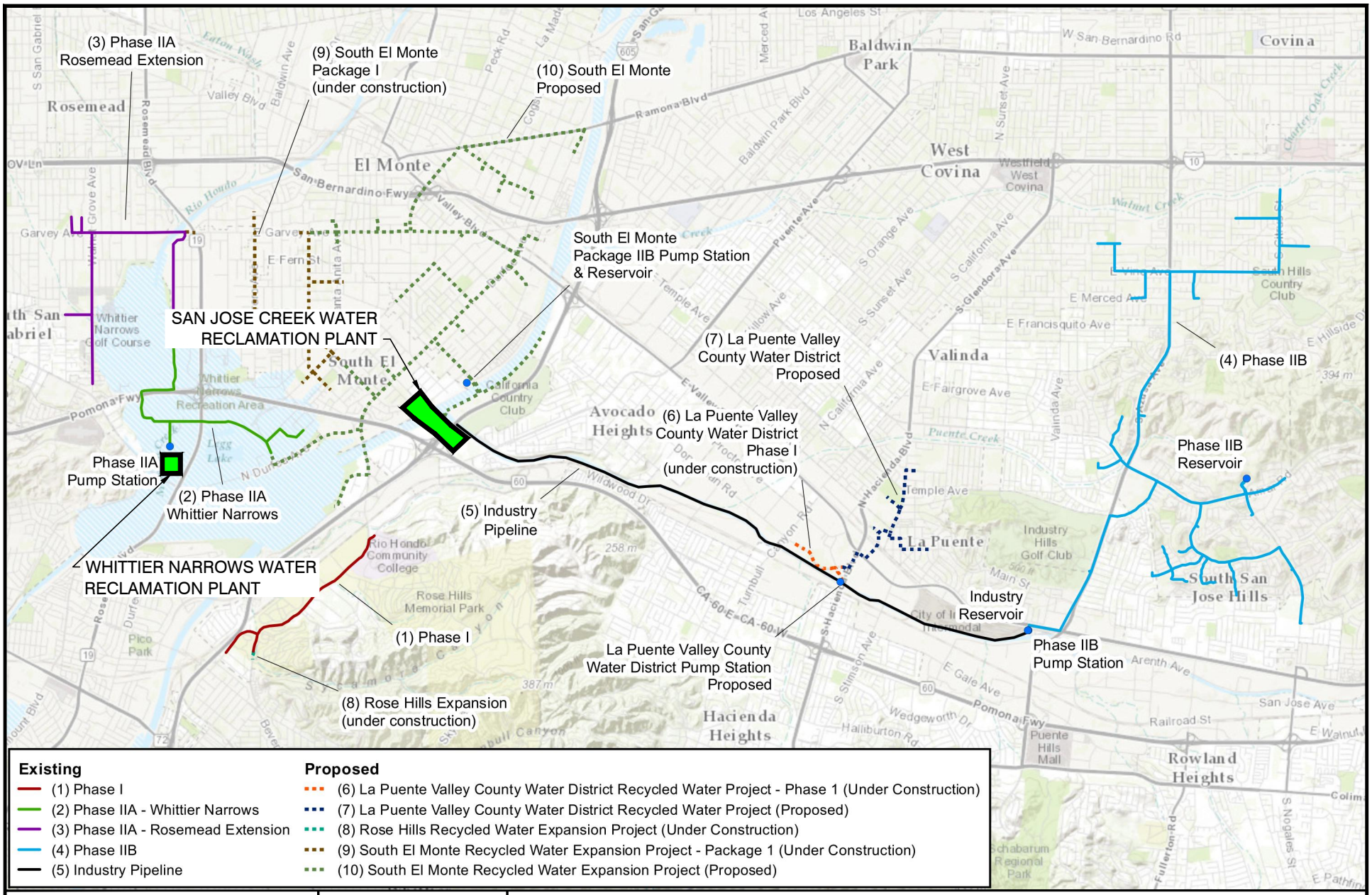
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UPPER SAN GABRIEL VALLEY MUNICIPAL WATER DISTRICT

GROUNDWATER CONTOURS MAP
MAIN SAN GABRIEL BASIN - JULY 2015

FIGURE 6

J:\2533\5.02.001 - Urban Water Management Plan\03 Plates and Figures\FIGURE 6.dwg
NONE



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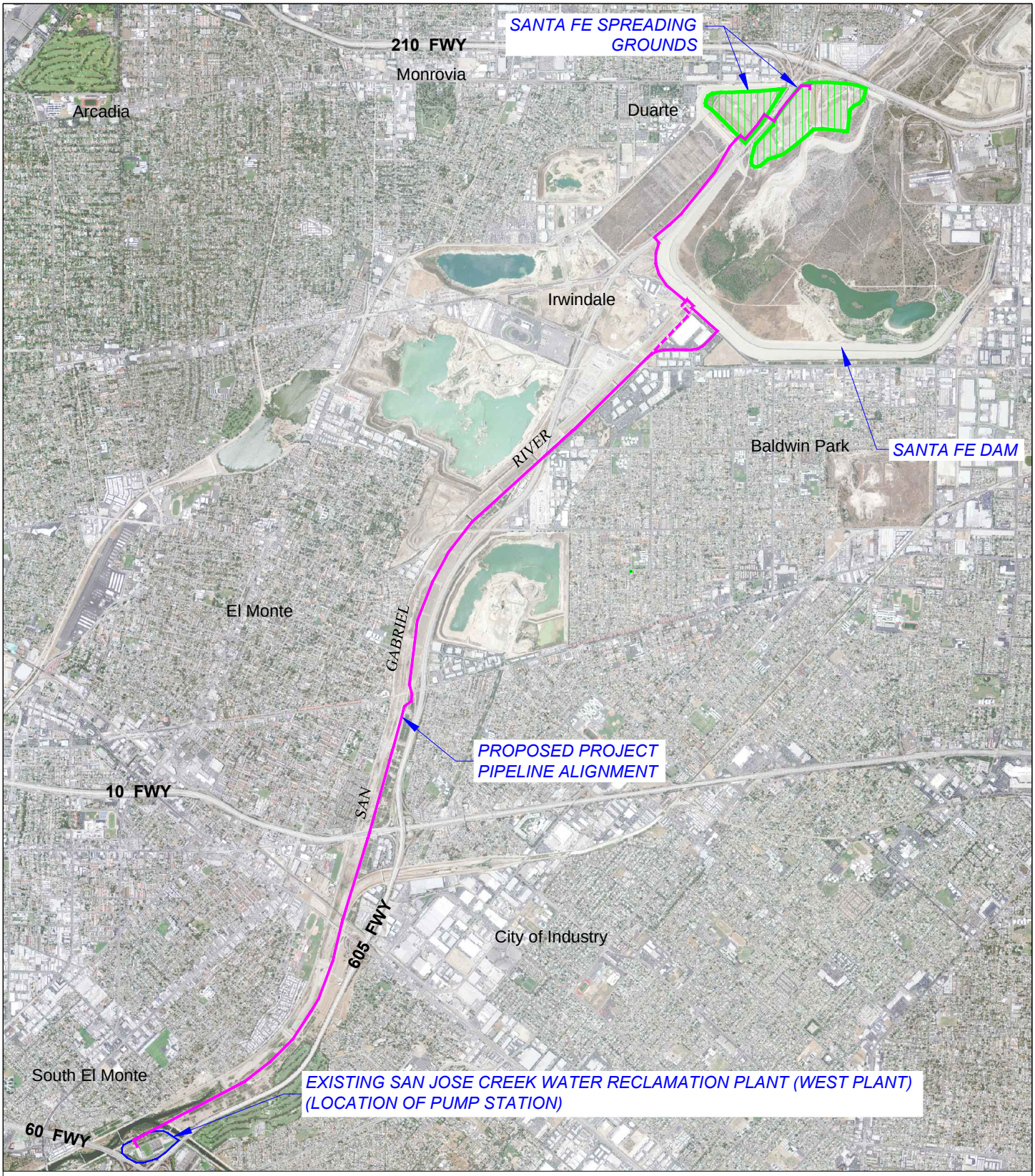
UPPER SAN GABRIEL VALLEY MUNICIPAL WATER DISTRICT

RECYCLED WATER PROGRAM

FIGURE 7

J:\2533\5.02.001 - Urban Water Management Plan\03 Plates and Figures\FIGURE 7.dwg
NONE

FIGURE 8



LEGEND :

POTENTIAL SPREADING AREA — PIPELINE — ALTERNATIVEALIGNMENT

STETSON ENGINEERS INC.

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San Rafael California 94901

2651 W Guadalupe Rd., Suite A209
Mesa Arizona 85202

APPROXIMATE SCALE
0 2,250' 4,500'

UPPER SAN GABRIEL VALLEY MUNICIPAL WATER DISTRICT

IRRP PROJECT FACILITIES

D:\JOBS\1046\1046-58\Engineering Report\Engineering Report Final Plates\PLATE 1-3.DWG
F:\JOBS\1046-10.CTB

APPENDICES

APPENDIX A

URBAN WATER MANAGEMENT PLANNING ACT

California Water Code Division 6, Part 2.6.

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

Chapter 1. General Declaration and Policy

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.

Chapter 2. Definitions

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.

Chapter 3. Urban Water Management Plans

Article 1. General Provisions

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, except as provided in subdivision (d).

(b) Every urban water supplier required to prepare a plan pursuant to this part shall, at least 60 days before 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).

(d) Each urban water supplier shall update and submit its 2015 plan to the department by July 1, 2016.

Article 2. Contents of Plan

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 basins that 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.

(J) Distribution system water loss.

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

(3) (A) For the 2015 urban water management plan update, the distribution system water loss shall be quantified for the most recent 12-month period available. For all subsequent updates, the distribution system water loss shall be quantified for each of the five years preceding the plan update.

(B) The distribution system water loss quantification shall be reported in accordance with a worksheet approved or developed by the department through a public process. The water loss quantification worksheet shall be based on the water system balance methodology developed by the American Water Works Association.

(4) (A) If available and applicable to an urban water supplier, water use projections may display and account for the water savings estimated to result from adopted codes, standards, ordinances, or transportation and land use plans identified by the urban water supplier, as applicable to the service area.

(B) To the extent that an urban water supplier reports the information described in subparagraph (A), an urban water supplier shall do both of the following:

(i) Provide citations of the various codes, standards, ordinances, or transportation and land use plans utilized in making the projections.

(ii) Indicate the extent that the water use projections consider savings from codes, standards, ordinances, or transportation and land use plans. Water use projections that do not account for these water savings shall be noted of that fact.

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

(1) (A) For an urban retail water supplier, as defined in Section 10608.12, a narrative description that addresses the nature and extent of each water demand management measure implemented over the past five years. The narrative shall describe the water demand management measures that the supplier plans to implement to achieve its water use targets pursuant to Section 10608.20.

(B) The narrative pursuant to this paragraph shall include descriptions of the following water demand management measures:

(i) Water waste prevention ordinances.

(ii) Metering.

(iii) Conservation pricing.

(iv) Public education and outreach.

(v) Programs to assess and manage distribution system real loss.

(vi) Water conservation program coordination and staffing support.

(vii) Other demand management measures that have a significant impact on water use as measured in gallons per capita per day, including innovative measures, if implemented.

(2) For an urban wholesale water supplier, as defined in Section 10608.12, a narrative description of the items in clauses (ii), (iv), (vi), and (vii) of subparagraph (B) of paragraph (1), and a narrative description of its distribution system asset management and wholesale supplier assistance programs.

(g) 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 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.

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

(i) 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 subdivision (f) 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.

(j) An urban water supplier that relies 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.

10631.2. (a) In addition to the requirements of Section 10631, an urban water management plan may, but is not required to, include any of the following information:

(1) An estimate of the amount of energy used to extract or divert water supplies.

(2) An estimate of the amount of energy used to convey water supplies to the water treatment plants or distribution systems.

(3) An estimate of the amount of energy used to treat water supplies.

(4) An estimate of the amount of energy used to distribute water supplies through its distribution systems.

(5) An estimate of the amount of energy used for treated water supplies in comparison to the amount used for nontreated water supplies.

(6) An estimate of the amount of energy used to place water into or withdraw from storage.

(7) Any other energy-related information the urban water supplier deems appropriate.

(b) The department shall include in its guidance for the preparation of urban water management plans a methodology for the voluntary calculation or estimation of the energy intensity of urban water systems. The department may consider studies and calculations conducted by the Public Utilities Commission in developing the methodology.

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 July 1, 2016, 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.

Article 2.5. Water Service Reliability

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.

Article 3. Adoption and Implementation of Plans

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) (1) 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.

(2) The plan, or amendments to the plan, submitted to the department pursuant to paragraph (1) shall be submitted electronically and shall include any standardized forms, tables, or displays specified by the department.

(b) (1) Notwithstanding Section 10231.5 of the Government Code, 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.

(2) A report to be submitted pursuant to paragraph (1) shall be submitted in compliance with Section 9795 of the Government Code.

(c) (1) For the purpose of identifying the exemplary elements of the individual plans, the department shall identify in the report 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.

Chapter 4. Miscellaneous Provisions

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

2015 Urban Water Management Plans Guidebook for Urban Water Suppliers



2015 Urban Water Management Plans

Guidebook for Urban Water Suppliers

Final

March 2016



California
Department of
Water Resources

State of California
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California Natural Resources Agency
John Laird, Secretary for Natural Resources

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Abbreviations and Acronyms

AB - Assembly Bill

AF - Acre-Foot

BMP - Best Management Practice

CEHTP - California Environmental Health Tracking Program

CASGEM - California Statewide Groundwater Elevation Monitoring Program

CII - Commercial, Industrial, Institutional, water use sectors

CIMIS - California Irrigation Management Information System

CUWCC - California Urban Water Conservation Council

CWC - California Water Code

DMMs - Demand Management Measures

DOF - Department of Finance

DWR - Department of Water Resources

eARDWP - Electronic Annual Reports to the Drinking Water Program (SWRCB)

ETo - Reference Evapotranspiration

GIS - Geographic Information System

GPCD - Gallons per Capita per Day

IRWM - Integrated Regional Water Management

ITP - Independent Technical Panel

LAFCO - Local Agency Formation Commission

NOAA - National Oceanic and Atmospheric Administration

NPDES - National Pollutant Discharge Elimination System

PWS - Public Water System

RWQCB - Regional Water Quality Control Board

SB - Senate Bill

SB X7-7 - Senate Bill Seven of the Senate's Seventh Extraordinary Session of 2009

SGMA - Sustainable Groundwater Management Act

SWP - State Water Project

SWRCB - State Water Resources Control Board

RUWMP - Regional Urban Water Management Plan

UWMP - Urban Water Management Plan

WARN - Water/Wastewater Agency Response Network

WDR - Waste Discharge Requirement

WRR - Water Recycling Requirement

WSCP - Water Shortage Contingency Plan

Use of This Guidebook

The Guidebook for Urban Water Suppliers (Guidebook) has been developed by Department of Water Resources to assist urban water suppliers in preparing 2015 Urban Water Management Plans (UWMPs or Plans). This guidance is intended to ensure the Plans will address the requirements of the California Water Code (CWC), provide useful information to the public about water suppliers and their water management programs, and provide a framework for water planning to minimize the negative effects of potential water shortages.

Water suppliers need not limit themselves to the requirements and recommendations found in the Guidebook. Suppliers may include any additional information that will assist in providing a full description of their water resources and water management.

Section Organization

The sections of the Guidebook are laid out with the following organization:

X.X Section or Subsection Header

> ***California Code***
> *This text box will display requirements from California Code that apply to the section immediately following. It will also include references to regulations in the Methodologies for Calculating Baseline and Compliance Urban Per Capita Water Use.*

R W

ALL URBAN WATER SUPPLIERS

Sections that provide guidance and recommendations for addressing CWC requirements that apply to both retail and wholesale agencies will be headed with "**ALL URBAN WATER SUPPLIERS**", denoted with the symbols "**R**" "**W**", and marked by the color blue.

NOTE: Additional guidance and recommendations that apply only to retail or wholesale agencies are found in "Retail Only" or "Wholesale Only" text boxes.

RECOMMENDATIONS

This text provides recommendations from DWR for both retail and wholesale agencies. These are not required by the CWC; however, DWR includes these recommendations to address topic areas that would benefit from further clarification or elaboration.

RETAIL ONLY

Sections that provide guidance and recommendations for addressing CWC requirements that apply only to retail agencies will be headed with "**RETAIL ONLY**", denoted with the symbol "**R**", and marked by the color gold.

NOTE: Additional guidance and recommendations that apply to retail agencies are found in "All Urban Water Suppliers" text boxes.

RECOMMENDATIONS

This section provides recommendations from DWR for retail suppliers.

WHOLESALE ONLY

Sections that provide guidance and recommendations for addressing CWC requirements that apply only to wholesale agencies will be headed with "**WHOLESALE ONLY**", denoted with the symbol "**W**", and marked by the color red.

NOTE: Additional guidance and recommendations that apply to wholesale agencies are found in "All Urban Water Suppliers" text boxes.

RECOMMENDATIONS

This section provides recommendations from DWR for wholesale suppliers.

TABLES

All required tables that apply to a section are found at the end of the section. (*See section on Standardized Forms, Tables, and Displays*). Both wholesale and retail versions are presented. The tables shown within the body of the guidebook are for viewing only and cannot be filled out. Excel versions of these tables are available on DWR's website at http://www.water.ca.gov/urbanwatermanagement/uwmp2015.cfm.

Table X-X Retail: Data Table

	2015	2020	2025	2030	2035	2040 -Opt
Data 1						
Data 2						
TOTAL	0	0	0	0	0	0

Table X-X Wholesale: Data Table

	2015	2020	2025	2030	2035	2040 -Opt
Data 1						
Data 2						
Data 3						
TOTAL	0	0	0	0	0	0

Definition of Wholesale Supplier and Retail Supplier

CWC 10608.12

(p) *"Urban retail water supplier" means a water supplier, either publicly or privately owned, that directly provides potable municipal water to more than 3,000 end users or that supplies more than 3,000 acre-feet of potable water annually at retail for municipal purposes.*

(r) *"Urban wholesale water supplier," means a water supplier, either publicly or privately owned, that provides more than 3,000 acre-feet of water annually at wholesale for potable municipal purposes.*

For purposes of UWMP reporting, an agency is considered either a wholesale or retail urban water supplier, or both, based on the criteria stated in CWC 10608.12 (p) and (r). See the citation of the CWC in the text box above. This guidebook provides guidance for all urban water suppliers.

If an agency has both wholesale and retail sales, review the criteria in the CWC, and guidance below, to determine which criteria apply (wholesale and/or retail). Reporting requirements and guidance for both types of agencies are included in the paragraphs below.

(1.) **Both Wholesale and Retail Urban Water Supplier:** If an urban water supplier meets the definition of both a wholesale and retail water supplier as found in 10608.12 (p) and (r), it is considered both a wholesale and a retail urban water supplier. Such an agency must address the CWC requirements that apply to both wholesale and retail suppliers. Agencies that are both retail and wholesale will report their data using both retail and wholesale tables.

(2.) **(Exclusively or Primarily) Retail Urban Water Supplier:** If an urban water supplier meets the definition of an urban retail water supplier as found in CWC 10608.12 (p), it is considered a retail urban water supplier. Such an agency may also provide water on a wholesale basis, for example, sales to other agencies, but the wholesale volume is below the reporting threshold for the agency to be considered a wholesale supplier. This small volume of wholesale demand will be reported in the agency's retail tables 4-1 and 4-2.

(3.) **(Exclusively or Primarily) Wholesale Urban Water Supplier:** If an urban water supplier meets the definition of an urban wholesale water supplier, as found in 10608.12 (r), it is considered a wholesale urban water supplier. Such an agency may also have retail customers, but the retail volume is below the reporting threshold for an agency to be considered a retail supplier. This small volume of retail demand will be reported as "retail demand" in the agency's wholesale tables 4-1 and 4-2.

Standardized Forms, Tables, or Displays (*Appendix E*)

CWC 10644

(a)(2) *The plan, or amendments to the plan, submitted to the department … shall include any standardized forms, tables, or displays specified by the department.*

CWC 10608.52

(a) *The department, in consultation with the board, the California Bay-Delta Authority or its successor agency, the State Department of Public Health, and the Public Utilities Commission, shall develop a single standardized water use reporting form to meet the water use information needs of each agency, including the needs of urban water suppliers that elect to determine and report progress toward achieving targets on a regional basis as provided in subdivision (a) of Section 10608.28.*

(b) *At a minimum, the form shall be developed to accommodate information sufficient to assess an urban water supplier's compliance with conservation targets pursuant to Section 10608.24… The form shall accommodate reporting by urban water suppliers on an individual or regional basis as provided in subdivision (a) of Section 10608.28.*

In response to the requirements of the CWC, standardized tables for the reporting and submittal of UWMP data have been developed and are required for use in 2015 UWMPs. The standardization of data tables allows for more efficient data management, expedited review of UWMPs, and easier compilation of data for regional and statewide planning.

Water agencies are required to submit UWMP data electronically to DWR using standardized tables. Water suppliers must also include the standardized tables in the body of the plan or as an appendix. Electronic submittal is at the WUE data website https://wuedata.water.ca.gov/secure/.

The standardized tables are compiled in Appendix E and available in Excel on DWR's 2015 UWMP webpage at http://www.water.ca.gov/urbanwatermanagement/uwmp2015.cfm. Water agencies will be able to cut and paste from the Excel tables to the tables on the WUEdata website.

The Guidebook displays the standardized tables in a PDF format for quick viewing, but these tables are not fillable forms.

Note for Regional Water Management Plans (RUWMPs): RUWMPs will submit data for multiple agencies. This will require a set of tables for each individual agency. UWMP preparers will identify each table with a notation to indicate the corresponding supplier.



RETAIL ONLY

Retail water suppliers are also required to submit the SB X7-7 Verification Form (*Appendix E*) with their 2015 UWMP. The form allows for verification that the agency's calculations are in compliance with SB X7-7, the Water Conservation Act of 2009.

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Chapter 1
Introduction and Overview

This chapter contains guidance on the following topics:

1.1 Background and Purpose

1.2 Urban Water Management Planning and the California Water Code

1.3 Urban Water Management Plans in Relation to Other Efforts

1.4 Recommended UWMP Organization

1.5 UWMPs and Grant or Loan Eligibility

1.6 Tips for UWMP Preparers

1.7 DWR Contact Information

1.1 Background and Purpose

ALL URBAN WATER SUPPLIERS

R

W

Water planning is an essential function of water suppliers but becomes critical as California grapples with ongoing drought and expected long-term climate changes.

Prior to the adoption of the Urban Water Management Planning (UWMP) Act (*Appendix A*), there were no specific requirements that water agencies conduct long-term resource planning. While many water agencies conducted long-term water supply and resource planning prior to the Act, those that did not were left vulnerable to supply disruptions during dry periods or catastrophic events.

An example of local supply disruption that spurred the development of the UWMP Act can be found from the drought of 1976-1977. The Marin Municipal Water District (MMWD) faced dwindling supplies, even though water rationing strategies were successfully implemented. MMWD managers met with officials of other water districts and from the California Department of Water Resources (DWR) to quickly find a reliable alternate source of water. An agreement was reached to transport water from the State Water Project (SWP) via a temporary, 6-mile pipeline on the Richmond-San Rafael Bridge from the East Bay to Marin County.

The necessity of installing this emergency pipeline indicated that water planning had to be done at the local level, as two water agencies in the same region could have very different impacts from a drought. As a result, the UWMP Act was proposed and adopted, requiring a minimum level of resource assessment and planning by water suppliers.

There is no substitute for water planning at the local water supplier level. Only a local supplier has the knowledge, ability to consider the unique circumstances of the individual agency, can provide for participation by the community, and tailor the planning to local conditions.

The UWMP Act has been modified over the years in response to the State's water shortages, droughts, and other factors. A significant amendment was made in 2009, after the drought of 2007-2009 and as a result of the governor's call for a statewide 20 percent reduction in urban water use by the year 2020. This was the Water Conservation Act of 2009, also known as SB X7-7 (*Appendix B*). This Act required agencies to establish water use targets for 2015 and 2020 that would result in statewide savings of 20 percent by 2020.

1.2 Urban Water Management Planning and the California Water Code

ALL URBAN WATER SUPPLIERS

The sections below are summaries of CWC sections applicable to UWMPs. DWR provides guidance on addressing CWC UWMP requirements, but water suppliers are solely responsible for ensuring that all CWC requirements and applicable laws have been met.

1.2.1 Urban Water Management Planning Act of 1983 (Appendix A)

ALL URBAN WATER SUPPLIERS

The UWMP Act requires water agencies to develop UWMPs. The UWMPs provide a framework for long term water planning and inform the public of a supplier's plans for long-term resource planning that ensures adequate water supplies for existing and future demands.

This part of the CWC requires urban water suppliers to report, describe, and evaluate:

- Water deliveries and uses;
- Water supply sources;
- Efficient water uses;
- Demand management measures; and
- Water shortage contingency planning.

1.2.2 Applicable Changes to the Water Code since 2010 UWMPs *(Appendix C)*

ALL URBAN WATER SUPPLIERS

See Appendix C for a detailed table of these changes. Guidance for addressing the changes is included in the relevant chapters of the guidebook and a summary list is provided below.

- Demand Management Measures CWC Section 10631 (f) (1) and (2) Assembly Bill 2067, 2014 *Guidebook Chapter 9*
- Submittal Date CWC Section 10621 (d) Assembly Bill 2067, 2014 *Guidebook Chapter 10*

- Electronic Submittal CWC Section 10644 (a) (2) Senate Bill 1420, 2014 *Guidebook Chapter 10*
- Standardized Forms CWC Section 10644 (a) (2) Senate Bill 1420, 2014 *Guidebook Chapter 10*
- Water Loss CWC Section 10631 (e) (1) (J) and (e) (3) (A) and (B) Senate Bill 1420, 2014, *Guidebook Appendix L*
- Estimating Future Water Savings CWC Section 10631 (e) (4) Senate Bill 1420, 2014 *Guidebook Appendix K*
- Voluntary Reporting of Energy Intensity CWC Section 10631.2 (a) and (b) Senate Bill 1036, 2014 *Guidebook Appendix O*
- Defining Water Features CWC Section 10632 (b) Assembly Bill 2409, 2010 *Guidebook Chapter 4*

1.2.3 Water Conservation Act of 2009 (SB X7-7) (*Appendix B*)

RETAIL ONLY

The Water Conservation Act of 2009 required retail urban water suppliers to report in their UWMPs their Base Daily per Capita Water Use (Baseline GPCD), 2015 Interim Urban Water Use Target, 2020 Urban Water Use Target, and Compliance Daily per Capita Water Use. These terms are defined in *Methodologies for Calculating Baseline and Compliance Urban Per Capita Water Use, DWR 2011 (Methodologies)* consistent with SB X7-7 requirements. The *Methodologies* document can be found online at http://www.water.ca.gov/urbanwatermanagement/uwmp2015.cfm

Beginning in 2016, retail water suppliers are required to comply with the water conservation requirements in SB X7-7 in order to be eligible for State water grants or loans. The complete text of the Water Conservation Act is in Appendix B. Guidance for addressing the requirements of the Act is found in Chapter 5 of the Guidebook and in the *Methodologies* document. Retail water agencies are required to set targets and track progress toward decreasing daily per capita urban water use in their service area, which will assist the State in meeting its 20 percent reduction goal by 2020.

1.3 Urban Water Management Plans in Relation to Other Planning Efforts

R W

ALL URBAN WATER SUPPLIERS

Urban suppliers provide information on water management specific to their service areas. However, water management does not happen in isolation; there are other planning processes that integrate with the UWMP to accomplish urban planning. Some of these plans include city and county General Plans, Water Master Plans, Recycled Water Master Plans, integrated resource plans, Integrated Regional Water Management Plans, Groundwater Management Plans, and others.

RECOMMENDED

Each of these planning efforts is greatly enhanced when it relies upon the information found in the other documents. DWR strongly encourages water suppliers to utilize other planning processes and documents when developing their UWMPs and to share their UWMPs with other agencies.

1.4 UWMP Organization

R W

ALL URBAN WATER SUPPLIERS

RECOMMENDED

DWR recommends, but does not require, that an urban water supplier use the organization outlined below to prepare its 2015 UWMP. The Guidebook is organized in the same sequence as the recommended UWMP organization.

This organization groups the requirements by topic and presents the topics in the order in which a water supplier may consider including them in an UWMP. This does not follow the order of the legislation.

The 2015 UWMP Guidebook has been updated from the 2010 version to reflect new legislation and some of the recommended organization has been modified from previous guidebooks.

Chapter 1 - Introduction and Overview *In this introductory chapter, agencies provide a discussion on the importance and extent of their water management planning efforts.*

Chapter 2 - Plan Preparation *This section will provide information on their process for developing the UWMP, including efforts in coordination and outreach.*

Chapter 3 - System Description *Suppliers may include maps of the service area, a description of the service area and climate, their Public Water System(s), and the agency's organizational structure and history.*

Chapter 4 - System Water Use *Describe and quantify the current and projected water uses within the agency's service area.*

Chapter 5 - Baselines and Targets *Retail agencies and Regional Alliances (See Appendix D for more information about Regional Alliances) will describe their methods for calculating their baseline and target water consumption. They will also demonstrate whether or not they have achieved the 2015 interim water use target, and their plans for achieving their 2020 water use target.*

Chapter 6 - System Supplies *Describe and quantify the current and projected sources of water available to the agency. A description and quantification of potential recycled water uses and supply availability is also to be included in this chapter, to the extent that it pertains to each agency.*

Chapter 7 - Water Supply Reliability *Water agencies will describe the reliability of their water supply and project the reliability out 20 years. This description will be provided for normal, single dry years and multiple dry years.*

Chapter 8 - Water Shortage Contingency Planning *Provide the supplier's staged plan for dealing with water shortages, including a catastrophic supply interruption.*

Chapter 9 - Demand Management Measures *Water suppliers will communicate their efforts to promote conservation and to reduce demand on their water supply and will specifically address several demand management measures.*

Chapter 10 - Plan Adoption, Submittal, and Implementation *Water agencies will describe the steps taken to adopt and submit the UWMP and to make it publicly available. This chapter will also include a discussion of the agency's plan to implement the UWMP.*

SUPPORTING DOCUMENTS

Supporting documents may be included in the plan as appendices or may be referenced with a link to the webpage where the document can be found. Some examples of supporting documentation include:

- Notification letters of UWMP update;
- Public notice of UWMP hearing;
- Adoption resolution(s) from the agency's governing body;
- Water Shortage Contingency Plan (if a separate, stand-alone document from the UMWP);
- Groundwater Management Plan (if applicable) (*See Section 6.2*);
- California Urban Water Conservation Council (CUWCC) Best Management Practices (BMP) Reports (if applicable) (*See Chapter 9*).

1.5 UWMPs and Grant or Loan Eligibility

1.5.1 Funding Eligibility for Retail and Wholesale Suppliers

ALL URBAN WATER SUPPLIERS

In order for an urban water supplier to be eligible for any water management grant or loan administered by DWR, the agency must have a current UWMP on file that has been determined by DWR to address the requirements of the CWC. A current UWMP must also be maintained by the water supplier throughout the term of any grant or loan administered by DWR.

An UWMP may also be required in order to be eligible for other State funding, depending on the conditions that are specified in the funding guidelines. Agencies should seek guidance on the specifics of any State funding source from the funding agency(ies).

1.5.2 Funding Eligibility for Retail Suppliers Only

CWC 10608.56

(a) *On and after July 1, 2016, an urban retail water supplier is not eligible for a water grant or loan awarded or administered by the state unless the supplier complies with this part.*

(c) *Notwithstanding subdivision (a), the department shall determine that an urban retail water supplier is eligible for a water grant or loan even though the supplier has not met the per capita reductions required pursuant to Section 10608.24, if the urban retail 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 achieving the per capita reductions. The supplier may request grant or loan funds to achieve the per capita reductions to the extent the request is consistent with the eligibility requirements applicable to the water funds.*

(e) *Notwithstanding subdivision (a), the department shall determine that an urban retail water supplier is eligible for a water grant or loan even though the supplier has not met the per capita reductions required pursuant to Section 10608.24, if the urban retail water supplier has submitted to the department for approval documentation demonstrating that its entire service area qualifies as a disadvantaged community.*

(f) *The department shall not deny eligibility to an urban retail water supplier or agricultural water supplier in compliance with the requirements of this part and Part 2.8 (commencing with Section 10800), 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 requirements of this part or Part 2.8 (commencing with Section 10800).*

CCR Section 596.1

(b)(2) *"disadvantaged community" means a community with an annual median household income that is less than 80 percent of the statewide annual median household income.*

RETAIL ONLY

Changes to California law require that beginning in 2016, urban retail water suppliers must comply with water conservation requirements established by the Water Conservation Act of 2009 in order to be eligible for State water grants or loans. For 2015 UWMPs, this means that a retail water agency must meet its 2015 Interim Urban Water Use Target (*see Chapter 5*) and report compliance in the 2015 UWMP.

Suppliers may still be eligible if either of the below requirements are met:

1. The urban retail water supplier submits a schedule, financing plan, and budget, for achieving the per capita reductions; and/or
2. The urban retail water supplier submitted to DWR, for DWR's approval, documentation demonstrating that its entire service area qualifies as a disadvantaged community.

If an agency met its 2015 Interim Target, or met either of the exceptions above, and is participating in a multiagency water project or an Integrated Regional Water Management Plan, it shall remain eligible to receive grants or loans even though one or more of the other participating agencies is not in compliance with the SB X7-7 requirements.

1.6 Tips for UWMP Preparers

ALL URBAN WATER SUPPLIERS

- **Use previous UWMPs and regional UWMPs.** Although the 2015 UWMP should be considered as an update to an agency's previous UWMP, the 2015 UWMP should be able to be read as a stand-alone document. Preparers should ensure that information carried forward from previous UWMPs is up to date. Preparers should also, when possible and available, utilize information from Regional UWMPs or wholesale UMMPs on regional water supply sources, regional demand management programs, and other regional issues that may impact the reliability of an agency's water supply. Summaries of such information, with reference to the Regional UWMP, are acceptable to maintain the Plan's flow and readability.

- **Review the legislative changes since the 2010 UWMP cycle** (Appendix C).
- **Review the UWMP deadline and adoption processes during Plan development.** The adoption and notification processes are detailed in Chapter 10. Suppliers should take into account the time needed for the Plan to be developed, adopted and submitted.
- **Provide an executive summary.** An executive summary provides a useful and concise summary of the Plan for readers, but is not required.
- **If a requirement does not apply to your agency, include an explanation in the UWMP.**
- **Unique situations may require explanation.** In order to clarify a unique situation, UWMP preparers should consider including detailed information in an appendix or as an attachment and provide summary information in the main body of the UWMP. Including explanatory information in the UWMP will clarify the circumstances to readers and to DWR.
- **Importance of narratives and maps.** Narrative descriptions and maps are as important as the data presented in the tables and can greatly enhance the reader's understanding of the tabular data.
- **Using summaries and cross references.** Rather than repeating detailed information from other documents, summarize information and provide a reference to source documents. Avoid repeating information in more than one chapter of the UWMP; use cross references as appropriate.
- **Use the checklist.** A checklist of specific UWMP requirements is included in Appendix F. The UWMP preparer is requested to complete this checklist and enter the page number where the required element is addressed to assist in the DWR review of the submitted UWMP.
- **Use the Guidebook appendices.** The appendices provide detailed and specific information, such as a glossary of terms (Appendix G), or supporting documents related to preparing a UWMP (Appendix H).
- **Ask for guidance or clarification.** If there is a question about what to include in an UWMP prior to adoption, please contact a DWR regional team member.

1.7 DWR Contact Information

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Region	**DWR UWMP Staff**	**Phone**	**Email**
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Chapter 2
Plan Preparation

This section provides guidance on determining whether or not a water supplier is required to write an UWMP and describes the various levels of regional coordination that an agency may employ. It also includes guidance and tables for two pieces of information that will apply throughout the UWMP; the use of fiscal or calendar year and the units of measure used by the agency to report water volumes.

Coordination and outreach are key elements to developing a useful and accurate UWMP. For example, working with neighboring water suppliers strengthens a region's ability to plan for drought and catastrophic events; city and county land use planning agencies can provide information on regional planning, demographics, and expected future development.

Because UWMP preparation and development may be accomplished in many ways, water agencies may choose to include a summary of the process they used to prepare the Plan. They may include such activities as designation of a planning team, holding public meetings, the extent of coordination with other agencies, use of this Guidebook, or the use of assistance from a consulting firm.

This chapter includes guidance on preparing the following sections:

2.1 Basis for Preparing a Plan

2.2 Regional Planning

2.3 Individual or Regional Planning and Compliance

2.4 Fiscal or Calendar Year and Units of Measure

2.5 Coordination and Outreach

2.1 Basis for Preparing a Plan

CWC 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…

CWC 10620

(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.*

CWC 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, except as provided in subdivision (d).*

(d) *Each urban water supplier shall update and submit its 2015 plan to the department by July 1, 2016.*

R
W

ALL URBAN WATER SUPPLIERS

In accordance with the CWC, urban water suppliers with 3,000 or more service connections or supplying 3,000 or more acre-feet of water per year are required to prepare an UWMP every five years.

If an agency is under this defined threshold for the year that an UWMP is due, but meets this threshold before the next reporting cycle, the agency is required to adopt an UWMP within one year after meeting the reporting threshold.

Water suppliers will provide a brief discussion of the applicability of CWC 10617 to their agency.

2.1.1 Public Water Systems

CWC 10644

(a)(2) *The plan, or amendments to the plan, submitted to the department … shall include any standardized forms, tables, or displays specified by the department.*

CWC 10608.52

(a) *The department, in consultation with the board, the California Bay-Delta Authority or its successor agency, the State Department of Public Health, and the Public Utilities Commission, shall develop a single standardized water use reporting form to meet the water use information needs of each agency, including the needs of urban water suppliers that elect to determine and report progress toward achieving targets on a regional basis as provided in subdivision (a) of Section 10608.28.*

(b) *At a minimum, the form shall be developed to accommodate information sufficient to assess an urban water supplier's compliance with conservation targets pursuant to Section 10608.24… The form shall accommodate reporting by urban water suppliers on an individual or regional basis as provided in subdivision (a) of Section 10608.28.*

California Health and Safety Code 116275

(h) *"Public Water System" means a system for the provision of water for human consumption through pipes or other constructed conveyances that has 15 or more service connections or regularly serves at least 25 individuals daily at least 60 days out of the year.*

R
W

ALL URBAN WATER SUPPLIERS

Public Water Systems (PWSs) are the systems that provide drinking water for human consumption. These systems are regulated by the State Water Resources Control Board (Board), Division of Drinking Water.

The California Health and Safety Code defines a "Public Water System" as shown in the text box above.

R

RETAIL ONLY

PWS data reported to the Board is used to determine whether or not a retail supplier has reached the UWMP reporting threshold of 3,000 or more connections or 3,000 acre-feet of water supplied. This is done by reviewing the number of connections and volume of water supplied by each PWS that is managed by the water supplier.

Reporting the PWS(s) that are managed by a water agency demonstrates the basis of reporting, that is, if the agency is considered an urban water supplier for purposes of submitting an UWMP.

W

WHOLESALE ONLY

Agencies that are exclusively or primarily wholesale water agencies are not required to provide PWS information.

RECOMMENDED

PWS information from wholesale suppliers is requested if available.

2.1.2 Agencies Serving Multiple Service Areas/Public Water Systems

R
W

ALL URBAN WATER SUPPLIERS

Many water suppliers within the State have more than one PWS. Such suppliers may determine regional groupings and reporting for these systems based on internal planning requirements, geographic distribution, and similarities between systems. Each PWS that exceeds the UWMP size threshold must either have an individual plan or be included in a multiple system plan.

TABLES

Table 2-1

Provide the names and numbers of each PWS (drinking water only) that is managed by the agency and reported in this UWMP. For Regional UWMPs (RUWMPs), agencies will use multiple versions of Table 2-1; one for each participating retail agency.

R

Table 2-1 Retail Only: Public Water Systems			
Public Water System Number	Public Water System Name	Number of Municipal Connections 2015	Volume of Water Supplied 2015
Up to 20 entries allowed.			
	TOTAL	0	0
NOTES:			

2.2 Regional Planning

R W

ALL URBAN WATER SUPPLIERS

Before developing the UWMP, water agencies should consider the extent to which they will become involved in regional planning processes. Developing a cooperative 2015 UWMP may be a natural continuation of other regional coordination efforts, such as Integrated Regional Water Management, or may present an opportunity to begin regional collaboration.

Regional planning can deliver mutually beneficial solutions to all agencies involved by reducing costs for the individual agency, assessing water resources at the appropriate geographic scale, and allowing for solutions that cross jurisdictional boundaries.

Some of the other possible benefits, depending on the level of regional cooperation, can include:

- More reliable water supplies;
- Increased regional self-reliance;

- Improved water quality;
- Better flood management;
- Increased economic stability;
- Restored and enhanced ecosystems; and
- Reduced conflict over resources.

In support of regional UWMPs and regional water conservation targets, the UWMP portion of the CWC provides mechanisms for participating in area-wide, regional, watershed, or basin-wide urban water management planning.

Section 2.3 and Appendix D of this Guidebook provide guidance to water suppliers for developing regional plans and for cooperative reporting of 2020 targets in a Regional Alliance.

2.3 Individual or Regional Planning and Compliance

ALL URBAN WATER SUPPLIERS

Before developing the UWMP, water suppliers should decide the level of regional coordination that they wish to engage in for the 2015 cycle of urban water management planning.

Regional planning provides many benefits, including increasing regional self-reliance, reducing the need for imported water, and proper management of regional water assets. Good regional planning considers all interests and works across jurisdictional boundaries.

Agencies may choose:

- **Individual Reporting** - An agency develops an UWMP that reports solely on its service area. The individual UWMP addresses all requirements of the CWC. The agency notifies and coordinates with appropriate regional agencies and constituents.
- **Regional Reporting** - Working with an Integrated Regional Water Management (IRWM) group, wholesaler, other retailers, or another regional entity, an agency becomes part of a regional group that may develop either a:

- **RUWMP -** A regional group develops a RUWMP that reports on their combined regional service area. The RUWMP must address all the requirements of the CWC, but the requirements of SB X7-7 may be addressed either by individual agencies or through a Regional Alliance or both (see section 2.3.2 below). RUWMPs will submit data for multiple agencies, requiring duplication of many standardized tables. The supplier will need to copy the required tables and notate each of the copies with the name of the agency to which the table pertains.
- **Regional Alliance -** A regional group develops a Regional Alliance that addresses only the requirements of the Water Conservation Act of 2009 (SB X7-7), that is, planning, reporting and complying as a Regional Alliance on 2015 and 2020 water use targets. This is done by completing the SB X7-7 Verification Form for a Regional Alliance, Option 1, 2, or 3. All other elements of the CWC must be addressed through either an individual or RUWMP. Water suppliers considering a Regional Alliance are strongly advised to read Methodology 9 of the *Methodologies* document for detailed guidance on how to proceed.

2.3.1 Regional UWMP

> ***CWC 10620***
> ***(d)(1)*** *An urban water supplier may satisfy the requirements of this part by participation in area wide, regional, watershed, or basin wide urban water management planning where those plans will reduce preparation costs and contribute to the achievement of conservation and efficient water use.*

ALL URBAN WATER SUPPLIERS

Water agencies may find it beneficial to collaborate with other water suppliers to develop a Regional UWMP (RUWMP or Regional Plan).

The RUWMP must address all the requirements of the CWC. The requirements of SBX7-7 may be addressed either by individual agencies, through a Regional Alliance, or both. Some elements of the RUWMP, such as each agency's supply and demand information, must be reported on an individual agency-by-agency basis within the RUWMP. Providing the sum of the supplies and demands from each agency in order to report the regional supply and demand is not required, although it may be submitted.

R W

Other elements in the RUWMP may be reported as an aggregate of all the agencies' information, such as, a regional Water Shortage Contingency Plan that clearly includes the actions and regional reliance of all agencies in response to a water shortage.

Each participating water supplier is required to adopt the RUWMP, and each adoption resolution must be submitted to DWR.

If an agency participates in a RUWMP and also prepares its own individual UWMP, its governing board must adopt both the regional and individual Plans.

R

RETAIL ONLY

Within the RUWMP, agencies may determine and report targets and baselines in one of two ways, either on a regional basis through a Regional Alliance (see Section 2.3.2), or by individual agency.

2.3.2 Regional Alliance

CWC 10608.20

(a)(1) *…Urban retail water suppliers may elect to determine and report progress toward achieving these targets on an individual or regional basis as provided in subdivision (a) of Section 10608.28…*

CWC 10608.28

(a) *An urban retail water supplier may meet its urban water use target within its retail service area, or through mutual agreement by any of the following:*

(1) *Through an urban wholesale water supplier.*

(2) *Through a regional agency authorized to plan and implement water conservation, including, but not limited to, an agency established under the Bay Area Water Supply and Conservation Agency Act (Division 31 (commencing with Section 81300)).*

(3) *Through a regional water management group as defined in Section 10537.*

(4) *By an integrated regional water management funding area.*

(5) *By hydrologic region.*

(6) *Through other appropriate geographic scales for which computation methods have been developed by the department.*

(b) *A regional water management group, with the written consent of its member agencies, may undertake any or all planning, reporting, and implementation functions under this chapter for the member agencies that consent to those activities. Any data or reports shall provide information both for the regional water management group and separately for each consenting urban retail water supplier and urban wholesale water supplier.*

R

RETAIL ONLY

A group of water suppliers agreeing among themselves to plan, comply, and report as a region on the requirements of SB X7-7 is referred to as a "Regional Alliance." Each Regional Alliance will develop its own set of Interim 2015 and 2020 Urban Water Use Targets.

A Regional Alliance allows water suppliers to work toward cooperatively developing programs and meeting regional water conservation targets, but not necessarily submitting a Regional Plan. Being a member of a Regional Alliance does not take the place of submitting an UWMP or RUWMP.

A Regional Alliance may either be a part of a RUWMP or may be a group of suppliers that submit a Regional Alliance report and individual UWMPs.

Note that an individual supplier's compliance with an Interim 2015 Water Use Target will be assessed based upon how the individual retail water supplier performs relative to its individual target, or how the supplier's Regional Alliance performs as a whole in relation to its regional target.

Detailed guidance for a Regional Alliance, including criteria for participating in a Regional Alliance, reporting requirements, calculation of regional targets, and compliance assessment, is found in Methodology 9 of the *Methodologies* document.

TABLES

Table 2-2

UWMP preparers must complete Table 2-2: Plan Identification. Each UWMP will have only one Table 2-2; this table will not be copied for multiple agencies within an RUWMP.

Table 2-2: Plan Identification (Select One)			
Select Only One	**Type of Plan**		**Name of RUWMP or Regional Alliance** *if applicable* *drop down list*
☐	**Individual UWMP**		
	☐	Water Supplier is also a member of a RUWMP	
	☐	Water Supplier is also a member of a Regional Alliance	
☐	**Regional UWMP (RUWMP)**		
NOTES:			

2.4 Fiscal or Calendar Year and Units of Measure

CWC 1608.20
(a)(1) *Urban retail water suppliers…may determine the targets on a fiscal year or calendar year basis.*

2.4.1 Fiscal or Calendar Year

R W

ALL URBAN WATER SUPPLIERS

A water supplier may report on a fiscal year or calendar year basis, but must clearly state in the UWMP the type of year that is used for reporting. The type of year should remain consistent throughout the Plan.

DWR prefers that agencies report on a calendar year basis in order to ensure UWMP data is consistent with data submitted in other reports to the State. However, DWR also understands that for some agencies fiscal year reporting ensures consistency with local, regional, and/or financial reports. The agency may report either calendar year or fiscal year data in the UWMP.

For agencies that are reporting on a fiscal year basis: table columns labeled with particular years signify the end year of the fiscal year. For example, 2015 denotes the fiscal year 2014-2015. The UWMP preparer will note the start day and month of the agency's fiscal year in Table 2-3.

2.4.2 Reporting Complete 2015 Data

R W

ALL URBAN WATER SUPPLIERS

2015 UWMPs are required to include the water use and planning data for the entire calendar year of 2015, if an agency is reporting on a calendar year basis. If an agency is reporting on a fiscal year basis, it may complete its 2015 UWMP at the end of its fiscal year and include the water use and supply data for their fiscal year 2014-2015.

2.4.3 Units of Measure

ALL URBAN WATER SUPPLIERS

Water agencies use various units of measure when reporting water volumes, such as acre-feet (AF), million gallons (MG), or hundred cubic feet (CCF). Agencies may report volumes of water in any of these units, but must **maintain consistency throughout the Plan.**

Report the units of measure that the water agency will be using to report water volume throughout the UWMP in Table 2-3.

TABLES

Table 2-3

Complete Table 2-3 with the name of the agency, type of agency, type of reporting year, and the units of measure. RUWMPs will use multiple versions of Table 2-3; one for each participating agency.

Table 2-3: Agency Identification	
Type of Agency (select one or both)	
☐	Agency is a wholesaler
☐	Agency is a retailer
Fiscal or Calendar Year (select one)	
☐	UWMP Tables Are in Calendar Years
☐	UWMP Tables Are in Fiscal Years
If Using Fiscal Years Provide Date and Month that the Fiscal Year Begins (dd/mm)	
dd/mm	
Units of Measure Used in UWMP (select from Drop down)	
Unit	AF MG CCF
NOTES:	

2.5 Coordination and Outreach

CWC 10631

(j) *An urban water supplier that relies 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).*

2.5.1 Wholesale and Retail Coordination

R W

ALL URBAN WATER SUPPLIERS

When a water supplier relies upon a wholesale agency for a water supply, both suppliers are required to provide each other with information regarding projected water supply and demand, as described below. These projections should be consistent with each agency's supply and demand projections as reported in the appropriate tables of Chapter 4 and Chapter 6 of this Guidebook.

R

RETAIL ONLY

Retail agencies that receive a water supply from one or more wholesalers are required to provide their wholesaler(s) with the retail agency's projected water demand from that source, in five-year increments for 20 years, or as far as data is available.

W

WHOLESALE ONLY

Wholesale agencies are required to provide information to their customer urban water suppliers identifying and quantifying water supplies available to those agencies from the wholesaler, to the extent practicable. This information shall be projected in increments of five years, from 2015 through 2035 and for average, single, and multiple-dry years.

TABLES

Table 2-4

Complete Table 2-4: Water Supplier Information Exchange. RUWMPs will use multiple versions of Table 2-4; one for each participating agency.

Table 2-4 Wholesale: Water Supplier Information Exchange (select one)	
☐	Supplier has informed more than 10 other water suppliers of water supplies available in accordance with CWC 10631. Completion of the table below is optional. If not completed include a list of the water suppliers that were informed.
	Provide page number for location of the list.
☐	Supplier has informed 10 or fewer other water suppliers of water supplies available in accordance with CWC 10631. **Complete the table below.**
Water Supplier Name	
Up to 10 entries allowed.	
NOTES:	

Table 2-4 Retail: Water Supplier Information Exchange
The retail supplier has informed the following wholesale supplier(s) of projected water use in accordance with CWC 10631.
Wholesale Water Supplier Name
Up to 5 entries allowed.
NOTES:

2.5.2 Coordination with Other Agencies and the Community

CWC 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.*

CWC 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...

ALL URBAN WATER SUPPLIERS

Water suppliers must coordinate the preparation of their UWMP with other appropriate agencies in the area, to the extent practicable. In order to verify that agencies have fulfilled the above CWC provisions, agencies are to include a description of their outreach and coordination activities to other agencies and the community, as described in CWC 10620(d)(2) and CWC 10642.

RECOMMENDED

UWMP preparers are strongly encouraged to solicit participation from other agencies responsible for developing related reports or planning documents such as General Plans, Water Master Plans, Groundwater Management Plans, or PWS reports. Such coordination ensures consistency in planning and reporting.

The following is a non-comprehensive list of agencies and organizations with which the supplier may seek to coordinate:

- Public agencies;
- Cities and counties that are served by agency (REQUIRED);
- Local wastewater and/or stormwater entities;
- Regional boards/agencies;
- School districts;
- Economic development agencies;

- Park districts;
- Councils of governments (e.g., COGs, CAGs, etc…);
- Water management organizations;
- Other urban water suppliers;
- Water agencies that share a common source;
- IRWM groups;
- Groundwater management entities;
- Watershed groups;
- Residential customers;
- Large commercial, industrial, institutional (CII) water users;
- Home owners' associations (HOAs);
- Diverse elements of the population;
- Building industry;
- Native American tribes;
- Chambers of commerce;
- Environmental organizations;
- Civic organizations.

2.5.3 Notice to Cities and Counties

CWC 10621 (b)

Every urban water supplier required to prepare a plan pursuant to this part shall, at least 60 days before 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.

ALL URBAN WATER SUPPLIERS

(*See also Section 10.1.1*)

CWC 10621 (b) requires that agencies notify cities and counties to which they serve water that the Plan is being updated and reviewed. The CWC specifies that this must be done at least 60 days prior to the public hearing. These notifications to cities and counties will be reported in Table 10-1 (See Chapter 10).

RECOMMENDED

DWR encourages water agencies to send this notification at the start of the UWMP process, well in advance of the required 60 days prior to the UWMP public hearing.

The CWC only requires that the city or county be notified of the Plan update. However, water agencies are encouraged to include the UWMP revision schedule, contact information of the UWMP preparer, and the location where the UWMP can be viewed.

Notification letters to cities and counties may be addressed to the City Manager, County Administrator, or to other local contacts as appropriate for the service area of the water supplier.

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Chapter 3
System Description

A thorough description of the water system and the service area provides information to the reader that can help in understanding various elements of water supply and demand.

Chapter 3 provides guidance for describing the urban water supplier's system, including a description of the service area, climate, and projected population. It also provides additional guidance for other items which are not required but are recommended, such as the potential impacts of climate change.

This chapter includes the following sections:

3.1 General Description

3.2 Service Area Boundary Map(s)

3.3 Service Area Climate

3.4 Service Area Population and Demographics

3.1 General Description

CWC Section 10631
Describe the service area of the supplier.

R W

ALL URBAN WATER SUPPLIERS

Provide a description of the service area of the supplier.

RECOMMENDED

Consider including a narrative description of the proportion of the area that is already built-out versus areas of future development. This will provide a clearer understanding of the extent of land use in the supplier's service area.

Water suppliers are encouraged to include information on the organizational structure of the agency. This could include the agency's history, whether or not the agency is a public or private entity, a description of the agency's governance, and a history and description of any consolidations or annexations.

Other documents, such as the General Plan or Water Master Plan, may provide greater detail on these topics. Rather than repeating this detailed information, agencies may summarize the relevant information and provide a reference to these documents.

R

RETAIL ONLY

If there are any significant areas within the service area boundary that are NOT served by the water supplier, (e.g., an institution served exclusively by a private well) note this in the service area description. The population in any such unserved area will be excluded when calculating the population for purposes of SB X7-7 compliance (see Chapter 5).

RECOMMENDED

Agencies may provide an overview of the service area's significant water uses. For example, some agencies may have a large CII entity that accounts for a significant portion of water demand. Others may have high water use for landscape irrigation due to large residential lots and a particularly arid climate.

3.2 Service Area Boundary Maps

R W

ALL URBAN WATER SUPPLIERS

Water suppliers are encouraged to include service area boundary maps in the UWMP.

RECOMMENDED

Appropriate maps that are recommended for inclusion in the UWMP include:

- Potable Water Service Area – The boundary encompassing the entire potable water service area of the suppler. This may include multiple public water systems;
- Public Water System(s) – The boundary containing the distribution system(s) of the agency's Public Water System(s);
- Raw Water Distribution System – The boundary containing the raw water distribution system, as applicable. Note that this does not include any recycled water system(s);
- Recycled Water System – See Section 6.5.3 for guidance on mapping of a recycled water system;
- Jurisdictional Boundary – This boundary includes the potable and non-potable distribution system boundary(ies) and any additional areas that fall within the water suppliers jurisdiction;
- Service Area Changes – If there have been changes to the service area from the beginning of the baseline period through 2015, agencies are encouraged to submit maps that display these changes.

R

RETAIL ONLY

See Section 5.4 for guidance on the use of service area maps for estimating population for SB X7-7.

3.2.1 Map Format Recommendations

R W

ALL URBAN WATER SUPPLIERS

Recommendations for map formatting are below.

RECOMMENDED

DWR's preference is to obtain electronic service area boundary maps. Note that electronic boundary maps will be needed to use DWR's Population Tool (see Section 5.4.1.2). Electronic maps can be created by using the California Environmental Health Tracking Program (CEHTP) found at http://cehtp.org/page/water/, Google Earth, or other tools. Other resources to obtain electronic maps include a Local Agency Formation Commission (LAFCO), a local Council of Governments, a regional wholesale water agency, a private consulting service, or a regional university. If an electronic, geospatial map layer (such as .shp, or KML file) of the service area map is submitted, agencies are encouraged to include the following metadata:

- Map projection;
- Contact information for the person that created the map;
- Start and end dates for which the map is valid;
- Constraints;
- Attribute table definitions;
- Digitizing base (e.g., USGS 7.5 minute quadrangle, or 1-meter resolution 2010 digital aerial photograph).

3.3 Service Area Climate

CWC Section 10631

Describe the service area of the supplier, including… climate…

ALL URBAN WATER SUPPLIERS

Agencies are required to provide information that assists in understanding the area's climate and its possible impacts on water management. Agencies may report climate information in a narrative format, in tabular format (no standardized table is provided for this), or a combination of both.

RECOMMENDED

This description could include average reference evapotranspiration (ETo), temperature, precipitation patterns, as well as a description of any challenges associated with providing water in a particular climate.

Climate information can be obtained from several sources:

- California Irrigation Management Information System (CIMIS) http://www.cimis.water.ca.gov
- Western Regional Climate Information Center
- Weather stations in the service area
- National Oceanographic and Atmospheric Agency (NOAA)
- PRISM/SIMETAW http://www.water.ca.gov/urbanwatermanagement/uwmp2015.cfm

If the water agency is reporting more than one service area in a UWMP, or a large service area with differences in climate, the agency may report the different climates separately, or may provide climate information that averages the climate of the entire service area.

3.3.1 Climate Change

R W

ALL URBAN WATER SUPPLIERS

The CWC does not require that UWMPs address climate change. However, scientists and water managers are beginning to observe the effects of climate change and identifying associated risks in water planning.

RECOMMENDED

Suppliers are encouraged to include a discussion of climate change in their UWMPs.

DWR recommends that suppliers complete the IRWM Climate Change Vulnerability Assessment (see Appendix I) and include a narrative summary of relevant information such as Section IV Sea Level Rise, Section V Flooding, Section VI Ecosystem and Habitat Vulnerability, and/or Section VII Hydropower. The summary should include a discussion of any planned actions to address noted vulnerabilities from the climate change assessment.

3.4 Service Area Population and Demographics

CWC Section 10631

Describe the service area of the supplier, including current and projected population …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 .

ALL URBAN WATER SUPPLIERS

Provide current and projected population estimates for the service area in Table 3-1.

The CWC does not require a specific methodology for projecting future populations, but it does require that the estimates of future population be based upon data from State, regional, or local service agency population projections. Include the source(s) used to estimate the population projections (2020, 2025 etc…).

Suppliers must state their source of population data projections. If the agency does not use population projections directly from a standard source, (e.g., a general plan, or the local council of governments) but instead develops its own projections, the UWMP must describe how these projections were developed.

RECOMMENDED

Describe the proportion of the service area that is already built out versus the proportion that remains to be developed. This description is particularly useful for agencies that are fully built-out and expect a very low rate of population growth.

RETAIL ONLY

Retail suppliers must report their 2015 population in two separate areas of the UWMP:

- Table 3-1: Population-Current and Projected, and
- SB X7-7 Table 3: Service Area Population.

RECOMMENDED

The population calculations for SB X7-7 Table 3 require the use of a specific methodology (Methodology 2 of the *Methodologies* document) whereas the population estimates for Table 3-1 have no such methodology. Because of the specific guidance provided for SB X7-7 Table 3, DWR recommends that the 2015 population calculated for SB X7-7 Table 3 be used to complete the 2015 population in Table 3-1.

TABLES

Table 3-1

Complete Table 3-1: Population – Current and Projected. RUWMPs will use multiple versions of Table 3-1; one for each participating agency.



Table 3-1 Wholesale: Population - Current and Projected						
Population Served	2015	2020	2025	2030	2035	2040*(opt)*
NOTES:						



Table 3-1 Retail: Population - Current and Projected						
Population Served	2015	2020	2025	2030	2035	2040*(opt)*
NOTES:						

3.4.1 Other Demographic Factors

CWC 10631

Describe the service area of the supplier, including. . . other demographic factors affecting the supplier's water management planning.



ALL URBAN WATER SUPPLIERS

Include a discussion of other demographic factors that may affect water management and planning.

RETAIL ONLY

If there are significant non-residential populations, such as seasonal populations based on vacation, agricultural, institutional, or commercial economies, provide a brief narrative describing this element of the population and how the agency's population estimates incorporated this element.

RECOMMENDED

Provide a description of the population density in the service area, such as a comparison of the number of single-family homes to multi-family homes, or large lots versus small lots. This can help explain unusually high or low water use.

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Chapter 4
System Water Use

This chapter provides guidance for describing and quantifying the agency's current water use and water use projections through the year 2035 to the extent that records are available.

Accurately tracking and reporting current water demands allow a water supplier to properly analyze the use of their resources and conduct good resource planning. Estimating future demand as accurately as possible allows water agencies to manage their water supply and appropriately plan their infrastructure investments. Assessments of future growth and related water demand, done in coordination with local planning agencies, provide essential information for developing demand projections. Agencies are encouraged to coordinate and communicate with other planning agencies when developing demand projections.

Agencies are encouraged to review Appendix K - Estimating Future Water Savings. This appendix provides an optional approach for including conservation savings in water use projections. Various factors, such as codes, standards, ordinances, or transportation and land use plans may significantly reduce water use over time. Appendix K provides a method for reflecting these future savings in projected water demand.

It is also important to note that many planning agencies, whether local, regional, or statewide, rely upon water agencies' current water demand reports and demand projections in order to manage water resources on a larger scale.

For purposes of the UWMP, the terms "water use" and "water demand" will be used interchangeably. These terms will also be used to refer to all the demand sectors listed in Section 4.2.

This chapter is divided into the following subsections:

4.1 Recycled versus Potable and Raw Water Demand

4.2 Water Uses by Sector

4.3 Distribution System Water Losses

4.4 Estimating Future Water Savings

4.5 Water Use for Lower Income Households

4.6 Climate Change (Optional)

4.1 Recycled versus Potable and Raw Water Demand

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ALL URBAN WATER SUPPLIERS

In order to clearly distinguish recycled from potable and raw water demand, guidance and suggested reporting for these demands is discussed separately in this Guidebook.

Recycled water is addressed comprehensively in Section 6.5 of Chapter 6, but a summary of recycled water demand is included in Table 4-3.

Chapter 4 addresses potable water demand and also provides for the reporting of raw water demand for the year 2015. Raw water use in 2015 is reported in Table 4-1, and will be denoted as "raw water" by using the column labeled "Level of Treatment" and selecting "Raw Water" from the drop down menu.

4.2 Water Uses by Sector

CWC 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).*

ALL URBAN WATER SUPPLIERS

Water agencies must include past, current, and projected water use in the UWMP in five-year increments. Water agencies are to make their determination of the reliability of their projected water supply(ies) based upon information that is reasonably available at the time the 2015 UWMP is prepared.

Agencies will also identify the water use by sector to the extent that records are available. Suppliers are directed to use as many water demand sectors as are applicable to provide a better understanding of water use by the supplier. Suppliers are not required to enter a volume for each water sector listed, only those sectors that are used by the supplier and to the extent that records are available.

The sectors listed below and in Tables 4-1 and 4-2 are the only sectors that will be accepted by the Water Use Efficiency (WUE) data online submittal tool. If there is a difference between the sectors used by the agency and the sectors listed in the sections below, agencies must report using the "Other" sector and provide a description of that water use.

RECOMMENDED

Include a narrative description of how demand projections are estimated.

Agencies may reference any documents used to estimate projected demands.

Appendix K provides a method for calculating expected savings from codes, standards, and land use planning (also known as "passive savings") in estimates of future water demand. Although inclusion of these expected passive savings is optional, water agencies are encouraged to read this guidance and use this approach.

RETAIL ONLY

Some retail agencies also supply wholesale demands. If the retail supplier's wholesale demands do not exceed 3,000 AF/year, the supplier is not considered a wholesaler and is not required to complete the standardized tables for a wholesaler. This small volume of wholesale demand will be reported in the agency's retail Tables 4-1 and 4-2 using the appropriate water use sector.

W

WHOLESALE ONLY

When reporting water uses uses/demands in Table 4-1 and Table 4-2, wholesalers will only report their direct uses. They will not report the uses of other agencies to which they provide water. For example, if a wholesaler sells water to a retailer, and the retailer uses that water for their industrial customers, the wholesaler is only required to report the sale to the other agency in Table 4-1 and Table 4-2. The retailer is responsible for reporting the uses of their water supply to the industrial customer in their own UWMP.

RECOMMENDED

Wholesale agencies may report on the entirety of water use within their service area by aggregating water demand reported from all suppliers in the service area. Aggregated reporting of all water use within a wholesalers service area is not required by the CWC and no standardized table is provided for compiled service area demand. Wholesale suppliers that report this aggregated service area demand may include a non-standardized table for this data in their UWMP.

4.2.1 Demand Sectors Listed in Water Code

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ALL URBAN WATER SUPPLIERS

For purposes of the 2015 UWMPs, the following definitions are used by DWR for each of the water sectors listed in the CWC. The order of the sectors follows the order found in the CWC. Each of these sectors, as well as those recommended in Section 4.2.2, are the only sectors that will be accepted by the WUE data online submittal tool. Sectors are listed in the order of the CWC.

4.2.1.1 Single-family residential

A single-family dwelling unit. A lot with a free-standing building containing one dwelling unit that may include a detached secondary dwelling. This is a retail demand.

4.2.1.2 Multi-family

Multiple dwelling units contained within one building or several buildings within one complex. This is a retail demand.

4.2.1.3 Commercial

A water user that provides or distributes a product or service. CWC 10608.12 (d). This is a retail demand.

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4.2.1.4 Industrial

A water user that is primarily a manufacturer or processor of materials as defined by the North American Industry Classification System (NAICS) code sectors 31 to 33, inclusive, or an entity that is a water user primarily engaged in research and development. CWC 10608.12 (h). The following link is to the NAICS website: http://www.census.gov/cgi-bin/sssd/naics/naicsrch. This is a retail demand.

4.2.1.5 Institutional (and governmental)

A water user dedicated to public service. This type of user includes, among other users, higher education institutions, schools, courts, churches, hospitals, government facilities, and nonprofit research institutions. CWC 10608.12 (i). This is a retail demand.

4.2.1.6 Landscape

Water connections supplying water solely for landscape irrigation. Such landscapes may be associated with multi-family, commercial, industrial, or institutional/governmental sites, but are considered a separate water use sector if the connection is solely for landscape irrigation. This is a retail demand.

4.2.1.7 Sales to other agencies

Water sales made to another agency. Projected sales may be based on projected demand provided by the receiving agency. There is inherent uncertainty in future projections, therefore, any projected sales reported in the UWMP are for planning purposes only and are not considered a commitment on the part of the seller. This is a wholesale demand.

Water agencies will determine whether their demands are considered sales, transfers, or exchanges; reporting in the UWMPs will reflect the agencies' determination of these water demands.

Some retail agencies also supply water to other agencies. This is considered a wholesale demand.

4.2.1.8 Conjunctive use

A management strategy where surface water is managed in conjunction with an underground aquifer. For purposes of the UMWP, conjunctive use is seen as a management strategy rather than as a demand. Do not use the sector "conjunctive use" as a demand. The water demand would best be reported as groundwater recharge, or as "Other".

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4.2.1.9 Groundwater Recharge

The managed and intentional replenishment of natural groundwater supplies using man-made conveyances such as infiltration basins or injection wells. Water used for groundwater banking or storage may also be reported using this sector.

If all, or a portion of, the groundwater recharge water is subsequently pumped out of the basin in the same year, that water will be reported by the pumping agency as a supply from groundwater (Tables 6-1 and/or 6-8 and 6-9). This may be either a wholesale or retail demand.

4.2.1.10 Saline water intrusion barriers

Injection of water into a fresh water aquifer to prevent the intrusion of salt water. This may be either a wholesale or retail demand.

4.2.1.11 Agricultural

Water used for commercial agricultural irrigation. Note that water used for processing agricultural products (e.g., food, beverage, or textile manufacturing) may be considered industrial process water, rather than an agricultural water use. Industrial process water may be excluded from gross water use for SB X7-7 calculations, see section 5.5 of Chapter 5. To be classified as industrial process water, the water use must fall under Sector 31, 32, or 33 of the North American Industry Classification System (NAICS) code. http://www.census.gov/cgi-bin/sssd/naics/naicsrch. This may be either a wholesale or retail demand.

4.2.1.12 Distribution System Losses

Reporting of system losses is required by the CWC in the 2015 UWMPs. See Section 4.3 and Appendix L for details on the required methodology for calculating system losses. The CWC requires reporting losses for the most recent 12 months for which data is available, which can be taken to mean the calendar year or fiscal year used for data reporting throughout the rest of the UWMP. Report the losses for the most recent 12 months available in Table 4-1. If the reported water losses are for a 12 month period that is different from the calendar or fiscal year used for data reporting throughout the rest of the UWMP, the water supplier will state this in the UWMP. This is both a wholesale and a retail demand.

4.2.2 Demand Sectors in Addition to Those Listed in Water Code

ALL URBAN WATER SUPPLIERS

RECOMMENDED

The water demand sectors below are not specifically listed in, nor required by the CWC. They can, however, help some agencies account for the entirety of their demand. The water use in these sectors is to be reported as records are available.

4.2.2.1 Exchanges

The agency will make a determination as to whether water sent to another agency is a sale, transfer, or exchange. This is a wholesale demand.

Water exchanges are typically water delivered by one water user to another water user, with the receiving water user returning the water at a specified time or when the conditions of the parties' agreement are met. Water exchanges can be strictly a return of water on a basis agreed upon by the participants or can include payment and the return of water. The water returned may or may not be an "even" exchange. Water can be returned on a one-for-one basis or by another arrangement (e.g., for each acre-foot (AF) of water received, 2 AF are returned).

Some retail agencies provide exchange water to other agencies. This is considered a wholesale demand.

4.2.2.2 Surface Water Augmentation

The planned placement of recycled water into a surface water reservoir that is used as a source of domestic drinking water supply. (Used in Chapter 6, Section 6.5 Recycled Water).

4.2.2.3 Transfers

The agency will make a determination as to whether water sent to another agency is a sale, transfer, or exchange. This is a wholesale demand.

The CWC defines a water transfer as a temporary or long-term change in the point of diversion, place of use, or purpose of use due to a transfer, sale, lease, or exchange of water or water rights.

Transfers can be between water districts that are neighboring or across the State, provided there is a means to convey or store the water. A water transfer can be a temporary or permanent sale of water or a water right by the water right holder, a lease of the right to use water from the water right holder, or a sale or lease of a contractual right to water supply. Water transfers can also take the form of long-term contracts for the purpose of improving long-term supply reliability.

Some retail agencies transfer water to other agencies. This is considered a wholesale demand.

4.2.2.4 Wetlands or Wildlife Habitat

Water used for a managed environmental use to improve an environmental condition. This may be a wholesale or retail demand.

4.2.2.5 Other

Any water demand that is not adequately described by the water sectors defined above. Examples include:

- The agency does not track, or may not project, water use by the individual sectors listed in sections 4.1 and 4.2.
    - An agency does not track actual water demand, and/or project water demand, by individual sectors. Such agencies will report their total demand in this category. Agencies are required to report water use by sector to the extent that records are available.
    - The supplier combines commercial, industrial, and institutional into one sector called "CII".
    - An agency combines their single-family and multi-family sectors into one sector that they define as "residential".
- Unbilled, authorized consumption, such as water used for firefighting, line flushing or other unbilled uses.
- When using the "Other" category as a water use sector, the agency is required to briefly describe the water uses reported in this category (i.e., firefighting). NOTE: Beginning with the 2015 UWMP cycle, system water losses are not to be reported in the "Other" category; system water losses are reported separately as "Losses". (See Section 4.2.1.12).

TABLES

RUWMPs will use multiple versions of Tables 4-1, 4-2, and 4-3; one for each participating agency.

Table 4-1

Complete Table 4-1: Demands for Potable and Raw Water – Actual. This table is used to report the actual water demands of the supplier for the year 2015 (fiscal or calendar).

Table 4-2

Complete Table 4-2: Demands for Potable and Raw Water – Projected. This table is used to report projected water demands through the year 2035 and may be used to report projected water use for 2040. Suppliers will complete this table using as many sectors as possible, given the extent of available records and data.

Table 4-3

Total Water Demands. The online submittal tool and Excel version of this table will auto fill using data alread reported in Tables 4-1 (Potable and Raw Water - Actual), 4-2 (Potable and Raw Water – Projected) and 6-4 (Recycled Water).

Table 4-1 Wholesale: Demands for Potable and Raw Water - Actual

Use Type *Drop down list* *May select each use multiple times* *These are the only use types that will be recognized by the WUE data online submittal tool*	2015 Actual		
	Additional Description *(as needed)*	Level of Treatment When Delivered *Drop down list*	Volume
Sales to other agencies		*Drinking Water*	
Transfers to other agencies		*Raw Water*	
Exchanges to other agencies			
Groundwater recharge			
Saline water intrusion barrier			
Agricultural irrigation			
Wetlands or wildlife habitat			
Retail demand *for use by agencies that are primarily wholesalers with a small volume of retail sales*			
Losses			
Other			
		TOTAL	0
NOTES:			

Table 4-1 Retail: Demands for Potable and Raw Water - Actual

Use Type *Drop down list* *May select each use multiple times* *These are the only Use Types that will be recognized by the WUEdata online submittal tool*	2015 Actual		
	Additional Description *(as needed)*	Level of Treatment When Delivered *Drop down list*	Volume
Single Family		*Drinking Water*	
Multi-Family		*Raw Water*	
Commercial			
Industrial			
Institutional/Governmental			
Landscape			
Groundwater recharge			
Saline water intrusion barrier			
Agricultural irrigation			
Wetlands or wildlife habitat			
Sales/Transfers/Exchanges to other agencies			
Losses			
Other			
		TOTAL	0
NOTES:			

Table 4-2 Wholesale: Demands for Potable and Raw Water - Projected

Use Type *Drop down list* *May select each use multiple times* *These are the only Use Types that will be recognized by the WUEdata online submittal tool.*	Additional Description *(as needed)*	Projected Water Use *Report To the Extent that Records are Available*				
		2020	2025	2030	2035	2040-opt
Sales to other agencies						
Transfers to other agencies						
Exchanges to other agencies						
Groundwater recharge						
Saline water intrusion barrier						
Agricultural irrigation						
Wetlands or wildlife habitat						
Retail demand for use by agencies that are primarily wholesalers with a small volume of retail sales						
Losses						
Other						
TOTAL		0	0	0	0	0
NOTES:						

Table 4-2 Retail: Demands for Potable and Raw Water - Projected

Use Type *Drop down list* *May select each use multiple times* *These are the only Use Types that will be recognized by the WUEdata online submittal tool*	Additional Description *(as needed)*	Projected Water Use *Report To the Extent that Records are Available*				
		2020	2025	2030	2035	2040-opt
Single Family						
Multi-Family						
Commercial						
Industrial						
Institutional/Governmental						
Landscape						
Groundwater recharge						
Saline water intrusion barrier						
Agricultural irrigation						
Wetlands or wildlife habitat						
Sales/Transfers/Exchanges to other agencies						
Losses						
Other						
TOTAL		0	0	0	0	0

NOTES:

Table 4-3 Wholesale: Total Water Demands

	2015	2020	2025	2030	2035	2040*(opt)*
Potable and Raw Water *From Tables 4-1 and 4-2*	0	0	0	0	0	0
Recycled Water Demand* *From Table 6-4*	0	0	0	0	0	0
TOTAL WATER DEMAND	0	0	0	0	0	0

**Recycled water demand fields will be blank until Table 6-4 is complete.*

NOTES:

Table 4-3 Retail: Total Water Demands

	2015	2020	2025	2030	2035	2040 *(opt)*
Potable and Raw Water *From Tables 4-1 and 4-2*	0	0	0	0	0	0
Recycled Water Demand* *From Table 6-4*	0	0	0	0	0	0
TOTAL WATER DEMAND	0	0	0	0	0	0

**Recycled water demand fields will be blank until Table 6-4 is complete.*

NOTES:

4.3 Distribution System Water Losses

CWC 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:…*

(J) *Distribution system water loss*

(3)(A) *For the 2015 urban water management plan update, the distribution system water loss shall be quantified for the most recent 12-month period available. For all subsequent updates, the distribution system water loss shall be quantified for each of the five years preceding the plan update.*

(B) *The distribution system water loss quantification shall be reported in accordance with a worksheet approved or developed by the department through a public process. The water loss quantification worksheet shall be based on the water system balance methodology developed by the American Water Works Association.*

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W

ALL URBAN WATER SUPPLIERS

Distribution system water losses (also known as "real losses") are the physical water losses from the water distribution system and the supplier's storage facilities, up to the point of customer consumption.

Water suppliers are required to quantify their distribution system losses using the American Water Works Association Method. Guidance is found in Appendix L. An electronic copy of the audit in Excel format shall be submitted to DWR using DWR's online submittal tool.

Projected water losses, reported in five year increments, shall also be included in the UWMP to the extent that records are available. Projected losses will be reported in Table 4-2.

In the 2015 UWMPs water agencies must report their distribution system water loss for the most recent 12-month period available. This can be taken to mean the calendar year or fiscal year used for data reporting throughout the rest of the UWMP. This will be reported in Tables 4-1 and 4-4.

In 2020, and subsequent UWMP reporting cycles, agencies will be required to report losses for each of the last five years (2016, 2017, 2018, 2019, and 2020).

Note: This section on reporting water loss differs from the Demand Management Measures (DMMs) in Chapter 9. This section requires estimation of water loss, whereas, the DMM in Chapter 9 requires retail water agencies to discuss how they will address water loss and wholesale agencies manage system assets.

TABLES

Table 4-4

Complete Table 4-4: Water Loss Summary Most Recent 12 Month Period Available using the values calculated in the AWWA worksheet. RUWMPs will use multiple versions of Table 4-4; one for each participating agency.

W

Table 4-4 Wholesale: 12 Month Water Loss Audit Reporting	
Reporting Period Start Date (mm/yyyy)	Volume of Water Loss*
** Taken from the field "Water Losses" (a combination of apparent losses and real losses) from the AWWA worksheet.*	
NOTES:	

R

Table 4-4 Retail: 12 Month Water Loss Audit Reporting	
Reporting Period Start Date (mm/yyyy)	Volume of Water Loss*
** Taken from the field "Water Losses" (a combination of apparent losses and real losses) from the AWWA worksheet.*	
NOTES:	

4.4 Estimating Future Water Savings

CWC 10631

(e)(4)(A) *If available and applicable to an urban water supplier, water use projections may display and account for the water savings estimated to result from adopted codes, standards, ordinances, or transportation and land use plans identified by the urban water supplier, as applicable to the service area.*

(B) *To the extent that an urban water supplier reports the information described in subparagraph (A), an urban water supplier shall do both of the following: (i) Provide citations of the various codes, standards, ordinances, or transportation and land use plans utilized in making the projections.(ii) Indicate the extent that the water use projections consider savings from codes, standards, ordinances, or transportation and land use plans. Water use projections that do not account for these water savings shall be noted of that fact.*

R

RETAIL ONLY

Water savings from codes, standards, ordinances, or transportation and land use plans are also known as "passive savings". These various factors generally decrease the water use for new and future customers, compared to historical customers.

Water agencies are required to state the extent to which passive savings are considered in these water use projections. This will be noted in Table 4-5.

RECOMMENDED

Suppliers that include estimates of future water savings in their demand projections shall cite the codes, standards, ordinances, or transportation and land use plans utilized in making these projections. See Table 4-5.

Agencies are encouraged to review Appendix K – Estimating Future Water Savings. This appendix provides an optional approach for including estimated water savings based on codes, standards, ordinances, or transportation and land use plans in their demand projections. Appendix K provides a method to reflect these future savings which may be incorporated into a supplier's demand projections.

4.5 Water Use for Lower Income Households

CWC 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.*

California Health and Safety Code 50079.5

(a) *"Lower income households" means persons and families whose income does not exceed the qualifying limits for lower income families… In the event the federal standards are discontinued, the department shall, by regulation, establish income limits for lower income households for all geographic areas of the state at 80 percent of area median income, adjusted for family size and revised annually.*

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RETAIL ONLY

Retail water agencies are required to include the projected water use for lower income households in projected water demands. A lower income household has an income below 80 percent of area median income, adjusted for family size.

To address this requirement, suppliers will:

- Determine the number of lower income single-family and multi-family housing units projected for the service area, as identified in the housing elements of city or county General Plans;
- Estimate the projected water use for those lower income housing units.
- Verify that the expected water use for low income housing, as estimated above, was included in the projected water demands. Complete Table 4-5.

TABLES

Table 4-5

Complete Table 4-5: Inclusion in Water Use Projections. This table will indicate whether or not future water savings estimates and lower income household demands are included in water demand projections. RUWMPs will use multiple versions of Table 4-5; one for each participating agency.

R

Table 4-5 Retail Only: Inclusion in Water Use Projections	
Are Future Water Savings Included in Projections? (Refer to Appendix K of UWMP Guidebook) *Drop down list (y/n)*	
If "Yes" to above, state the section or page number, in the cell to the right, where citations of the codes, ordinances, etc... utilized in demand projections are found.	
Are Lower Income Residential Demands Included In Projections? *Drop down list (y/n)*	
NOTES:	

4.6 Climate Change

R W

ALL URBAN WATER SUPPLIERS

Including a discussion of potential climate change impacts on an agency's water demand is optional.

RECOMMENDED

A discussion of potential climate change impacts can assist in providing a comprehensive look at the potential impacts on projected demand. For example, hotter and drier weather may lead to an increased demand in landscape irrigation. Water agencies are encouraged, but not required, to consider potential climate change impacts to their water demand.

There is no required format for addressing climate change in an UWMP.

DWR recommends that agencies complete the IRWM Climate Change Vulnerability Assessment (see Appendix I) and include a narrative in the water use chapter of the UWMP summarizing the results of the "Water Demand" section of the Assessment.

Agencies may also attach a Vulnerability Assessment from an IRWM Plan, if available.

Chapter 5
SB X7-7 Baselines and Targets

With the adoption of the Water Conservation Act of 2009, also known as the SB X7-7, (see Appendix B), the State is required to set a goal of reducing urban water use by 20 percent by the year 2020. Each retail urban water supplier must determine baseline water use during their baseline period and also target water use for the years 2015 and 2020 in order to help the State achieve the 20 percent reduction.

In the 2015 Plan, water agencies must demonstrate compliance with their established water use target for the year 2015. This will also demonstrate whether or not the agency is currently on track to achieve its 2020 target. Compliance is verified by DWR's review of the SB X7-7 Verification Form submitted with an agency's 2015 UWMP. The SB X7-7 Verification Form is found in Appendix E and summarized in Tables 5-1 and 5-2 of this chapter.

Baselines and targets are to be calculated for each retail urban water supplier. This may be done individually or regionally. Regional compliance with SB X7-7 is done via a Regional Alliance and is addressed in Section 5.9.

This chapter of the Guidebook provides an overview and clarifying information regarding the requirements of the Water Conservation Act of 2009. Specific methodologies and calculations are detailed in *Methodologies for Calculating Baseline and Compliance Urban Per Capita Water Use,* DWR 2011, pending 2015 update. **Agencies are strongly advised to read the *Methodologies* document.**
http://www.water.ca.gov/urbanwatermanagement/uwmp2015.cfm

SB X7-7 Verification Form. Retail water agencies are required to complete the tables in the SB X7-7 verification form (Appendix E). Regional Alliances are also required to complete a version of the SB X7-7 Verification Form. Not all tables will be required for every agency, depending upon the agency's methods for determining their baselines and targets. Note that the tables in the SB X7-7 Verification Form are in addition to the 2015 UWMP tables that are found throughout the guidebook which are also compiled in Appendix E. All tables in the SB X7-7 Verification Form have the prefix "SB X7-7", followed by the table number.

Calculation of baselines and targets is a very important but highly technical portion of the UWMP. To address the non-technical audience, agencies may choose to include an overview that highlights the importance of these calculations, a reference to the *Methodologies* document (DWR 2011), and the agency's efforts to meet these targeted reductions.

This chapter includes the following sections:

5.1 Guidance for Wholesale Agencies

5.2 Updating Calculations from 2010 UWMP

5.3 Baseline Periods

5.4 Service Area Population

5.5 Gross Water Use

5.6 Baseline Daily per Capita Water Use

5.7 2015 and 2020 Targets

5.8 2015 Compliance Daily per Capita Water Use

5.9 Regional Alliance

GPCD Terminology

When determining water use in a UWMP, two terms are often used interchangeably:

- Daily per Capita Water Use - the amount of water used per person per day. In the UWMP calculations, this is total water use within a service area, divided by population and is measured in gallons.
- Gallons per Capita per Day (GPCD) – This is the "Daily per Capita Water Use" measured in gallons. Therefore, the term commonly used when referring to "Daily per Capita Water Use" is "Gallons Per Capita per Day" or "GPCD."

It may also be important to distinguish GPCD (as used in Urban Water Management Plans) from the R-GPCD that is used in drought reporting to the State Water Resources Control Board.

- GPCD is the total water use within a service area (residential, commercial, institutional, etc…) minus allowable exclusions, divided by the population. This is used in UWMPs for purposes of the Water Conservation Act of 2009.
- R-GPCD is solely the estimated residential water use in a service area divided by population. R-GPCD is used in drought reporting to SWRCB for purposes of complying with the Governor's drought declarations and executive orders in 2014 and 2015 (as of the publication of this Guidebook).

5.1 Guidance for Wholesale Agencies

For purposes of identifying baselines and targets, the following definition applies:

CWC 10608.12

(r) *"Urban wholesale water supplier" means a water supplier, either publicly or privately owned, that provides more than 3,000 acre-feet of water annually at wholesale for potable municipal purposes.*

CWC 10608.36

Urban wholesale water suppliers shall include in the urban water management plans… an assessment of their present and proposed future measures, programs, and policies to help achieve the water use reductions required by this part.

WHOLESALE ONLY

Wholesale water suppliers are not required to establish and meet baseline and targets for daily per capita water use, nor are wholesalers required to complete the SB X7-7 Verification Form. However, wholesale agencies are required to provide an assessment of their present and proposed future measures, programs and policies that will help the retail water suppliers in their wholesale service area achieve their SB X7-7 water use reduction targets.

RECOMMENDED

Such measures could include, but are not limited to, water conservation programs funded or supported by the wholesaler and made available to the retailers, recycled water programs supported or implemented by the wholesaler in its service area, and various policies that may be adopted by the wholesaler to encourage demand reduction in its service area.

Wholesale water suppliers may also participate in a Regional Alliance in a supportive role to assist the retail agencies in meeting their established targets. The retail suppliers are responsible for complying with the Alliance's regional target. See Section 5.9 for more on a Regional Alliance.

5.2 Updating Calculations from 2010 UWMP

CWC 10608.20

(g) *An urban retail water supplier may update its 2020 urban water use target in its 2015 urban water management plan required pursuant to Part 2.6 (commencing with Section 10610).*

Methodologies DWR 2011, Methodology 2 Service Area Population

Page 27 - Water suppliers may revise population estimates for baseline years between 2000 and 2010 when 2010 census information becomes available. DWR will examine discrepancy between the actual population estimate and DOF's projections for 2010; if significant discrepancies are discovered, DWR may require some or all suppliers to update their baseline population estimates.

5.2.1 Update of Target Method

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RETAIL ONLY

In 2010 UWMPs, water agencies calculated a 2020 Urban Water Use Target through the use of a selected target method. In 2015 UWMPs, water agencies may update their 2020 Target and may make this calculation using a different target method than was used in 2010. (See Section 5.7.1 for a discussion of the Target Methods).

5.2.2 Required Use of 2010 U.S. Census Data

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RETAIL ONLY

After examining a sample of data from Department of Finance, DWR has determined that significant discrepancies exist between DOF's projected populations for 2010 (based on 2000 U.S. Census data) and actual population for 2010, based on 2010 U.S. Census data. The average difference between projected and actual was approximately 3 percent, but the difference for some cities was as high as 9 percent.

Therefore, if an agency did not use 2010 Census data for their baseline population calculations in the 2010 UWMP (the full census data set was not available until 2012) DWR has determined that these agencies must recalculate their baseline population for the 2015 UWMPs using 2000 and 2010 Census data. This may affect the baseline and target GPCD values calculated in the 2010 UWMP, which must be modified accordingly in the 2015 UWMP. See section 5.4 for guidance on developing baseline population estimates.

5.2.3 SB X7-7 Verification Form (Appendix E)

RETAIL ONLY

All retail agencies, whether updating their baselines and targets from 2010, or calculating these for the first time in 2015 UWMPs, are required to submit the standardized tables in the SB X7-7 Verification Form (see Appendix E) with their 2015 UWMPs. These standardized tables were not available in 2010 and are required to demonstrate compliance with the Water Conservation Act of 2009.

A Regional Alliance must report the information from this chapter in the SB X7-7 Verification Form for a Regional Alliance, Option 1, 2, or 3. This form may be included in a Regional UWMP. See Appendix D and Methodology 9 of the *Methodologies* document.

The tables in the SB X7-7 Verification Form are distinguished from the other standardized tables in this guidebook by their name, which will always begin with "SB X7-7", followed by the table number.

5.3 Baseline Periods

CWC 10608.20

(e) *An urban retail water supplier shall include in its urban water management plan due in 2010. . . the baseline daily per capita water use…along with the bases for determining those estimates, including references to supporting data.*

(g) *An urban retail water supplier may update its 2020 urban water use target in its 2015 urban water management plan required pursuant to Part 2.6 (commencing with Section 10610).*

RETAIL ONLY

In their 2015 UWMPs agencies may change the years they selected for their baseline periods as compared to their 2010 UWMPs. Agencies may choose to make this change based on changes to their calculated population (see Section 5.4) which may have affected the baseline and target GPCD values.

Water use GPCD must be calculated and reported for two baseline periods, the 10- or 15- year baseline (Baseline GPCD) and the 5-year baseline (Target Confirmation). Whether an agency uses a 10 or 15 year baseline depends on the percentage of recycled water delivered in the year 2008. See Section 5.3.1 for making this determination.

5.3.1 Determination of the 10-15 Year Baseline Period (Baseline GPCD)

CWC 10608.12

(b) *"Base daily per capita water use" means any of the following:*

(1) *The urban retail water supplier's estimate of its average gross water use, reported in gallons per capita per day and calculated over a continuous 10-year period ending no earlier than December 31, 2004, and no later than December 31, 2010.*

(2) *For an urban retail water supplier that meets at least 10 percent of its 2008 measured retail water demand through recycled water that is delivered within the service area of an urban retail water supplier or its urban wholesale water supplier, the urban retail water supplier may extend the calculation described in paragraph (1) up to an additional five years to a maximum of a continuous 15-year period ending no earlier than December 31, 2004, and no later than December 31, 2010.*

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RETAIL ONLY

Water suppliers must define a 10- to 15-year baseline period for water use and calculate the average water use, in GPCD, over that length of time. This is a 10- to 15-year continuous period ending between December 31, 2004 and December 31, 2010.

To determine whether an agency must use a 10-year baseline period, or may use a 10-15 baseline, the water supplier must determine whether or not recycled water was at least 10 percent of their total water deliveries in the year 2008:

- If the percentage of recycled water used in the year 2008 was at least 10 percent, the agency may use up to a 15-year baseline period. If data is not available for the entire 15 years, agencies may select a baseline period that is between 10 and 15 continuous years;
- If the percentage of recycled water used in the year 2008 was less than 10 percent, the water agency must use a 10-year baseline period.

Recycled water deliveries of 2008 and the total water deliveries of 2008 will be entered into SB X7-7 Table 1. The table will calculate the percent of recycled water delivered in 2008.

5.3.2 Determination of the 5-Year Baseline Period (Target Confirmation)

CWC 10608.12 (b)

(3) *For the purposes of Section 10608.22, the urban retail water supplier's estimate of its average gross water use, reported in gallons per capita per day and calculated over a continuous five-year period ending no earlier than December 31, 2007, and no later than December 31, 2010.*

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RETAIL ONLY

Water suppliers must also calculate water use, in GPCD, for a 5-year baseline period. This will be used to confirm that the selected 2020 target meets the minimum water use reduction requirements (see Section 5.7.2 2020 Target Confirmation). This is a continuous 5-year period that ends no earlier than December 31, 2007 and no later than December 31, 2010.

All retail agencies are required to complete SB X7-7 Table 1: Baseline Period Ranges.

5.4 Service Area Population

CWC 10608.20

(e) *An urban retail water supplier shall include in its urban water management plan due in 2010…the baseline per capita water use,…along with the bases for determining those estimates, including references to supporting data.*

(f) *When calculating per capita values for the purposes of this chapter, an urban retail water supplier shall determine population using federal, state, and local population reports and projections.*

CWC10644

(a)(2) *The plan…shall include any standardized forms, tables or displays specified by the department.*

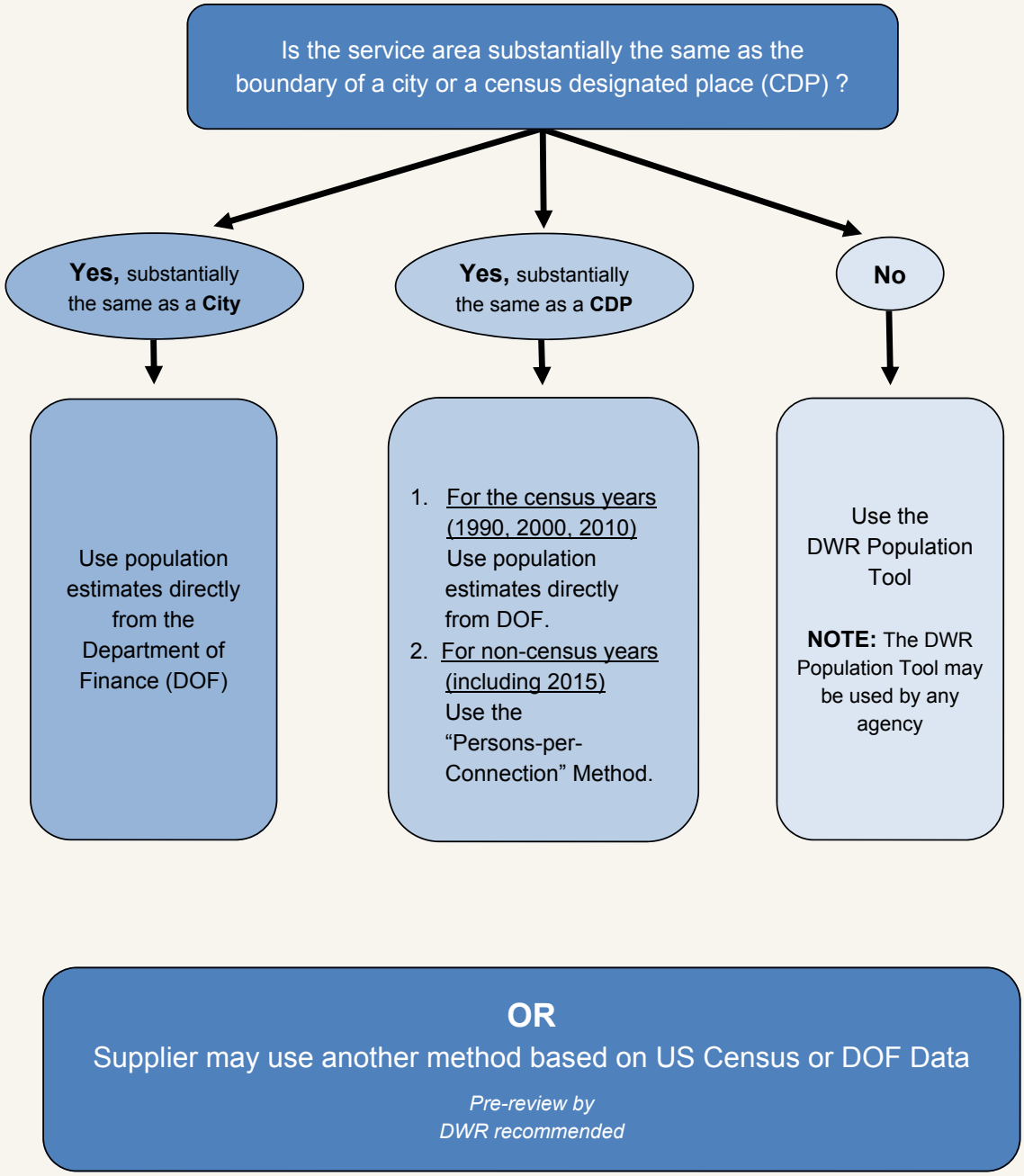
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RETAIL ONLY

In order to correctly calculate annual GPCD, agencies must determine the population that they served for each baseline year in both of the baseline periods and for the 2015 compliance year.

If an agency did not use 2010 U.S. Census data for its baseline population calculations in the 2010 UWMP (the full census data set was not available until 2012) the agency must re-calculate its baseline population for the 2015 UWMPs using 2000 and 2010 Census data. This may affect the baseline and target GPCD values calculated in the 2010 UWMP, which must be modified accordingly in the 2015 UWMP.

Figure 5. 1 Flow Chart for Determining Service Area Population



5.4.1 Population Methodologies

RETAIL ONLY

The methodology for estimating an agency's population is provided in Methodology 2 of the *Methodologies* document. Additional guidance on population methodologies is provided below.

All suppliers may use the DWR Population Tool or a Persons-per-Connection calculation.

5.4.1.1 Department of Finance

Cities. Agencies whose service area boundaries correspond by 95 percent or more with the boundaries of a city during the baseline period and the compliance year 2015 will be able to obtain population estimates from tables prepared by the Department of Finance (DOF).

Census Designated Places. Agencies whose service area boundaries correspond by 95 percent or more with the boundaries of a census designated place (CDP) during census years will be able to obtain population estimates for those census years directly from tables prepared by the Department of Finance (DOF). Population for non-census years may be calculated using the Persons-per-Connection method.

The DOF population tables can be found online at
http://www.dof.ca.gov/research/demographic/reports_papers/index.php

5.4.1.2 Persons-per-Connection

This method is used to determine population estimates for the non-census years, including 2015. Water suppliers must already have population estimates for the census years in order to use this method.

1. For each census year that data is available, determine the number of persons-per-connection by dividing the total population by the number of service connections.
2. For non-census years in the baseline period, determine the persons-per-connection by interpolating between the census years.
3. For the year 2015, use the same persons-per-connection that was calculated for the year 2010.
4. Determine the population for each non-census year by multiplying the number of service connections by the persons-per-connection for that year.

5.4.1.3 DWR Population Tool

DWR anticipates the release of a free, online population tool in adequate time for 2015 UWMP preparation. Any agency may use the DWR population tool, but it is particularly useful for agencies whose service area boundaries do not match to a city or CDP and cannot use DOF population data. The tool will utilize US Census data and electronic maps of the agency's service area (the tool will provide instructions for developing electronic maps) to obtain population data for census years. Using the number of agency service connections, the tool will calculate the population for the non-census years.

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5.4.1.4 Other Population Methods

Agencies may estimate their population using other methods developed in-house, by a wholesaler, Association of Governments, consultant, university, or other entity. However, DWR must determine that the alternate method complies with the requirements of Methodology 9 of the *Methodologies* document and is at least as accurate as the methods recommended by DWR. The agency must provide a description of the method that provides enough detail for DWR to make this evaluation. DWR recommends that the agency seek a pre-review from DWR to assess the adequacy of any proposed alternate population methodologies.

TABLES

All retail agencies are required to complete SB X7-7 Table 2: Method for Population Estimates and SB X7-7 Table 3: Service Area Population.

5.5 Gross Water Use

CWC 10608.12

(g) *"Gross Water Use" means the total volume of water, whether treated or untreated, entering the distribution system of an urban retail water supplier, excluding all of the following:*

(1) *Recycled water that is delivered within the service area of an urban retail water supplier or its urban wholesale water supplier*

(2) *The net volume of water that the urban retail water supplier places into long term storage*

(3) *The volume of water the urban retail water supplier conveys for use by another urban water supplier*

(4) *The volume of water delivered for agricultural use, except as otherwise provided in subdivision (f) of Section 10608.24.*

California Code of Regulations Title 23 Division 2 Chapter 5.1 Article

Section 596 (a) An urban retail water supplier that has a substantial percentage of industrial water use in its service area is eligible to exclude the process water use of existing industrial water customers from the calculation of its gross water use to avoid a disproportionate burden on another customer sector.

RETAIL ONLY

Detailed guidance for gross water calculations is found in Methodology 1: Gross Water of the *Methodologies* document.

Gross water use is a measure of water that enters the distribution system of the supplier over a 12-month period (either fiscal or calendar year) with certain allowable exclusions. These exclusions are:

- Recycled water delivered within the service area. Recycled water use has been excluded from all calculation of gross water, as reflected in the SB X7-7 Tables. Water suppliers are not required to report their recycled water use, nor demonstrate any reduction in recycled water use for purposes of SB X7-7;
- Indirect recycled water (see Methodology 1 from the *Methodologies* document, DWR 2011);
- Water placed into long term storage (surface or groundwater);
- Water conveyed to another urban supplier;
- Water delivered for agricultural use;
- Process water.

Gross water use must be reported for each year in the baseline periods as well as 2015, the compliance year.

5.5.1 Gross Water Tables

RETAIL ONLY

There are several tables from the SB X7-7 Verification Form that are related to gross water calculations.

Agencies that will deduct indirect recycled water and/or process water from their gross water will complete additional tables, as found in the subsections below.

5.5.1.1 Indirect Recycled Water Use Deduction

If the agency uses indirect recycled water and will deduct it from their gross water use, they must complete SB X7-7 Table 4-B: Indirect Recycled Water Use Deduction**.**

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5.5.1.2 Process Water Use Deduction

The Process Water tables are not on the DWR online submittal tool, but can be found on the DWR website at http://www.water.ca.gov/urbanwatermanagement/uwmp2015.cfm. Agencies that will be subtracting process water from their gross water use must submit additional tables SB X7-7 Table 4-C and one associated subtable (SB X7-7 Table 4-C.1, SB X7-7 Table 4-C.2, SB X7-7 Table 4-C.3, or SB X7-7 Table 4-C.4) as well as SB X7-7 Table 4-D.

5.6 Baseline Daily Per Capita Water Use

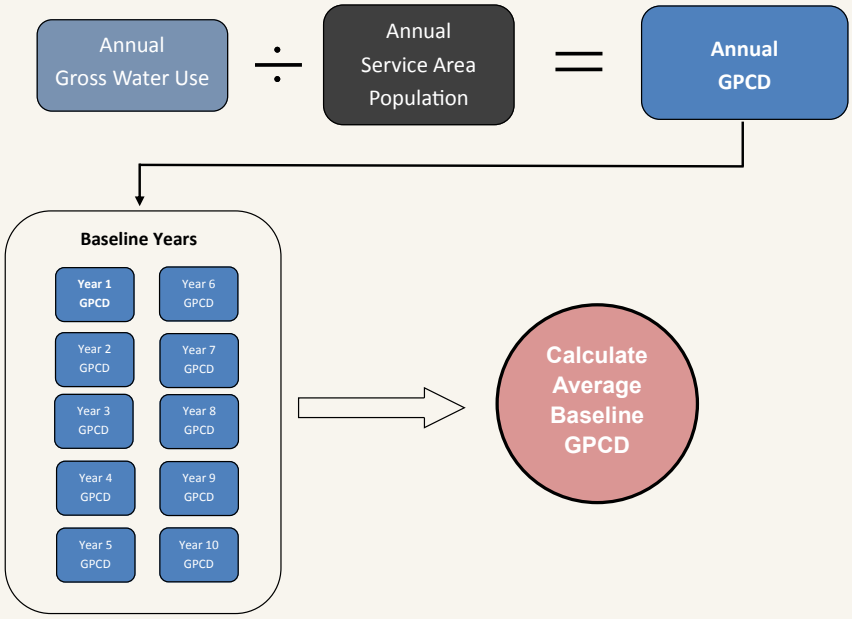
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RETAIL ONLY

The final step in baseline calculations is determining the daily per capita water use in each of the baseline years. All agencies must complete SB X7-7 Table 5 (Appendix E). Once population and gross water have been determined and entered into SB X7-7 Table 5, the GPCD for each baseline year will automatically be calculated in the table.

Figure 5.2 Calculate Baseline GPCD

Daily per Capita Water Use is reported in gallons and is referred to as "Gallons per Capita per Day" or "GPCD". The GPCD is calculated for each year in the baseline periods and for the compliance year 2015.



5.7 2015 and 2020 Targets

CWC 10608.20

(e) *An urban retail water supplier shall include in its urban water management plan due in 2010. . . urban water use target, interim urban water use target,…along with the bases for determining those estimates, including references to supporting data (10608.20(e)).*

CWC 10608.20

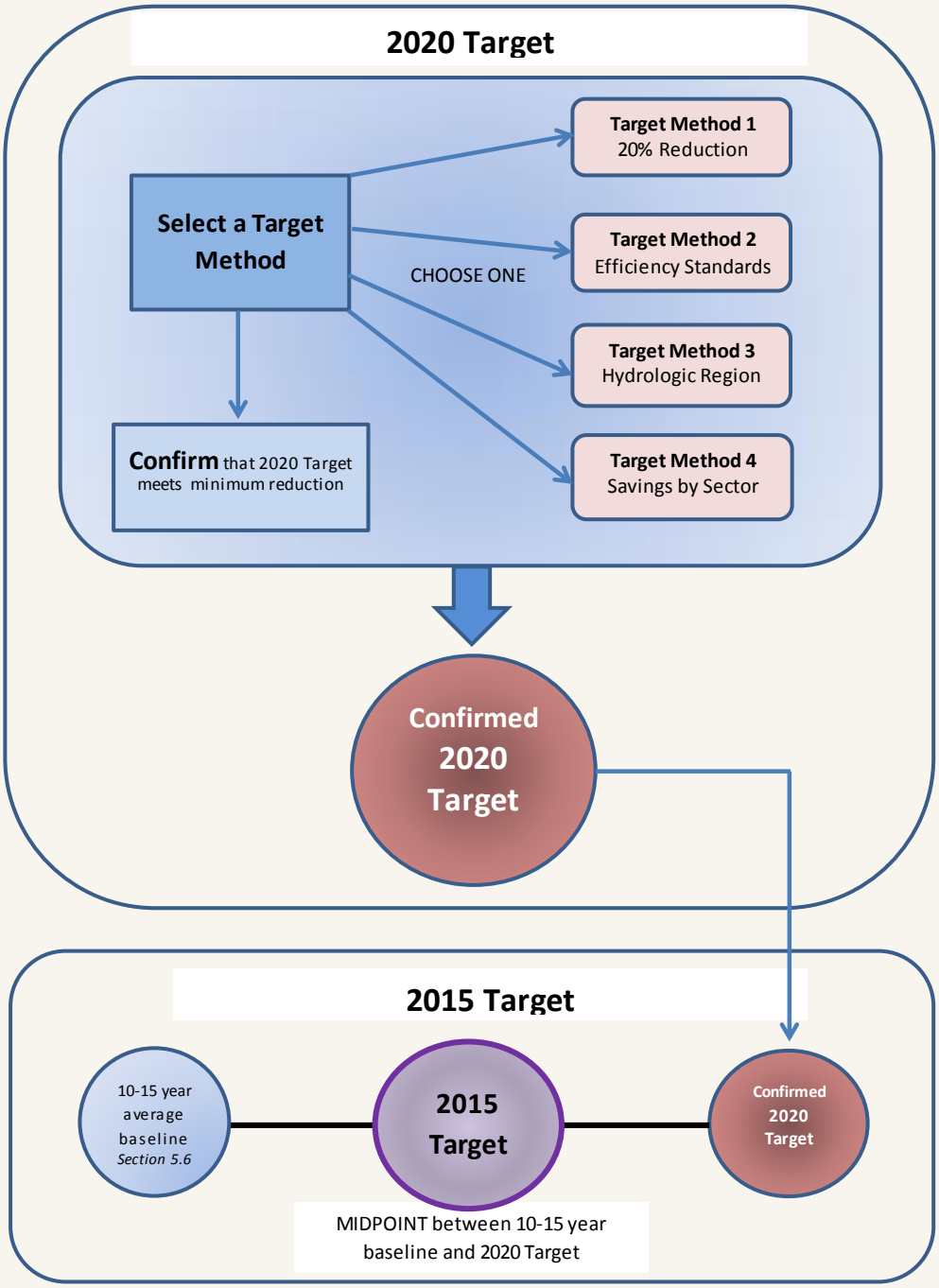
(g) *An urban retail water supplier may update its 2020 urban water use target in its 2015 urban water management plan…*

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RETAIL ONLY

A water supplier may select a different target method in its 2015 plan than it selected in its 2010 Plan. Once the 2015 Plan is submitted, the target method may not be changed in any amendments to the 2015 Plan or in the 2020 Plan.

Figure 5.3 Determine Targets – A Flow Chart



5.7.1 Select and Apply a Target Method

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RETAIL ONLY

The water supplier has four different methods to choose from when determining the 2020 Urban Water Use Target. Identify which of the following four methods was used to determine the Urban Water Use Target. See CWC Section 10608.20(b) in Appendix E and *Methodologies* document for details. **All retail suppliers must** complete SB X7-7 Table 7 to identify the target method that has been selected.

5.7.1.1 Target Method 1

80 percent of 10- to 15- Year Baseline GPCD *CWC 10608.20 (b) (1)*

- Calculate 80 percent of the base daily per capita water use. Agencies using Target Method 1 must complete SB X7-7 Table 7-A.

5.7.1.2 Target Method 2

Performance Standards *CWC 10608.20 (b) (2)* Tables for Target Method 2 are posted at http://www.water.ca.gov/urbanwatermanagement/uwmp2015.cfm

The sum of the following three performance standards:

- Efficient Indoor Residential Use
  (Methodology 5: Indoor Residential Use)
- Landscape Water Use Equivalent to Model Ordinance
  (Methodology 6: Landscaped Area Water Use)
- 10% reduction in Commercial, Industrial, and Institutional (CII) Water Use from baseline CII use
  (Methodology 7: Baseline CII Water Use)

Agencies using Target Method 2 must complete SB X7-7 Tables 7-B and 7-C.

5.7.1.3 Target Method 3

95 percent of Hydrologic Regional Target from the 20 x 2020 Water Convention Plan, State of California Agency Team, 2010. *CWC 10608.20 (b) (3)*

- Identify the hydrologic region where the water agency is located. Online tools are available at http://www.water.ca.gov/urbanwatermanagement/technicalassistance/ to help water suppliers identify their hydrologic region.
- If the water supplier's service area is within more than one hydrologic region, then proportionally calculate the 2020 urban water use target using the proportion that lies within each hydrologic region.
- Agencies using Target Method 3 must complete SB X7-7 Table 7-E.

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5.7.1.4 Target Method 4

Savings by Water Sector DWR Method 4

- DWR was directed in CWC 10608.20 (b) (4) to develop a fourth Target Method to calculate 2020 water use targets. This method identifies water savings obtained through identified practices and subtracts them from the agency's baseline GPCD.
- Agencies that use Target Method 4 must use the procedures described in Provisional Method 4 for Determining Water Use Targets, DWR 2011, and include the worksheets from the Method 4 Calculator found on DWR's website in their 2015 UWMPs: http://www.water.ca.gov/urbanwatermanagement/uwmp2015.cfm

5.7.2 5- Year Baseline – 2020 Target Confirmation

CWC 10608.22

Notwithstanding the method adopted by an urban retail water supplier pursuant to Section 10608.20, an urban retail water supplier's per capita daily water use reduction shall be no less than 5 percent of base daily per capita water use as defined in paragraph (3) of subdivision (b) of Section 10608.12. This section does not apply to an urban retail water supplier with a base daily per capita water use at or below 100 gallons per capita per day.

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RETAIL ONLY

This step verifies that the 2020 water use target that has been calculated will reduce the agency's 2020 water use by a minimum of 5 percent from the 5-year baseline. This confirmation is automatically calculated in SB X7-7 Table 7. All retail suppliers are required to complete SB X7-7 Table 7-F: Confirm Target.

5.7.3 Calculate the 2015 Interim Urban Water Use Target

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RETAIL ONLY

The 2015 Interim Target is the value halfway between the 10- to 15-year Baseline GPCD (from SB X7-7 Table 5) and the confirmed 2020 Target (SB X7-7 Table 7).

To determine the Interim 2015 Target, calculate the midpoint between the 10- to 15-year Baseline and the 2020 Target GPCD. Include the value of the Interim 2015 Target in the 2015 UWMP.

5.7.4 Baselines and Targets Summary

RETAIL ONLY

The SB X7-7 verification tables (see Appendix E) must be submitted in the 2015 UMWPs in order to determine compliance with the Water Conservation Act of 2009.

RECOMMENDED

DWR recommends that the SB X7-7 Verification Form be submitted as an appendix to the UWMP. The summary information from the form will be reported in Table 5-1 and may be included in the body of the UWMP.

TABLES

Table 5-1

Complete Table 5-1: Baselines and Targets Summary.

RUWMPs may either submit:

- One version of table 5-1 if complying as a Regional Alliance
- Multiple versions of Table 5-1; one for each participating agency
- Both

Table 5-1 Baselines and Targets Summary *Retail Agency or Regional Alliance Only*

Baseline Period	Start Year	End Year	Average Baseline GPCD*	2015 Interim Target *	Confirmed 2020 Target*
10-15 year	*From SB X7-7 Table 1*	*From SB X7-7 Table 1*	*From SB X7-7 Table 5*	*From SB X7-7 Table 8*	*SB X7-7 Table 7-F*
5 Year	*From SB X7-7 Table 1*	*From SB X7-7 Table 1*	*From SB X7-7 Table 5*		
*All values are in Gallons per Capita per Day (GPCD)					
NOTES:					

5.8 2015 Compliance Daily per Capita Water Use (GPCD)

CWC 10608.12

(e) *"Compliance daily per-capita water use" means the gross water use during the final year of the reporting period…*

CWC 10608.24

(a) *Each urban retail water supplier shall meet its interim urban water use target by December 31, 2015.*

CWC 10608.20

(e) *An urban retail water supplier shall include in its urban water management plan due in 2010 . . . compliance daily per capita water use, along with the bases for determining those estimates, including references to supporting data.*

5.8.1 Meeting the 2015 Target

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RETAIL ONLY

Criteria and methods for determining compliance with the 2015 Interim Target are detailed in Methodology 4 of the *Methodologies* document. Water suppliers must calculate their actual 2015 water use (2014-2015 fiscal or 2015 calendar year) to determine whether or not they have met their per capita 2015 target water use and to assess their progress toward meeting their 2020 target water use. All retail suppliers are required to complete SB X7-7 Table 9: 2015 Compliance.

5.8.2 2015 Adjustments to 2015 Gross Water Use

CWC 10608.24

(d)(1) *When determining compliance daily per capita water use, an urban retail water supplier may consider the following factors:*

(A) *Differences in evapotranspiration and rainfall in the baseline period compared to the compliance reporting period.*

(B) *Substantial changes to commercial or industrial water use resulting from increased business output and economic development that have occurred during the reporting period.*

(C) *Substantial changes to institutional water use resulting from fire suppression services or other extraordinary events, or from new or expanded operations, that have occurred during the reporting period.*

(2) *If the urban retail water supplier elects to adjust its estimate of compliance daily per capita water use due to one or more of the factors described in paragraph (1), it shall provide the basis for, and data supporting, the adjustment in the report required by Section 10608.40.*

Methodologies for Calculating Baseline and Compliance Urban Per Capita Water Use, Methodology 4

This section discusses adjustments to compliance-year GPCD because of changes in distribution area caused by mergers, annexation, and other scenarios that occur between the baseline and compliance years.

RETAIL ONLY

In 2015 (and 2020) there are several allowable adjustments that can be made to an agency's gross water use. These are detailed in the *Methodologies* document (Methodology 8: Criteria for Adjustment to Compliance Daily Per capita Water Use, and Methodology 4: Compliance Daily Per Capita Water Use).

In case of a change in the service area from the baseline period to the compliance year, as discussed in Methodology 4 of the Methodologies document, water suppliers must provide adequate documentation of their calculations for DWR review. This may require multiples of some tables in the SB X7-7 Verification Form, or additional tables if using weighted averages. DWR recognizes that this may not be compatible with the WUEdata upload tool for UWMPs and will accept these additional tables as an attachment to the UWMP.

In the UWMP, discuss the agency's progress toward meeting its 2020 water use target.

5.9 Regional Alliance

RETAIL ONLY

Agencies that are choosing to comply with SB X7-7 requirements through a Regional Alliance must report the information from this chapter in the Regional Alliance Report. The report will include the SB X7-7 Verification Form for a Regional Alliance, Option 1, 2, or 3. DWR recognizes that the SB X7-7 Verification Form for a Regional Alliance is not compatible with the WUEdata upload tool and will accept these tables as an attachment in WUEdata, rather than as entries into the WUEdata tables. This report may be included in a Regional UWMP. See Appendix D, E, and Methodology 9 of *Methodologies*.

TABLES

Table 5-2

Complete Table 5-2: 2015 Compliance.

RUWMPs may either submit:

- One version of Table 5-2 if complying as a Regional Alliance
- Multiple versions of Table 5-2; one for each participating agency
- Both

Table 5-2: 2015 Compliance *Retail Agency or Regional Alliance Only**								
2015 Actual GPCD	2015 Interim Target GPCD	**Optional Adjustments to 2015 GPCD** Enter "0" for adjustments not used *From Methodology 8*					Final 2015 GPCD	Did Supplier Achieve Targeted Reduction for 2015? Y/N
		Extraordinary Events	Economic Adjustment	Weather Normalization	TOTAL Adjustments	Adjusted 2015 GPCD		
*All values are in Gallons per Capita per Day (GPCD)								
NOTES:								

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Chapter 6
System Supplies

This chapter provides guidance for describing and quantifying the sources of water available to the urban water supplier, including supplies from other agencies, surface water, groundwater, recycled water, desalinated water, transfers and exchanges, and any other source water the supplier considers part of its supply portfolio.

For each water source, provide a narrative description that may include a discussion of the origin of the water supply, water quality, or quantity issues. Agencies will also include any actions or projects that are anticipated to meet future water demands.

Water volumes presented in Chapter 6 must reflect expectations for average year conditions. Discussion of supply reliability is discussed in Chapter 7, and water shortage contingency planning is discussed in Chapter 8.

The UWMP preparer may choose to present portions of the water supplies derived from alternative or non-traditional sources (recycled water, stormwater, graywater, or desalinated water) in separate sections of the Plan. This may be preferable for the UWMP preparer, especially if the alternate water supply system is complex or involves detailed discussion. If some water supplies are discussed separately, summary information must be included in the water supply overview at the end of the water supply chapter.

This chapter covers the following topics:

6.1 Purchased or Imported Water

6.2 Groundwater

6.3 Surface Water

6.4 Stormwater

6.5 Wastewater and Recycled Water

6.6 Desalinated Water Opportunities

6.7 Exchanges or Transfers

6.8 Future Water Projects

6.9 Summary of Existing and Planned Sources of Water

6.10 Climate Change Impacts to Supply (Optional)

6.1 Purchased or Imported Water

R W

ALL URBAN WATER SUPPLIERS

Urban water suppliers may import or purchase water from other water suppliers or other entities. Agencies will make their own determination as to whether a water supply is purchased, imported, transferred, or exchanged. Agencies may provide a narrative description of their purchased water supplies.

Provide the volumes of purchased or imported water in Table 6-8 Water Supplies – Actual and Table 6-9: Water Supplies – Projected. If an agency has more than one source of purchased or imported water, add additional rows to the tables.

6.2 Groundwater

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ALL URBAN WATER SUPPLIERS

Only an agency that pumps groundwater, or expects to pump groundwater, must address the requirements in this section. An agency that uses groundwater pumped by another agency must report this as a purchased or imported supply from another agency.

Groundwater UWMP reporting requirements apply to any groundwater an agency pumps, including alluvial groundwater basins, fractured volcanics, and bedrock. The UWMP must provide an overview of the groundwater resource, the agency's reliance on the groundwater source, any groundwater management framework or strategies, and include, or provide links to, documents that have been developed specifically for groundwater management.

Groundwater management requirements are covered in detail in Section 10750, et seq., of the CWC and more information can be found at the DWR Groundwater Information Center website at http://www.water.ca.gov/groundwater/. Changes to groundwater management under the Sustainable Groundwater Management Act (SGMA) are beginning to be implemented. Several of the activities, including adoption of regulations for Groundwater Sustainability Plans, are not expected to be finalized until June 30, 2016, which is when the 2015 UWMPs are due to DWR (July 1, 2016). Therefore, new requirements for groundwater management under SGMA will not apply to the 2015 UWMPs.

RECOMMENDED

The groundwater portion of a Plan is best prepared by summarizing information from other professionally prepared documents, including those prepared by federal, State, or local agencies, or the water supplier. Documents used as references to summarize the hydrogeologic conditions may be cited and included as either an appendix or a link to its web location.

6.2.1 Basin Description

> ***CWC 10631***
>
> ***(b)*** *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:*
>
> ***(2)*** *A description of any groundwater basin or basins from which the urban water supplier pumps groundwater.*

ALL URBAN WATER SUPPLIERS

The UWMP must include a description of the basin or basins used by the supplier. A description of the agency's source groundwater basin(s) includes the basin and sub-basin name(s). If the agency pumps from an alluvial groundwater basin, the agency must include the name of the basin and sub-basin as identified in DWR Bulletin 118. If the agency pumps groundwater from fractured rock or volcanics, the agency only needs to indicate that the source is fractured bedrock or volcanics. If an agency needs additional guidance identifying the groundwater basin, they may contact DWR staff in the respective Regional Office. See Section 1.8 for DWR contact information.

RECOMMENDED

A thorough basin description may include a map of the basin, a list of other known users of the basin, and a discussion of any known issues, including changes in groundwater levels, water quality issues, yield, subsidence, or any information which may impact present or future use of groundwater. DWR Bulletin 118, California's Groundwater (available from http://www.water.ca.gov/groundwater/) may be used to provide background and general information for describing the basin(s) if more current information is not available.

6.2.2 Groundwater Management

CWC 10631

(b) *...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…or any other specific authorization for groundwater management.*

(2) *…For basins that 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.*

R W

ALL URBAN WATER SUPPLIERS

An adopted groundwater management plan or final judgement for an adjudicated basin must be included in the UWMP, if one exists. This may be done by either including the document as an appendix to the UWMP or providing a website link to the location of the document.

If a groundwater management plan has not been adopted, include a brief discussion of the status of current or planned groundwater management actions occurring within the groundwater basin, if any. Groundwater management actions include groundwater level and water quality monitoring, metering or measuring groundwater pumping, groundwater recharge, conjunctive use programs, water conservation, subsidence monitoring, and use of alternative water supplies.

RECOMMENDED

Water agencies are encouraged to include a brief summary in the UWMP of the groundwater management plan and/or the basin adjudication, if either of these applies to the groundwater source.

As part of the groundwater basin management discussion, the UWMP may include a discussion of any activities occurring in the basin(s) pertaining to the California Statewide Groundwater Elevation Monitoring Program (CASGEM). These include groundwater monitoring activities and the respective Basin Prioritization ranking. The basin prioritization results are posted at http://water.ca.gov/groundwater/casgem/basin_prioritization.cfm

Although specific SGMA regulations may still be under development, discussion of current or planned activities to meet anticipated SGMA requirements may be included in a 2015 UWMP.

6.2.3 Overdraft Conditions

CWC 10631

(b)(2) *For basins that have not been adjudicated, (provide) 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.*

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W

ALL URBAN WATER SUPPLIERS

Agencies that draw water from a groundwater basin that is not adjudicated are to provide, in the UWMP, a discussion of DWR's current assessment of critically overdrafted basins. As of the publication of this guidebook, DWR's most current assessment of critically overdrafted basins is in Bulletin 118. Agencies with groundwater supplies should refer to http://www.water.ca.gov/groundwater/ for the current status of DWR's review of overdrafted basins and Bulletin 118.

These agencies must also include a detailed description of their efforts to eliminate long-term overdraft conditions.

6.2.4 Historical Groundwater Pumping

CWC 10631

(b) *...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:*

(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.*

R W

ALL URBAN WATER SUPPLIERS

Water agencies that have pumped groundwater at any time during the years 2011-2015 are required to complete Table 6-1 with the volume of water pumped from each source for each year within that time period. This reporting will be based on information that is reasonably available.

Water agencies are also required to discuss the sufficiency of groundwater pumped for the last five years. This may be addressed by describing any limitations or challenges, if any, such as brackish water, or a dropping water table, which were encountered in obtaining groundwater during this time.

TABLES

Table 6-1

Actual groundwater volumes pumped in the last five years must be reported in Table 6-1: Groundwater Volume Pumped. RUWMPs will use multiple versions of Table 6-1; one for each participating agency.

W

Table 6-1 Wholesale: Groundwater Volume Pumped						
☐	Supplier does not pump goundwater. The supplier will not complete the table below.					
Groundwater Type *Drop Down List May use each category multiple times*	Location or Basin Name	2011	2012	2013	2014	2015
Alluvial Basin						
Fractured Rock						
TOTAL		0	0	0	0	0
NOTES:						

R

Table 6-1 Retail: Groundwater Volume Pumped						
☐	Supplier does not pump goundwater. The supplier will not complete the table below.					
Groundwater Type *Drop Down List May use each category multiple times*	Location or Basin Name	2011	2012	2013	2014	2015
Alluvial Basin						
Fractured Rock						
TOTAL		0	0	0	0	0
NOTES:						

6.3 Surface Water

R W

ALL URBAN WATER SUPPLIERS

Water drawn from streams, lakes, and reservoirs is considered a surface water supply. If a water agency uses, or plans to use, self-supplied surface water as part of its water supply, the volume of that supply will be reported in Table 6-8: Water Supplies – Actual and Table 6-9: Water Supplies - Projected.

Surface water that is not self-supplied, such as purchases from a wholesaler, transfers, or exchanges, will be reported as "Purchased or Imported Water" in Tables 6-8 and 6-9. If an agency has more than one source of surface water, use additional rows in the table.

RECOMMENDED

The agency may choose to describe the surface water system in the UWMP. Such a description may include maps, an overview of the water conveyance system(s), the name of the surface water source (i.e., name of stream and/or reservoir), a brief description of the watershed that supplies the source, and a discussion of water rights to that source.

The water agency may also include the name(s) of any agency(ies) responsible for management of the water source and include a link or appendix of any management plans for the surface water source, if any.

6.4 Stormwater

R W

ALL URBAN WATER SUPPLIERS

Communities are increasingly implementing opportunities to beneficially use stormwater to meet local water supply demands. These actions are motivated by constrained local water resources, new regulations, and relieving strain on overburdened stormwater infrastructure. If stormwater is being intentionally diverted for beneficial reuse, that volume of stormwater can be reported as a water source in Table 6-8: Water supplies – Actual, and Table 6-9: Water supplies - Projected. (See Section 6.9). Beneficial reuses include blending with other water supplies for groundwater recharge, redirecting it into constructed wetlands or landscaping, and diverting it to a treatment facility for subsequent reuse.

RECOMMENDED

DWR recommends that the UWMP preparer provide a narrative description of the stormwater recovery system, if any.

6.5 Wastewater and Recycled Water

ALL URBAN WATER SUPPLIERS

Municipal recycled water is municipal wastewater that has been treated to a specified quality to enable it to be used again for a beneficial purpose. The term "recycled water" is defined in the CWC more broadly than "municipal recycled water." For purposes of the UWMPs, "recycled water" means only municipal recycled water, that is, water that has been treated and discharged from a municipal wastewater facility.

There are two requirements treated municipal wastewater must meet to be classified as recycled water. It must be reused:

- Beneficially, in a manner consistent with Title 22;
- In accordance with a Regional Water Quality Control Board (RWQCB) permit such as National Pollutant Discharge Elimination System (NPDES), waste discharge requirement (WDR), or water recycling requirement (WRR).

Both recycled water supplies and uses are presented in this section, which combines aspects of both Chapter 4 (System Water Uses) and Chapter 6 (System Supplies). Because recycled water is primarily maintained separately from the potable system, DWR prefers that agencies address both aspects of recycled water within one portion of an UWMP, which could be in Chapter 6 or a separate UWMP chapter.

There have been no legislative changes to the CWC regarding recycled water since the preparation of the 2010 UWMPs. However, because of challenges with some recycled water data reporting in 2010, changes to the recycled water tables have been made to improve data reporting in the 2015 UWMPs. Columns have been added to provide additional clarification, such as the level of treatment to support assessment of the potential use of the water for water supply benefit. Some of the additional information is optional and is marked as such. The additional information will improve and support consistency in how UWMPs quantify recycled water and facilitate use of the data provided in the UWMPs.

Appendix M is included in the 2015 Guidebook to clarify uncertainty and variability in how recycled water is to be reported in 2015 UWMPs. Topics in Appendix M include:

- What is considered recycled water?
- What are beneficial uses of recycled water?
- How is recycled water accounted for in the UWMP if multiple agencies are involved in the collection, treatment, and distribution of recycled water?

Water suppliers are advised to review Appendix M before completing the recycled water section of the UWMP. Appendix M also includes comprehensive guidance for how best to complete the wastewater and recycled water tables (Tables 6-2 through 6-6).

DWR and the SWRCB are cooperatively completing a statewide survey of 2015 recycled water use. For water suppliers with recycled water in their water supply portfolios, it is DWR's objective that there is consistency between the data compiled for the survey and the data reported in the UWMPs. Please see Appendix M for additional discussion of the survey. If there are additional questions during preparation of UWMP, please contact Toni Pezzetti at (916) 651-7024 or toni.pezzett@water.ca.gov.

The following sections are recommended for presenting recycled water information in an UWMP. They do not have to be labeled as 6.5.1, 6.5.2, etc., but the organization is provided as a reference both for the Guidebook and as potential UWMP sections.

RETAIL ONLY

Retail UWMPs are to include a discussion of wastewater and recycled water in the UWMP as follows:

If recycled water is currently or planned to be used in the service area of the UWMP:

- Address parts 6.5.1 through 6.5.5 (described below).
- Complete Tables 6-2 to 6-6.

If recycled water is not used and there are no plans for use within the planning horizon of the UWMP:

- Address parts 6.5.1, 6.5.2, and 6.5.5 (described below).
- Complete Table 6-2, 6-3, and 6-6.

WHOLESALE ONLY

A wholesale UWMP is not required to summarize wastewater generation or treatment within its service area, unless it provides supplemental treatment to recycled water prior to its distribution. Each wholesale UWMP preparer is to address recycled water as follows:

If recycled water is currently or planned to be used in the service area of a wholesale supplier:

- Describe how recycled water is or will be used within the service area;
- If not directly involved with the treatment or distribution of recycled water, provide a list of the wholesale and retail recycled water agencies;
- If any supplemental treatment is provided by the wholesale UWMP preparer, complete Table 6-3 for the supplemental treatment only;
- If recycled water is treated or distributed by the wholesale UWMP preparer, complete Tables 6-4.

If recycled water is not used and there are no plans for use within the planning horizon of the UWMP, provide a summary statement to that effect.

6.5.1 Recycled Water Coordination

CWC 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.

ALL URBAN WATER SUPPLIERS

To the extent available, each UWMP preparer is to:

- Coordinate with any wastewater facility or agency that collects or treats wastewater within the urban water supplier's service area regarding the quality and availability of wastewater for beneficial reuse. In addition, other water supply and planning agencies should be contacted regarding the existing and potential availability and uses of recycled water. These discussions can occur within the framework of an IRWM or other local and regional planning organization. Each of the types of organizations identified in the CWC 10633 should also be contacted.
- Identify in a bulleted list or similar format the agencies collecting, treating, or discharging municipal wastewater both generated and treated within the service area, and indicate their roles.

6.5.2 Wastewater Collection, Treatment, and Disposal

CWC 10633

(a) *(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.*

CWC 10633

(b) *(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.*

R

RETAIL ONLY

6.5.2.1 Wastewater Collected Within Service Area

This section summarizes collection and treatment of wastewater generated within the service area.

Describe how the agencies identified in Section 6.5.1 interact to collect wastewater within the service area, including any joint ventures or joint operations. For example, one agency collects wastewater and delivers it to another agency that operates the treatment facility.

Provide a general description of wastewater collection, treatment, and disposal within the service area.

TABLES

Table 6-2

RUWMPs will use multiple versions of Table 6-2; one for each participaint agency.

This table summarizes information on collection of wastewater within the service area. It is to be completed for each retail supplier, for all wastewater COLLECTED within the UWMP area, to the extent that information is available, whether recycled water is used within the service area or not. To complete Table 6-2:

- Contact the owners and operators of each agency that collects or treats wastewater in the supplier's service area regarding the volume of wastewater collected within the service area, to the best of the UWMP preparer's ability. Identify the facility that treated the collected wastewater;
- If wastewater generated from outside the service area is treated within the service area, indicate that.

RECOMMENDED

Table 6-2

- Estimate, to the best of the UWMP preparer's ability, the percentage of the service area and the population percentage served by the wastewater collection system;
- Indicate if a third-party organization operates a facility under contract (yes or no).

Table 6-2 Retail: Wastewater Collected Within Service Area in 2015						
☐	There is no wastewater collection system. The supplier will not complete the table below.					
	Percentage of 2015 service area covered by wastewater collection system *(optional)*					
	Percentage of 2015 service area population covered by wastewater collection system *(optional)*					
Wastewater Collection			**Recipient of Collected Wastewater**			
Name of Wastewater Collection Agency	Wastewater Volume Metered or Estimated? *Drop Down List*	Volume of Wastewater Collected from UWMP Service Area 2015	Name of Wastewater Treatment Agency Receiving Collected Wastewater	Treatment Plant Name	Is WWTP Located Within UWMP Area? *Drop Down List*	Is WWTP Operation Contracted to a Third Party? *(optional)* *Drop Down List*
Add additional rows as needed						
	Metered Estimated				Yes No	Yes No
Total Wastewater Collected from Service Area in 2015:		0				
NOTES:						

ALL URBAN WATER SUPPLIERS

6.5.2.2 Wastewater Treatment and Discharge Within Service Area

Table 6-3 identifies the volume of treated wastewater either recycled or disposed of within the service area. This may include wastewater that originated from outside the water supplier's area. Complete Table 6-3, to the extent that information is available. This table is to be completed by retailers for all wastewater TREATED OR DISPOSED within the UWMP area. If neither occurs, the table does not have to be completed. If a wholesale supplier provides additional treatment to recycled water, then it is to complete Table 6-3 only for the water receiving supplemental treatment.

RETAIL ONLY

If wastewater is not treated or disposed within the service area, Table 6-3 does not need to be completed. Instead, provide in the narrative a brief discussion of the disposal and/or recycling of treated wastewater at the facility that receives the service area wastewater.

WHOLESALE ONLY

Complete Table 6-3 only if the wholesale agency provides additional treatment.

TABLES

Table 6-3

Complete Table 6-3 Wastewater Treatment and Discharge Within Service Area 2015. RUWMPs will use multiple versions of Table 6-3; one for each participating agency.

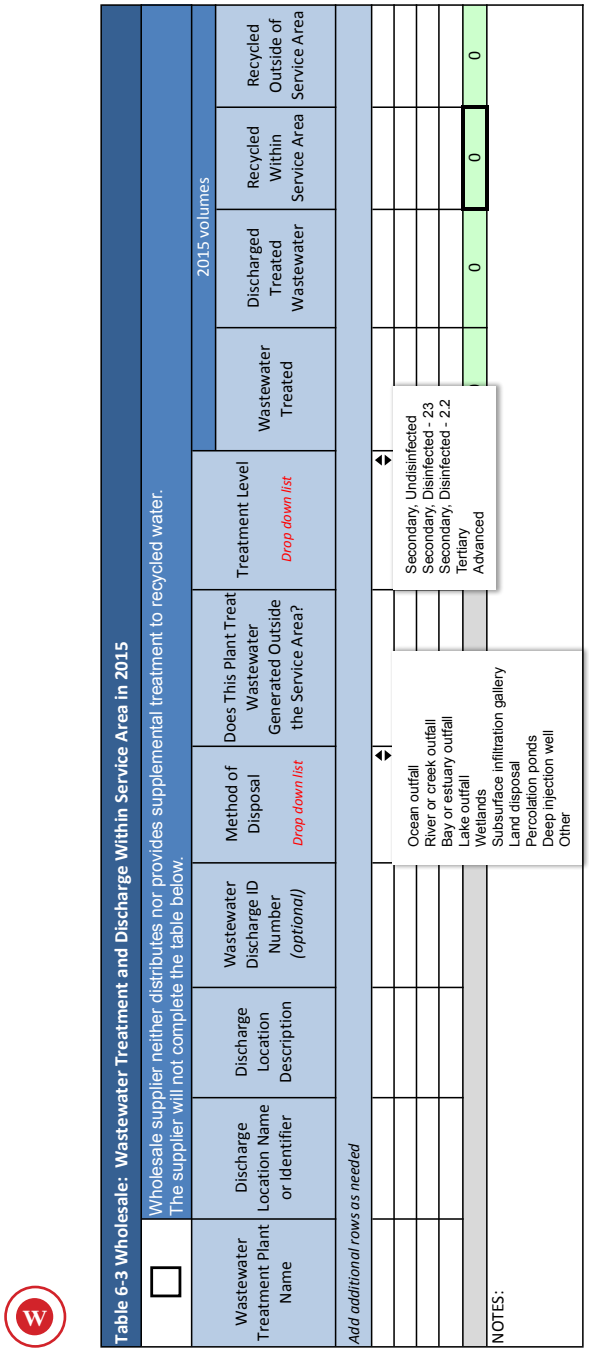


Table 6-3 Wholesale: Wastewater Treatment and Discharge Within Service Area in 2015

☐ Wholesale supplier neither distributes nor provides supplemental treatment to recycled water. The supplier will not complete the table below.

Wastewater Treatment Plant Name	Discharge Location Name or Identifier	Discharge Location Description	Wastewater Discharge ID Number *(optional)*	Method of Disposal *Drop down list*	Does This Plant Treat Wastewater Generated Outside the Service Area?	Treatment Level *Drop down list*	2015 volumes: Wastewater Treated	2015 volumes: Discharged Treated Wastewater	2015 volumes: Recycled Within Service Area	2015 volumes: Recycled Outside of Service Area
Add additional rows as needed										
								0	0	0

Ocean outfall
River or creek outfall
Bay or estuary outfall
Lake outfall
Wetlands
Subsurface infiltration gallery
Land disposal
Percolation ponds
Deep injection well
Other

Secondary, Undisinfected
Secondary, Disinfected - 23
Secondary, Disinfected - 2.2
Tertiary
Advanced

NOTES:

Table 6-3 Retail: Wastewater Treatment and Discharge Within Service Area in 2015

☐ No wastewater is treated or disposed of within the UWMP service area.
The supplier will not complete the table below.

Wastewater Treatment Plant Name	Discharge Location Name or Identifier	Discharge Location Description	Wastewater Discharge ID Number *(optional)*	Method of Disposal *Drop down list*	Does This Plant Treat Wastewater Generated Outside the Service Area?	Treatment Level *Drop down list*	2015 volumes			
							Wastewater Treated	Discharged Treated Wastewater	Recycled Within Service Area	Recycled Outside of Service Area
Add additional rows as needed										
								0	0	0

Method of Disposal drop down list:
Ocean outfall
River or creek outfall
Bay or estuary outfall
Lake outfall
Wetlands
Subsurface infiltration gallery
Land disposal
Percolation ponds
Deep injection well
Other

Treatment Level drop down list:
Secondary, Undisinfected
Secondary, Disinfected - 23
Secondary, Disinfected - 2.2
Tertiary
Advanced

NOTES:

6.5.3 Recycled Water System

CWC 10633

(c) *(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.*

R W

ALL URBAN WATER SUPPLIERS

For UWMP preparers implementing or planning recycled water use within the service area, this section provides an overview of the current recycled water system. The UWMP preparer shall:

- Provide text describing the recycled water system operating in the service area;
- Identify each agency involved in the recycled water system collection, treatment, and distribution, including wholesalers, retailers, special districts, or joint ventures;
- Provide information on the system's history and operation.

RECOMMENDED

Provide a map or specific physical description of the coverage of the distribution system providing recycled water in 2015.

Attach or provide a reference by website link to a Recycled Water Master Plan or similar document, if one has been prepared.

6.5.4 Recycled Water Beneficial Uses

CWC 10633

(d) *(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.*

CWC 10633

(e) *(Describe) 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.*

R W

ALL URBAN WATER SUPPLIERS

6.5.4.1 Current and Planned Uses of Recycled Water

This section discusses current and planned recycled water uses within the service area of urban water suppliers where recycled water use is implemented or planned and provides an overview of the current recycled water system.

The definition of recycled water (see Appendix M) includes the term "direct beneficial use", which is defined in the *California Code of Regulations*, Title 22, §60301.200 as "the use of recycled water that has been transported from the point of treatment or production to the point of use without an intervening discharge to waters of the State." Appendix M provides a more detailed discussion of how to apply these terms to recycled water.

R

RETAIL ONLY

Provide beneficial use information for recycled water delivered within the service area. If more than one supplier provides recycled water within the service area, separate tables may be provided for each (e.g., duplicating Table 6-4 and referring to the resulting tables as Table 6-4a and Table 6-4b to correspond to data from two different recycled water suppliers). Please refer to Appendix M before completing Table 6-4. Appendix M provides additional discussion on how recycled water should be quantified and discusses common errors in evaluating recycled water volume and uses.

RECOMMENDED

- The UWMP preparer may consider highlighting innovative uses of recycled water or a particular organization that has demonstrated commitment to the use of recycled water;
- Provide information on the specific types of recycled water uses, including such information as crops irrigated or type of landscapes irrigated.

WHOLESALE ONLY

For wholesale agencies that provide recycled water, include the name of the retail agency and the volume of water to which recycled water will be provided in Table 6-4. Beneficial uses do not need to be included. Wholesale agencies not directly involved in recycled water do not need to complete Table 6-4, but in the recycled water section of the UWMP should provide a list of the agencies that provide wholesale or retail recycled water within the UWMP preparers service area. Volumes of recycled water these agencies provide in 2015 could be included, but is not required.

TABLES

Table 6-4

This table is to be completed for all recycled water USED within the UWMP area. RUWMPs will use multiple versions of Table 6-4; one for each participating agency.

Text accompanying Table 6-4 should include a narrative overview of the level, or levels, of treatment (there may be more than one) of recycled water used and the types of uses.

The total recycled water use for each of the 5-year increments shown in Table 6-4 is to be included in Table 4-5 in Chapter 4.

Complete Table 6-4 for each direct beneficial use. To the best of the UWMP preparer's ability, quantify the amount of recycled water currently being used within the urban water supplier's service area, as well as projected volumes and uses into the future.

Table 6-4 Wholesale: Current and Projected Retailers Provided Recycled Water Within Service Area*

☐	Recycled water is not directly treated or distributed by the supplier. The supplier will not complete the table below.						
Name of Receiving Supplier or Direct Use by Wholesaler	Level of Treatment *Drop down list*	2015	2020	2025	2030	2035	2040 *(opt)*
	Secondary, Undisinfected						
	Secondary, Disinfected - 23						
	Secondary, Disinfected - 2.2						
	Tertiary						
	Advanced						
	Total:	0	0	0	0	0	0

** This may include use outside the the UWMP area that is NOT included in another UWMP area. It is to be noted in the general description cell.*

NOTES:

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Table 6-4 Retail: Current and Projected Recycled Water Direct Beneficial Uses Within Service Area*

☐	Recycled water is not used and is not planned for use within the service area of the supplier. The supplier will not complete the table below.
Name of Agency Producing (Treating) the Recycled Water:	
Name of Agency Operating the Recycled Water Distribution System:	
Supplemental Water Added in 2015	
Source of 2015 Supplemental Water	

Beneficial Use Type *These are the only Use Types that will be recognized by the DRW online submittal tool*	General Description of 2015 Uses	Level of Treatment *Drop down list*	2015	2020	2025	2030	2035	2040 (opt)
Agricultural irrigation		*Secondary, Undisinfected*						
Landscape irrigation (exc golf courses)		*Secondary, Disinfected - 23*						
Golf course irrigation		*Secondary, Disinfected - 2.2*						
Commercial use		*Tertiary*						
Industrial use		*Advanced*						
Geothermal and other energy production								
Seawater intrusion barrier								
Recreational impoundment								
Wetlands or wildlife habitat								
Groundwater recharge (IPR)								
Surface water augmentation (IPR)								
Direct potable reuse								
Other *Type of Use*								
		Total:	0	0	0	0	0	0

IPR - Indirect Potable Reuse

** This may include use outside the the UWMP area that is NOT included in another UWMP area. It is to be noted in the general description cell.*

NOTES:

6.5.4.2 Planned Versus Actual Use of Recycled Water

> ***CWC 10633***
>
> ***(e)*** *(Provide) a description of the actual use of recycled water in comparison to uses previously projected pursuant to this subdivision.*

R W

ALL URBAN WATER SUPPLIERS

Each UWMP which has recycled water use is to provide a comparison of earlier projected use of recycled water to actual uses. This is accomplished by completing Table 6-5. From the urban water supplier's 2010 UWMP, provide the 2015 projected estimates of recycled water use. Compare those estimates to the actual 2015 recycled water use as reported in Table 6-4.

Note that the highlighted cells in the total rows of Tables 6-3, 6-4, and 6-5 should be the same.

R

RETAIL ONLY

For retail UWMP preparers that have more than one recycled water provider within its service area, Table 6-5 can be submitted either as a compiled table or as separate tables for each provider.

W

WHOLESALE ONLY

Wholesale UWMP preparers are to provide total recycled water delivered to each retailer or wholesaler, without identification of beneficial use.

TABLES

Table 6-5

Complete Table 6-5: 2010 Recycled Water Use Projection Compared to 2015 Actual. RUWMPs will use multiple versions of Table 6-5; one for each participating agency.

Table 6-5 Wholesale: 2010 UWMP Recycled Water Use Projection Compared to 2015 Actual

☐	Recycled water was not used or distributed by the supplier in 2010, nor projected for use or distribution in 2015. The supplier will not complete the table below.	
Name of Receiving Supplier or Direct Use by Wholesaler	2010 Projection for 2015	2015 actual use
Total	0	0

NOTES:

Table 6-5 Retail: 2010 UWMP Recycled Water Use Projection Compared to 2015 Actual

☐	Recycled water was not used in 2010 nor projected for use in 2015. The supplier will not complete the table below.	
Use Type *These are the only Use Types that will be recognized by the WUEdata online submittal tool*	2010 Projection for 2015	2015 actual use
Agricultural irrigation		
Landscape irrigation (exc golf courses)		
Golf course irrigation		
Commercial use		
Industrial use		
Geothermal and other energy production		
Seawater intrusion barrier		
Recreational impoundment		
Wetlands or wildlife habitat		
Groundwater recharge (IPR)		
Surface water augmentation (IPR)		
Direct potable reuse		
Other *Type of Use*		
Total	0	0

NOTES:

6.5.5 Actions to Encourage and Optimize Future Recycled Water Use

CWC 10633

(f) *(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.*

CWC 10633

(g) *(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.*

R

RETAIL ONLY

Each retail agency is to complete this section, whether recycled water is used, planned for use, or not planned for use.

- Describe the approaches the urban water supplier is implementing or is planning to implement to increase or encourage the use of recycled water within its service area, building upon the discussion of planned future expansion of recycled water use in the service area. Summarize these approaches in Table 6-6. These actions may include financial incentives, funding for onsite retrofits for industrial or commercial users, public outreach, demonstration projects, building code modification, ordinances, etc.;
- Discuss the issues constraining recycled water implementation and expansion and what could be done to address those limitations.
- Assess potential uses of recycled water, whether or not it is currently being used in the service area;
- Provide estimates of the volume of additional recycled use that could be realized by implementing any of the actions (Table 6-6);
- If recycled water use is not planned to be implemented within the planning horizon of the UWMP, identify the reasons recycled water is not being considered as a potential water supply;
- Identify the nearest known availability of recycled water and the obstacles (if any) to accessing this resource;
- If a feasibility study has been prepared, include a reference and website link or attachment (optional).

The water supplier may not be the organization responsible for the treatment or distribution of recycled water in the service area. However, water agencies coordination with the local wastewater treatment operator and recycled water purveyors can identify opportunities to expand recycled water use, assess revenue impacts to both agencies, and recognize common benefits. These actions can include supporting the wastewater agencies plant upgrades to increase recycled water use. These actions should be included in Table 6-6, as applicable.

TABLES

Table 6-6

This table is to be completed by UWMP preparers whether recycled water is or is not planned to be used. RUWMPs will use multiple versions of Table 6-6; one for each participating agency.

Table 6-6 Retail: Methods to Expand Future Recycled Water Use

☐	Supplier does not plan to expand recycled water use in the future. Supplier will not complete the table below but will provide narrative explanation.
	Provide page location of narrative in UWMP

Name of Action	Description	Planned Implementation Year	Expected Increase in Recycled Water Use
		Total	0

NOTES:

6.6 Desalinated Water Opportunities

CWC 10631

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

R

W

ALL URBAN WATER SUPPLIERS

UWMP preparers are required to consider the potential for desalinated water as a water supply option. Identify and discuss opportunities for development of desalinated water supplies from ocean water, brackish surface water, and brackish groundwater. Indicate the level to which desalination is being considered.

If the water supplier has determined that there are no opportunities for development of desalinated water sources within the planning horizon of the 2015 UWMP, the supplier is to clearly indicate that desalination is not being considered and discuss why.

If surface water, groundwater, or seawater is being desalinated, or planned to be desalinated, the current and/or projected volume(s) will be reported in the desalinated water entry on Table 6-8: Water Supplies – Actual and Table 6-9 Water Supplies - Projected. The source of the water and the measurement of total dissolved solids (TDS) may be included in the "Detail" column of the tables, or as a narrative.

6.7 Exchanges or Transfers

CWC 10631

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

R W

ALL URBAN WATER SUPPLIERS

Describe any planned or potential future water exchanges or transfers.

For purposes of the UWMP, water agencies will make their own determination as to whether a water source is a purchase, import, exchange, or transfer.

6.7.1 Exchanges

R W

ALL URBAN WATER SUPPLIERS

Water exchanges are typically water delivered by one water user to another water user, with the receiving water user providing water in return at a specified time or when the conditions of the parties' agreement are met. Water exchanges can be strictly a return of water on a basis agreed upon by the participants or can include payment and the return of water. The water returned may or may not be an "even" exchange. Water can be returned on a one-for-one basis or by another arrangement (e.g., for each acre-foot [AF] of water received, 2 AF are returned). Enter exchange information into Table 6-8: Water Supplies – Actual, and Table 6-9 Water Supplies - Projected.

6.7.2 Transfers

R W

ALL URBAN WATER SUPPLIERS

The CWC defines a water transfer as a temporary or long-term change in the point of diversion, place of use, or purpose of use due to a transfer, sale, lease, or exchange of water or water rights. Temporary water transfers have a duration of one year or less (CWC Section 1725). Long-term water transfers have a duration of more than one year (CWC Section 1728).

Transfers can be between water districts that are neighboring or across the State, provided there is a means to convey or store the water. A water transfer can be a temporary or permanent sale of water or a water right by the water right holder, a lease of the right to use water from the water right holder, or a sale or lease of a contractual right to water supply. Water transfers can also take the form of long-term contracts for the purpose of improving long-term supply reliability. Enter transfer information into Table 6-8: Water Supplies – Actual, and Table 6-9 Water Supplies - Projected.

6.7.3 Emergency Interties

ALL URBAN WATER SUPPLIERS

Emergency interties are addressed in Chapter 7, Water Supply Reliability.

6.8 Future Water Projects

CWC 10631

(g) *…The urban water supplier shall include a detailed description of expected future projects and programs… 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.*

ALL URBAN WATER SUPPLIERS

Provide a narrative description of expected future projects and programs that the supplier may implement to increase water supply for average, single-dry and/or multi-dry years.

Complete Table 6-7: Expected Future Water Supply Projects or Programs for projects or programs that have a quantifiable increase in water supply to the agency and can reasonably be expected to be implemented within the 20-year time frame of the UWMP. Examples include desalination plants, recycled water treatment plants or infrastructure, or a known increase in a water right or contractual agreement. Capital improvement projects that do not increase the agency's water supply should not be included in this section.

TABLES

Table 6-7: Expected Future Water Supply Projects or Programs

RUWMPs will use multiple versions of Table 6-7; one for each participating agency.

Table 6-7 Wholesale: Expected Future Water Supply Projects or Programs

☐	No expected future water supply projects or programs that provide a quantifiable increase to the agency's water supply. Supplier will not complete the table below.
☐	Some or all of the supplier's future water supply projects or programs are not compatible with this table and are described in a narrative format.
	Provide page location of narrative in the UWMP

Name of Future Projects or Programs	Joint Project with other agencies?		Description *(if needed)*	Planned Implementation Year	Planned for Use in Year Type *Drop Down list*	Expected Increase in Water Supply to Agency
	Drop Down Menu	*If Yes, Agency Name*				
Add additional rows as needed						

NOTES:

Table 6-7 Retail: Expected Future Water Supply Projects or Programs

☐	No expected future water supply projects or programs that provide a quantifiable increase to the agency's water supply. Supplier will not complete the table below.
☐	Some or all of the supplier's future water supply projects or programs are not compatible with this table and are described in a narrative format.
	Provide page location of narrative in the UWMP

Name of Future Projects or Programs	Joint Project with other agencies?		Description (if needed)	Planned Implementation Year	Planned for Use in Year Type *Drop Down List*	Expected Increase in Water Supply to Agency *This may be a range*
	Drop Down List (y/n)	*If Yes, Agency Name*				
Add additional rows as needed						

NOTES:

6.9 Summary of Existing and Planned Sources of Water

CWC 10631

(b) *Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five-year increments described in subdivision 10631(a).*

(4) *(Provide 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.*

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ALL URBAN WATER SUPPLIERS

Provide the actual source and volume of water for the year 2015 in Table 6-8: Water Supplies – Actual. In Table 6-9: Water Supplies – Projected, provide the volume of water, by source, that is reasonably available, based on historical deliveries for average years. The tables also provide a column for optional reporting of the volume of the agency's total water right or total capacity. For some agencies, these values will be identical. Water supply projections from wholesale agencies are a source for reasonably available supply data for retail agencies that receive water from wholesalers. The State Water Project (SWP) Delivery Capability Report 2015 (Report) is also a source of data that can be used to estimate future water supplies from the SWP. Note that the format and the content of the Report have changed from previous reports. Most significantly, the 2015 report does not provide projections of SWP deliveries; rather, it provides SWP delivery capability under several possible scenarios that address changes in climate, regulations, and facilities. (See Report Final Appendices https://msb.water.ca.gov/documents/86800/c97c3baa-0189-4154-bf19-aa88392026ac).

TABLES

RUWMPs will use multiple versions of Tables 6-8 and 6-9; one for each participating agency.

Table 6-8

Water Supplies – Actual

Complete Table 6-8 with information on the actual water supplies for the year 2015.

Table 6-9

Projected groundwater supplies will be reported in Table 6-9 Water Supplies – Projected. When listing groundwater sources, basin names are to be taken from DWR Bulletin 118. If an agency has more than one source of groundwater, add additional rows to the tables.

Complete Table 6-9 with information on projected water supplies. The projections will be based on information that is reasonably available to the supplier, including, but not limited to, historical use records.

Note: For purposes of the UWMP, water conservation is not classified as a source of water but should be reflected as a decrease in demand, as described in Chapter 4.



Table 6-8 Wholesale: Water Supplies — Actual

Water Supply *Drop down list May use each category multiple times. These are the only water supply categories that will be recognized by the WUEdata online submittal tool*	Additional Detail on Water Supply	2015		
		Actual Volume	Water Quality *Drop Down List*	Total Right or Safe Yield *(optional)*
Purchased or Imported Water			*Drinking Water*	
Supply from Storage			*Raw Water*	
Groundwater			*Recycled Water*	
Surface water				
Recycled Water				
Desalinated Water				
Stormwater Use				
Transfers				
Exchanges				
Other				
Total		0		0
NOTES:				

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Table 6-8 Retail: Water Supplies — Actual

Water Supply *Drop down list* *May use each category multiple times. These are the only water supply categories that will be recognized by the WUEdata online submittal tool*	Additional Detail on Water Supply	2015		
		Actual Volume	Water Quality *Drop Down List*	Total Right or Safe Yield *(optional)*
Purchased or Imported Water			*Drinking Water*	
Supply from Storage			*Raw Water*	
Groundwater			*Recycled Water*	
Surface water				
Recycled Water				
Desalinated Water				
Stormwater Use				
Transfers				
Exchanges				
Other				
Total		0		0
NOTES:				

Table 6-9 Wholesale: Water Supplies — Projected											
Water Supply *Drop down list* *May use each category multiple times. These are the only water supply categories that will be recognized by the WUEdata online submittal tool*	Additional Detail on Water Supply	Projected Water Supply *Report To the Extent Practicable*									
		2020		2025		2030		2035		2040 *(opt)*	
		Reasonably Available Volume	Total Right or Safe Yield *(optional)*	Reasonably Available Volume	Total Right or Safe Yield *(optional)*	Reasonably Available Volume	Total Right or Safe Yield *(optional)*	Reasonably Available Volume	Total Right or Safe Yield *(optional)*	Reasonably Available Volume	Total Right or Safe Yield *(optional)*
Purchased or Imported Water											
Supply from Storage											
Groundwater											
Surface water											
Recycled Water											
Desalinated Water											
Stormwater Use											
Transfers											
Exchanges											
Other											
Total		0	0	0	0	0	0	0	0	0	0
NOTES:											

Table 6-9 Retail: Water Supplies — Projected											
Water Supply *Drop down list* *May use each category multiple times. These are the only water supply categories that will be recognized by the WUEdata online submittal tool*	Additional Detail on Water Supply	**Projected Water Supply** *Report To the Extent Practicable*									
		2020		**2025**		**2030**		**2035**		**2040** *(opt)*	
		Reasonably Available Volume	Total Right or Safe Yield *(optional)*	Reasonably Available Volume	Total Right or Safe Yield *(optional)*	Reasonably Available Volume	Total Right or Safe Yield *(optional)*	Reasonably Available Volume	Total Right or Safe Yield *(optional)*	Reasonably Available Volume	Total Right or Safe Yield *(optional)*
Purchased or Imported Water											
Supply from Storage											
Groundwater											
Surface water											
Recycled Water											
Desalinated Water											
Stormwater Use											
Transfers											
Exchanges											
Other											
Total		0	0	0	0	0	0	0	0	0	0
NOTES:											

6.10 Climate Change Impacts to Supply

ALL URBAN WATER SUPPLIERS

A discussion of climate change impacts to an agency's water supply is not required by the CWC.

RECOMMENDED

DWR recommends that water agencies complete the IRWM Climate Change Vulnerability Assessment (Appendix I) and include in this chapter a narrative summary of "Section II Water Supply".

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Chapter 7
Water Supply Reliability Assessment

Assessment of water supply reliability is complex and dependent upon a number of factors, such as the number of water sources, regulatory and legal constraints, climate change, and expected growth, among others. Water agencies are to make their best determination of the reliability of their water supply(ies) based upon what is known by the agency at the time the 2015 UWMP is prepared.

This chapter of the Guidebook provides guidance for describing the long term reliability of an urban water supplier's water supplies. Shorter term reliability planning that may require immediate action, such as drought or a catastrophic supply interruption, is addressed in Chapter 8, Water Shortage Contingency Planning.

Specific guidance an urban water supplier may consider in preparing this part of a UWMP includes:

- DWR's Draft State Water Project Delivery Capability Report 2015 https://msb.water.ca.gov/documents/86800/c97c3baa-0189-4154-bf19-aa88392026ac
- Weather information from The National Weather Service http://www.nws.noaa.gov/
- Runoff data from:
  - DWR http://cdec.water.ca.gov/
  - US Geological Survey http://waterdata.usgs.gov/ca.nwis/sw
  - Operators of local dams

The following subsections are included in this chapter:

7.1 Constraints on Water Sources

7.2 Reliability by Type of Year

7.3 Supply and Demand Assessment

7.4 Regional Supply Reliability

7.1 Constraints on Water Sources

CWC 10631

(c)(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.*

CWC 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.

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ALL URBAN WATER SUPPLIERS

Provide, to the extent practicable, a description of any constraints on the agency's water supply, such as inconsistent availability or water quality issues, that have been identified by the water agency. Also include the management strategies that have been, or will be, employed to address the constraint. This narrative description is critical to explaining the degree and probability of any constraint to a water source.

Agencies that are both wholesalers and retailers should clearly identify if a particular constraint is related to their wholesale or retail operation.

The narrative will include:

- A description of any particular circumstances that would make a source inconsistent; for example, a legal, environmental or climatic factor. This estimation of inconsistent sources is determined by the water agency, is based on the information known by the water agency at the time the 2015 UWMP is prepared, and projects to the foreseeable future;
- Known future constraints on water supplies, such as declining groundwater levels, sea level rise, or diminishing snow pack;
- A description of the quality of source water and how the water quality may affect water management strategies and/or supply reliability for the water agency. This estimation is determined by the water agency, based on the information reasonably available at the time the 2015 UWMP is prepared;

- Planned actions and water management strategies to address noted vulnerabilities and inconsistencies.
- A description of plans to supplement or replace these sources with alternative sources or water demand management measures, to the extent practicable.

If there is another section within the UWMP that describes a constraint on a particular water source and/or plans to supplement this source, there is no need to repeat this information in this section. Refer the reader to the other sections within the UWMP that provide these details.

RECOMMENDED

Agencies may choose to include the most recent Consumer Confidence Report for water supplies as an appendix.

Maps, charts, graphs, or other visual tools are recommended when they can illustrate a water quality issue.

Include a summary of the water quality information from such documents as the Climate Change Vulnerability Assessment, Groundwater Management Plans, Salt and Nutrient Plans, and other relevant documents, as applicable.

7.2 Reliability by Type of Year

CWC 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.*

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ALL URBAN WATER SUPPLIERS

Describe the historic reliability of the water supply and any vulnerability to seasonal or climatic shortage, to the extent practicable.

Complete Table 7-1: Bases of Water Year Data. This table lists the years that the agency identifies as their historical average, single driest year, and driest multi-year period. These years are known as the "Base Years". In the "Base Year" column of the table, the UWMP preparer will specify the years that represent each year type. Historic hydrologic data are commonly used to establish water year types.

In the "Available Supplies" column of Table 7-1, the preparer will specify the percentage and/or volume of water supply expected if there were to be a repeat of the hydrology from that type of year.

- Percentage - The percentage of an average year water supply that would be available if the dry year hydrology were repeated.
- Volume - The volume of water that would be available from all sources if the dry year hydrology were to occur again.

RECOMMENDED

Provide the source, or describe the method used, to estimate water reliability and to determine which years represent the agency's average, single-dry and multiple-dry years.

7.2.1 Types of Years

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ALL URBAN WATER SUPPLIERS

7.2.1.1 Average Year

A year, or an averaged range of years, that most closely represents the average water supply available to the agency. The UWMP Act uses the term "normal" conditions. Within this guidebook the terms "normal" and "average" are used interchangeably.

7.2.1.2 Single-dry year

The single-dry year is the year that represents the lowest water supply available to the agency.

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7.2.1.3 Multiple-dry year period

The multiple dry year period is the period that represents the lowest average water supply availability to the agency for a consecutive multiple year period (three years or more). This is generally considered to be the lowest average runoff for a consecutive multiple year period (three years or more) for a watershed since 1903. DWR has interpreted "multiple dry years" to mean three dry years, however, water agencies may project their water supplies for a longer time period.

7.2.1.4 Sources for Water Data

For State Water Project contractors, information on water supply capacity of the SWP under several scenarios is available in the SWP Delivery Capability Report 2015.

Weather information is available at:

- The National Weather Service website http://www.nws.noaa.gov/
- California Irrigation Management Information Systems (CIMIS) http://www.cimis.water.ca.gov/

Runoff data is available at:

- DWR http://cdec.water.ca.gov/
- U.S. Geological Survey http://waterdata.usgs.gov/ca/nwis/sw
- Operators of local dams

Groundwater information is available at:

- State of California Sustainable Groundwater Management website http://groundwater.ca.gov/cagroundwater/index.cfm
- California Statewide Groundwater Eleveation Monitoring (CASGEM)
- http://www.water.ca.gov/groundwater/casgem/

7.2.2 Agencies with Multiple Sources of Water

ALL URBAN WATER SUPPLIERS

Many agencies have multiple water sources and each may have a different hydrology, resulting in different base years for each source. For example, an imported water source may have experienced its single driest year in the same year that a local surface water source experienced a normal year. Reporting of different base years for multiple water sources in Table 7-1 may be done by including multiple versions of Table 7-1.

TABLES

Table 7-1: Bases of Water Year Data

RUWMPs will use multiple versions of Table 7-1; one for each participating agency.

Table 7-1 Wholesale: Basis of Water Year Data

Year Type	Base Year *If not using a calendar year, type in the last year of the fiscal or water year, for example, water year 1999-2000, use 2000*	Available Supplies if Year Type Repeats	
		☐ Quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP. Location _____	
		☐ Quantification of available supplies is provided in this table as either volume only, percent only, or both.	
		Volume Available	% of Average Supply
Average Year			100%
Single-Dry Year			
Multiple-Dry Years 1st Year			
Multiple-Dry Years 2nd Year			
Multiple-Dry Years 3rd Year			
Multiple-Dry Years 4th Year *Optional*			
Multiple-Dry Years 5th Year *Optional*			
Multiple-Dry Years 6th Year *Optional*			

Agency may use multiple versions of Table 7-1 if different water sources have different base years and the supplier chooses to report the base years for each water source separately. If an agency uses multiple versions of Table 7-1, in the "Note" section of each table, state that multiple versions of Table 7-1 are being used and identify the particular water source that is being reported in each table.

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Table 7-1 Retail: Basis of Water Year Data

Year Type	Base Year *If not using a calendar year, type in the last year of the fiscal or water year, for example, water year 1999-2000, use 2000*	Available Supplies if Year Type Repeats	
		☐ Quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP. Location _____	
		☐ Quantification of available supplies is provided in this table as either volume only, percent only, or both.	
		Volume Available	**% of Average Supply**
Average Year			100%
Single-Dry Year			
Multiple-Dry Years 1st Year			
Multiple-Dry Years 2nd Year			
Multiple-Dry Years 3rd Year			
Multiple-Dry Years 4th Year *Optional*			
Multiple-Dry Years 5th Year *Optional*			
Multiple-Dry Years 6th Year *Optional*			

Agency may use multiple versions of Table 7-1 if different water sources have different base years and the supplier chooses to report the base years for each water source separately. If an agency uses multiple versions of Table 7-1, in the "Note" section of each table, state that multiple versions of Table 7-1 are being used and identify the particular water source that is being reported in each table.

NOTES:

CWC 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.*

ALL URBAN WATER SUPPLIERS

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Provide the water supplier's expected water supply reliability for normal (average), single-dry year, and multiple-dry years for 2020, 2025, 2030 and 2035.

Water agencies are to make the best determination of the reliability of their water supply(ies) based upon what information is reasonably available at the time the 2015 UWMP is prepared.

The water service reliability assessment shall be based upon the agency's compiled information regarding the service area, water sources, water supply reliability, and water demand as described in CWC Section 10631, including available data from State, regional or local agency population projections within the service area of the urban water supplier.

Include a brief narrative describing the information and process used to develop the supply and demand reliability assessment.

RECOMMENDED

If Tables 7-2, 7-3, or 7-4 show a surplus or a shortage when comparing projected supply and demand, DWR recommends that the UWMP preparer include a discussion of management actions that the agency may take in response to the surplus or shortage.

Some factors to consider in the assessment include the potential for acquiring supplemental water supplies, potential for increased irrigation demand because of low rainfall, expected demand reduction due to increased implementation of demand management measures, implementation of drought stages, savings from codes and standards, and increased drought messaging.

TABLES

RUWMPs will use multiple versions of Tables 7-2, 7-3, and 7-4; one for each participating agency.

Tables 7-2, 7-3, and 7-4

Include a quantification of supply and demand for the various types of years using Table 7-2: Normal Year Supply and Demand Comparison, Table 7-3: Single Dry Year Supply and Demand Comparison, and Table 7-4: Multiple Dry Years Supply and Demand Comparison.

Table 7-2

Table 7-2 records the data for a normal year. These values will already have been entered into Table 4-2 (Demand) and Table 6-8 (Supply) and will be copied to this table. This will be done manually in the Excel spreadsheets and will be automated in the WUEdata online submittal tool.

Tables 7-3 and 7-4

The UWMP preparer will enter the estimated dry and multiple dry water year supplies and demands for the 20 year planning horizon.



Table 7-2 Wholesale: Normal Year Supply and Demand Comparison					
	2020	2025	2030	2035	2040 *(Opt)*
Supply totals *(autofill fm Table 6-9)*	0	0	0	0	0
Demand totals *(autofill fm Table 4-3)*	0	0	0	0	0
Difference	0	0	0	0	0
NOTES:					



Table 7-2 Retail: Normal Year Supply and Demand Comparison					
	2020	2025	2030	2035	2040 *(Opt)*
Supply totals *(autofill fm Table 6-9)*	0	0	0	0	0
Demand totals *(autofill fm Table 4-3)*	0	0	0	0	0
Difference	0	0	0	0	0
NOTES:					

Table 7-3 Wholesale: Single Dry Year Supply and Demand Comparison					
	2020	2025	2030	2035	2040 (Opt)
Supply totals					
Demand totals					
Difference	0	0	0	0	0
NOTES:					

Table 7-3 Retail: Single Dry Year Supply and Demand Comparison					
	2020	2025	2030	2035	2040 (Opt)
Supply totals					
Demand totals					
Difference	0	0	0	0	0
NOTES:					

Table 7-4 Wholesale: Multiple Dry Years Supply and Demand Comparison

		2020	2025	2030	2035	2040 (Opt)
First year	Supply totals					
	Demand totals					
	Difference	0	0	0	0	0
Second year	Supply totals					
	Demand totals					
	Difference	0	0	0	0	0
Third year	Supply totals					
	Demand totals					
	Difference	0	0	0	0	0
Fourth year *(optional)*	Supply totals					
	Demand totals					
	Difference	0	0	0	0	0
Fifth year *(optional)*	Supply totals					
	Demand totals					
	Difference	0	0	0	0	0
Sixth year *(optional)*	Supply totals					
	Demand totals					
	Difference	0	0	0	0	0
NOTES:						

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Table 7-4 Retail: Multiple Dry Years Supply and Demand Comparison						
		2020	2025	2030	2035	2040 (Opt)
First year	Supply totals					
	Demand totals					
	Difference	0	0	0	0	0
Second year	Supply totals					
	Demand totals					
	Difference	0	0	0	0	0
Third year	Supply totals					
	Demand totals					
	Difference	0	0	0	0	0
Fourth year *(optional)*	Supply totals					
	Demand totals					
	Difference	0	0	0	0	0
Fifth year *(optional)*	Supply totals					
	Demand totals					
	Difference	0	0	0	0	0
Sixth year *(optional)*	Supply totals					
	Demand totals					
	Difference	0	0	0	0	0
NOTES:						

7.4 Regional Supply Reliability

CWC 10620

(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.*

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ALL URBAN WATER SUPPLIERS

Provide a summary of the water management tools and options that are being implemented, or are planned for implementation, that maximize the use of local water resources and minimize the need to import water from other regions. For example, this description may include actions such as increased implementation of demand management measures, increased use of recycled water, enhanced groundwater management, or improvements in regional water management and coordination.

RECOMMENDED

Water suppliers may quantify increased regional supply reliability by completing the optional tables in Appendix P. These optional tables may be completed for an individual agency, whether retail or wholesale, or may be completed for a region.

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Chapter 8
Water Shortage Contingency Planning

Water shortage contingency planning is a strategic planning process to prepare for and respond to water shortages. Good planning and preparation can help agencies maintain reliable supplies and reduce the impacts of supply interruptions.

This chapter provides guidance for describing the water shortage contingency planning of an urban water supplier. Guidance is included for reporting the staged response to a water shortage, such as a drought, that occurs over a period of time, as well catastrophic supply interruptions which occur suddenly.

A water shortage contingency plan (WSCP) is a document that can be created separately from the UWMP and amended as needed without amending the corresponding UWMP. However, the most current version of the WSCP must be included as part of the UWMP when the UWMP is submitted to DWR.

Specific guidance for consideration in preparing this part of a UWMP includes:

- DWR Urban Drought Guidebook (2008 Edition) – This publication provides extensive guidance on water shortage contingency planning for urban water suppliers, http://www.water.ca.gov/pubs/planning/urban_drought_guidebook/urban_drought_guidebook_2008.pdf
- DWR California Drought Contingency Plan (2010) http://www.water.ca.gov/waterconditions/docs/Final_CA_Drought_Contingency_Plan-11-18-2010a.pdf
- California's Most Significant Droughts: Comparing Historical and Recent Conditions, DWR 2015 http://www.water.ca.gov/waterconditions/docs/California_Signficant_Droughts_2015_small.pdf

CWC 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.*

Water agencies are only required to submit information in a WSCP that is within their authority.

The following sections are included in this chapter:

8.1 Stages of Action

8.2 Prohibitions on End Uses

8.3 Penalties, Charges, Other Enforcement of Prohibitions

8.4 Consumption Reduction Methods

8.5 Determining Water Shortage Reductions

8.6 Revenue and Expenditure Impacts

8.7 Resolution or Ordinance

8.8 Catastrophic Supply Interruption

8.9 Minimum Supply Next Three Years

8.1 Stages of Action

CWC 10632

(a)(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 which are applicable to each stage.*

R W

ALL URBAN WATER SUPPLIERS

The number of stages of action in a WSCP is at the discretion of the water supplier. Typically, water agencies will include between three and five stages of action in a WSCP. The stages reflect decreasing water supplies with increasing levels of prohibitions and consumption reduction methods. Agencies must include a stage that addresses a reduction of 50 percent in the water supply.

Indicate the specific water supply conditions applicable to each stage. Many agencies have more than one water source and will rely on the different sources as they are available. This situation provides a level of complexity that is not easily captured in a data table. Therefore, a narrative description is necessary. Some examples of water supply conditions include specific reservoir levels, levels of precipitation, groundwater availability, or water delivery estimates from other water agencies.

RECOMMENDED

DWR recommends that a narrative description of the stages include an outline of the process that will be used to implement the stages of action. For example, moving from one stage to another may be automatically triggered once water supplies have reached a certain percent of average supply, or, perhaps the governing board is required to make the determination that it is necessary to move to a different stage.

An agency may designate the first stage in their WSCP as a stage that is in force at all times and prohibits water waste.

Though not required by the CWC, DWR recommends that water agencies include a stage, or a plan of action to address severe water shortages of over a 50 percent reduction in water supply. This can be especially important in a series of dry years and particularly for water agencies that have only one source of supply. A description of this stage, or plan of action, may include a discussion of possible sources of additional water supply and a discussion of actions that may be implemented to address basic health and safety needs of the community.

TABLES

Table 8-1

Complete Table 8-1: Stages of WSCP. This table identifies the water supply conditions associated with each stage of action. In this table, water agencies will identify each stage by the supply reduction and the water supply condition. RUWMPs will use multiple versions of Table 8-1; one for each participating agency.

Table 8-1 Wholesale
Stages of Water Shortage Contingency Plan

Stage	Complete Both	
	Supply Reduction[1]	Water Supply Condition (*Narrative description*)
Add additional rows as needed		
[1] *One stage in the Water Shortage Contingency Plan must address a water shortage of 50%.*		
NOTES:		

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Table 8-1 Retail Stages of Water Shortage Contingency Plan		
Stage	Complete Both	
	Percent Supply Reduction[1] *Numerical value as a percent*	Water Supply Condition (*Narrative description*)
Add additional rows as needed		
[1] *One stage in the Water Shortage Contingency Plan must address a water shortage of 50%.*		
NOTES:		

8.2 Prohibitions on End Uses

CWC 10632

(a)(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.*

RETAIL ONLY

Agencies will make their own determination as to which prohibitions, and which stage for each prohibition, are most appropriate for their service area. Agencies may reference any document in this section that provides additional details of prohibitions and stages.

RECOMMENDED

Agencies may discuss the expected water savings at each stage based on the actions that will be taken. These expected savings may be estimated based on an agency's past experiences, or from studies and reports that have determined savings based on specific implementation.

TABLES

Complete Table 8-2: Restrictions and Prohibitions on End Uses. RUWMPs will use multiple versions of Table 8-2; one for each participating agency. This table reports the prohibitions that the agency places on end uses in each stage. Categories of prohibitions are provided in Table 8-2 in a drop down menu. Agencies are not required to select any of these categories of prohibitions. The categories provided are a compilation of common categories that were reported in the 2010 UWMPs and are the only prohibitions that will be accepted by the online submittal tool. If an agency utilizes a prohibition that is not listed, this will be reported using "Other".

A column in Table 8-2 provides an optional field for the UWMP preparer to include additional detail about the restriction or prohibition category selected, if needed. This table also includes a column for reporting of any penalties, charges, or other enforcement (see Section 8.3) that may be associated with the listed prohibitions.

These categories are described, with examples, in the sections below.

R

Table 8-2 Retail Only: Restrictions and Prohibitions on End Uses			
Stage	Restrictions and Prohibitions on End Users *Drop down list* *These are the only categories that will be accepted by the WUEdata online submittal tool*	Additional Explanation or Reference *(optional)*	Penalty, Charge, or Other Enforcement? *Drop Down List*
	Landscape - Restrict or prohibit runoff from landscape irrigation		*Yes*
	Landscape - Limit landscape irrigation to specific times		*No*
	Landscape - Limit landscape irrigation to specific days		
	Landscape - Prohibit certain types of landscape irrigation		
	Landscape - Prohibit all landscape irrigation		
	Landscape - Other landscape restriction or prohibition		
	CII - Lodging establishment must offer opt out of linen service		
	CII - Restaurants may only serve water upon request		
	CII - Commercial kitchens required to use pre-rinse spray valves		
	CII - Other CII restriction or prohibition		
	Water Features - Restrict water use for decorative water features, such as fountains		
	Pools and Spas - Require covers for pools and spas		
	Pools - Allow filling of swimming pools only when an appropriate cover is in place.		
	Other water feature or swimming pool restriction		
	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner		
	Other - Require automatic shut of hoses		
	Other - Prohibit use of potable water for construction and dust control		
	Other - Prohibit use of potable water for washing hard surfaces		
	Other - Prohibit vehicle washing except at facilities using recycled or recirculating water		
	Other		
NOTES:			

8.2.1 Landscape Irrigation

R

RETAIL ONLY

The following categories of prohibitions on landscape irrigation are provided in a drop down menu in Table 8.2. The section below includes examples of restrictions or prohibitions that may fall within these categories. Agencies are not required to select any of these categories of prohibitions. Note that "Other landscape restriction or prohibition" is a category that will be used to include prohibitions that do not fall into the listed categories.

- Restrict or prohibit runoff from landscape irrigation - Examples include: Irrigation runoff is to be prevented; Excessive irrigation runoff is prohibited; Irrigation runoff is prohibited.
- Limit landscape irrigation to specific times - Examples include: Landscape irrigation is limited to between the hours of 9:00pm and 6:00am; Landscape irrigation is limited to eight minutes per day duration.
- Limit landscape irrigation to specific days - Examples include: Even numbered addresses are allowed to water only on Tuesday, Thursday, and Saturday; Landscape irrigation is allowed only two days per week; Landscape irrigation is allowed only one day per week.
- Prohibit certain types of landscape irrigation - Examples include: The use of sprinkler irrigation is prohibited; Irrigation of turf is prohibited, except with recycled water; Only irrigation of trees and shrubs is allowed.
- Prohibit all landscape irrigation - Examples include: All landscape irrigation using potable water is prohibited: All landscape irrigation is prohibited.
- Other landscape restriction or prohibition - Examples include: Any other landscape restriction or prohibition utilized by the agency.

RECOMMENDED

Key savings are to be found in restrictions and prohibitions on irrigation of landscape, particularly turf. Water agencies are encouraged to include measures that limit turf and other landscape irrigation.

8.2.2 Commercial, Industrial, and Institutional (CII)

RETAIL ONLY

The following categories of prohibitions on CII are provided in a drop down menu in Table 8.2. The section below includes examples of restrictions or prohibitions that may fall within these categories. Agencies are not required to select any of these categories of prohibitions. Note that "Other CII restriction or prohibition" is a category that will be used to include prohibitions that do not fall into the listed categories.

- Lodging establishments must offer opt out of linen service – Examples include: Lodging establishments are required to place notices in each room that inform the guest that they may opt out of linen service.
- Restaurants may only serve water upon request – Examples include: Restaurants may not serve water to customers unless requested.
- Commercial kitchens are required to use pre-rinse spray valves – Examples include: Any commercial kitchen is required to use a pre-rinse spray valve as part of their dish washing operation.
- Other CII restriction or prohibition – Examples include: Any other CII restriction or prohibition selected by the agency that does not fall into the categories listed above.

8.2.3 Water Features and Swimming Pools

RETAIL ONLY

The following categories of prohibitions on water features and swimming pools are provided in a drop down menu in Table 8.2. The section below includes examples of restrictions or prohibitions that may fall within these categories. Agencies are not required to select any of these categories of prohibitions. Note that "Other water feature or swimming pool restriction" is also a category to include prohibitions that do not fall into the listed categories.

- Restrict water use for decorative water features, such as fountains – Examples include: Decorative water features may only be operated if they use recirculating water; Decorative water features shall not be allowed to operate.

R

- Require covers for pools and spas – Examples include: Every swimming pool and spa is required to cover the surface of the pool or spa with a cover that reduces evaporation during hours that the pool or spa is not in use; Allow filling of swimming pools only when an appropriate pool cover is in place.
- Other water feature or swimming pool restriction – Examples include: Any other restriction or prohibition selected by the agency for reducing water use in water features or swimming pools.

8.2.4 Defining Water Features

CWC 10632

(b) *Commencing with the urban water management plan update due July 1, 2016, 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.*

Health and Safety Code Section 115921

As used in this article the following terms have the following meanings:

(a) *"Swimming pool" or "pool" means any structure intended for swimming or recreational bathing that contains water over 18 inches deep. "Swimming pool" includes in-ground and aboveground structures and includes, but is not limited to, hot tubs, spas, portable spas, and non-portable wading pools.*

R

RETAIL ONLY

If an agency includes a limitation on, or prohibition of, water use for water features, this prohibition or limitation is restricted to decorative water features only and does not apply to swimming pools or spas, which must be listed separately.

Agencies that wish to include limitations on pools or spas must specifically list those separately from limitations on water features.

RECOMMENDED

Agencies may provide terminology in their WSCP that distinguishes water features from swimming pools, for example, "decorative water features" and "recreational water features."

8.2.5 Other

RETAIL ONLY

The following categories of other prohibitions or restrictions are provided in a drop down menu in Table 8.2. The section below includes examples of restrictions or prohibitions that may fall within these categories. Agencies are not required to select any of these categories of prohibitions. Note that "Other" is a category that will be used to include prohibitions that do not fall into the listed categories.

- Customers must repair leaks, breaks, and malfunctions in a timely manner – Examples include: Broken or malfunctioning sprinkler heads must be repaired within 48 hours after the customer receives a notification from the water agency; All leaks or breaks must be repaired by the customer within 48 hours of receiving a notification from the water agency.
- Require hoses to have automatic shut off nozzles – Examples include: Hoses may only be operated out of doors if they are equipped with an automatic shut off nozzle.
- Prohibit use of potable water for construction and dust control – Examples include: Potable water may not be used for construction or dust control.
- Prohibit use of potable water for washing hard surfaces – Examples include: Potable water may not be used to wash hard surfaces, such as driveways or sidewalks, except in cases of health and safety.
- Prohibit vehicle washing except at facilities using recycled or recirculating water – Examples include: Vehicles may not be washed except at a facility that uses recycled or recirculating water.
- Other – Examples include: Any other restriction or prohibition selected by the water agency to reduce water consumption that does not fall into the categories above.

8.3 Penalties, Charges, Other Enforcement of Prohibitions

CWC 10632
(a)(6) *Penalties or charges for excessive use, where applicable.*

R

RETAIL ONLY

Include a narrative description of the supplier's method(s) for enforcing the prohibitions listed in Table 8-2, where applicable. For example, an agency may issue a warning for violating a prohibition followed by increasing levels of fines for repeat offenses.

If an agency utilizes their rate structure as an enforcement mechanism, they may provide detailed information of their drought and/or conservation rate structures in an appendix and summarize the key points in the main body of the UWMP in the following sections, as applicable:

- Section 8.3 Penalties, Charges, and Other Enforcement
- Section 8.6 Impacts to Revenue and Expenditure
- Section 9.2.3 Conservation Rate Structures

Agencies will indicate whether or not the water agency has a penalty, charge, or other mechanism for enforcing the stated limitation or prohibition in Table 8.2.

8.4 Consumption Reduction Methods

CWC 10632
(a)(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.*

R W

ALL URBAN WATER SUPPLIERS

Consumption reduction methods are actions that are taken by the water agency to reduce water demand within the service area, whereas the prohibitions, addressed in Section 8.2, limit specific uses of water.

Agencies will make their own determination as to which consumption reduction methods, and which stages for employing the methods, are most appropriate for their service area. Agencies may reference any document in this section that provides additional details of methods and stages in order to capture specific language.

RECOMMENDED

The agency may discuss the expected water savings at each stage based on the actions that will be taken. These expected savings may be estimated based on an agency's past experiences, or from studies and reports that have determined savings based on implementation of specific consumption reduction methods.

8.4.1 Categories of Consumption Reduction Methods

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RETAIL ONLY

The following categories of consumption reduction methods are provided in a drop down menu in Table 8.3. These are the only consumption reduction methods that will be accepted by the WUEdata online submittal tool. The section below includes examples of consumption reduction methods that fall within these categories. Agencies are not required to implement any of these categories of consumption reduction methods. Note that "Other" is a category that will be used to include consumption reduction methods that do not fall into the listed categories.

- Expand Public Information Campaign – Examples include: Begin or enlarge media campaign; Create bill insert with conservation information; Write articles for local newspaper; Conduct water efficiency workshops for different customer sectors.
- Improve Customer Billing – Examples include: Increase billing frequency; Change bill format to report consumption in gallons per capita per day; Add information to the bill that compares the customer's use to the water use of similar customers.
- Increase Frequency of Meter Reading – Examples include: Change from bi-monthly to monthly meter reading; Employ Advance Metering Infrastructure (AMI) so that meters are read in real time.

R

- Offer Water Use Surveys – Examples include: Actively reach out to high water users to offer water use surveys; Expand water use survey program to include new sectors.
- Provide Rebates or Giveaways of Plumbing Fixtures and Devices – Examples include: Implement new (toilet, clothes washer, etc.) rebate programs; Implement new (shower head, aerator, etc.) giveaway programs; Expand rebate programs by including new types of rebates; Offer a higher dollar value for each rebate; Expand funding for existing rebate or giveaway programs.
- Provide Rebates for Landscape Irrigation Efficiency – Examples include: Implement a new landscape efficiency rebate program that provides rebates for landscape conversion, irrigation controllers, sprinkler heads, etc.; Expand an existing rebate program that provides rebates for landscape conversion, irrigation controllers, sprinkler heads, etc.
- Decrease Line Flushing – Examples include: Decrease the length of time for each line flushing; Decrease the frequency of line flushing.
- Reduce System Water Loss – Examples include: Implement a water audit program to identify leaks in the water system; Expand the leak repair program to control system losses. Refer to Chapter 4, Section 4.3 for required distribution system audit protocols.
- Increase Water Waste Patrols – Examples include: Implement a Water Waste Patrol program; Increase staffing for Water Waste Patrol; Increase authority of Water Waste Patrol.
- Moratorium or Net Zero Demand Increase on New Connections – Examples include: The water supplier will only approve a new connection if the applicant can demonstrate a net zero demand increase for the new connection. ("Net Zero Demand Increase" requires that a project's water use is offset with conservation projects inside or outside of the project area); The water supplier does not approve new water service connections.
- Implement or Modify Drought Rate Structure or Surcharge – (see "Note on Drought Rate Structures or Surcharges" on the next page.) Examples include: Implement a drought rate structure; Modify a drought rate structure; Implement a drought surcharge on all customers.
- Other – Any other consumption reduction method that the agency may take that does not fall into the categories listed above.

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Note on Drought Rate Structures or Surcharges

A drought rate structure or surcharge that is implemented in times of water shortage differs from a conservation rate structure, which is in place at all times. When considering a new rate structure, some agencies have embedded a drought rate structure within their proposed conservation rate structure. This avoids the difficulty and delay of instituting a drought structure during an emergency and streamlines the public process so that all rate structures are reviewed together.

Appendix N provides a case study of a retail water agency's experience changing to a new rate structure which includes a drought rate structure embedded in the WSCP.

Agencies may provide detailed information of their drought and/or conservation rate structures in an appendix and summarize the key points in the main body of the UWMP where applicable.

W

WHOLESALE ONLY

The water shortage contingency analysis for wholesale agencies must describe the agency's plan for reducing consumption, or, perhaps more aptly for a wholesaler, the agency's strategy for supply management.

RECOMMENDED

If the wholesale agency has a study or report addressing planned consumption reduction/ supply management by the agency, this may be briefly summarized in this section and either included as an attachment to the UWMP or referenced within the UWMP.

TABLES

Complete Table 8-3: Stages of WSCP - Consumption Reduction Methods.

RUWMPs will use multiple versions of Table 8-3; one for each participating agency.

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Table 8-3 Retail Only: Stages of WSCP - Consumption Reduction Methods		
Stage	Consumption Reduction Methods by Water Supplier *Drop down list* *These are the only categories that will be accepted by the WUEdata online submittal tool*	Additional Explanation or Reference *(optional)*
	Expand Public Information Campaign	
	Improve Customer Billing	
	Increase Frequency of Meter Reading	
	Offer Water Use Surveys	
	Provide Rebates on Plumbing Fixtures and Devices	
	Provide Rebates for Landscape Irrigation Efficiency	
	Provide Rebates for Turf Replacement	
	Decrease Line Flushing	
	Reduce System Water Loss	
	Increase Water Waste Patrols	
	Moratorium or Net Zero Demand Increase on New Connections	
	Implement or Modify Drought Rate Structure or Surcharge	
	Other	
NOTES:		

8.5 Determining Water Shortage Reductions

CWC 10632

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

R W

ALL URBAN WATER SUPPLIERS

Discuss how the water supplier will measure and determine actual water savings made from implementing the stages of the water shortage contingency plan.

This requirement may be addressed by relying upon water meters to record the production and consumption of water. UWMP preparers will state that fact in the UWMP, if applicable. If the water agency is not metered, a description of the method used to measure consumption reduction must be included in the UWMP. Consumption reduction may be measured by tracking any decrease in water production

8.6 Revenue and Expenditure Impacts

CWC 10632

(a)(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.*

R W

ALL URBAN WATER SUPPLIERS

Discuss the expected change in revenue and expenditure to the water agency as a result of implementing the WSCP. Depending on their rate structures, some agencies may experience a decrease in revenue with reduced water sales. Expenditures may also be expected to increase during water shortages as a result of increased outreach to customers about water conservation, purchases of more expensive water supplies, and possibly, developing and/or implementing a drought rate structure.

8.6.1 Drought Rate Structures and Surcharges

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RETAIL ONLY

Well-designed drought rate structures can reduce the potential financial effects of water shortages and enable the supplier to recover its purchase, treatment, and delivery costs, as well as the additional costs related to the water shortage response program.

If an agency includes a discussion of rate structures as part of the revenue and expenditure discussion, it may provide detailed information of its drought and/or conservation rate structures in an appendix and summarize the key points in the main body of the UWMP in the following sections, as applicable:

- Section 8.3 Penalties, Charges, and Other Enforcement
- Section 8.6 Revenue and Expenditure Impacts
- Section 9.2.3 Conservation Rate Structures

Drought surcharges are added to customers' water bills to ensure sufficient revenue to operate, manage, and maintain infrastructure and services even when volumetric sales are low. If an agency includes a drought surcharge as part of its WSCP, UWMP preparers will provide a narrative description of the surcharge.

8.6.2 Use of Financial Reserves

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W

ALL URBAN WATER SUPPLIERS

Discuss the agency's planned use of financial reserves to address decreased water sales during a water shortage (if applicable).

8.6.3 Other Measures

ALL URBAN WATER SUPPLIERS

Include a discussion of any other proposed measures that the water agency may take to overcome impacts to revenues and expenditures. For example, some agencies may consider postponement of capital improvements or other reductions in agency costs.

8.7 Resolution or Ordinance

CWC 10632
(a)(8) *A draft water shortage contingency resolution or ordinance.*

ALL URBAN WATER SUPPLIERS

Water agencies are required to develop a water shortage contingency resolution or ordinance for submittal with the UWMP. Include a draft or approved/adopted water shortage contingency resolution or ordinance in the UWMP.

It is at the discretion of the agency to choose to adopt a water shortage contingency resolution or ordinance in advance of a water shortage, or to hold it as a draft to be adopted when needed. The WSCP and the resolution or ordinance may be adopted with the UWMP or may be adopted separately. The WSCP is considered a stand-alone document; if the WSCP is updated after the UWMP has been submitted to DWR, it is not necessary to amend the UWMP. The most recent WSCP (draft or adopted) must be included when a UWMP is adopted by the governing body of the water agency.

8.8 Catastrophic Supply Interruption

CWC 10632

(a)(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.*

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ALL URBAN WATER SUPPLIERS

Identify what actions will be taken by a water supplier if there is a catastrophic reduction in water supplies. Catastrophic supply interruptions differ from the staged drought responses addressed earlier in this chapter in that catastrophic interruptions occur suddenly and can immediately jeopardize a large portion, or all, of an agency's water supply.

The CWC requires that agencies specifically address catastrophic interruptions due to a regional power outage or an earthquake.

Some actions that agencies may have in place include system interconnections with other suppliers in the region, participation in comprehensive regional disaster plans, or participation in the Water/Wastewater Agency Response Network (WARN). WARN is a network of agencies that supports and promotes statewide emergency preparedness, disaster response, and mutual assistance for public and private water and wastewater utilities. More information on WARN can be found at their website: http://www.calwarn.org.

To address catastrophic interruptions, an agency may summarize language from its Emergency Response Plan (ERP), as required by the Public Health Security and Bioterrorism Preparedness and Response Act of 2002 (Public Law 107-188). Section 1433(b) requires community water systems serving populations greater than 3,300 to either prepare or revise an ERP that incorporates the results of its Vulnerability Assessment, found in Section 1433(a).

8.9 Minimum Supply Next Three Years

CWC 10632

(a)(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.*

ALL URBAN WATER SUPPLIERS

Water agencies must provide an estimate of the minimum water supply available during each of the next three water years, 2016, 2017, and 2018. This will reflect the combined availability of all water sources and will assume the same hydrology as was noted during the historical multiple-dry year period. (Chapter 7, Section 7.3).

The estimate of the minimum supply for the next three years is based on data that is reasonably available to the water supplier at the time the 2015 UWMP is written.

TABLES

Table 8-4

Complete Table 8-4: Minimum Supply Next Three Years. RUWMPs will use multiple versions of Table 8-4; one for each participating agency.

Table 8-4 Wholesale: Minimum Supply Next Three Years

	2016	2017	2018
Available Water Supply			
NOTES:			

Table 8-4 Retail: Minimum Supply Next Three Years

	2016	2017	2018
Available Water Supply			
NOTES:			

Chapter 9
Demand Management Measures

The goal of the Demand Management Measures (DMM) section in a UWMP is to provide a comprehensive description of the water conservation programs that a supplier has implemented, is currently implementing, and plans to implement in order to meet its urban water use reduction targets. This chapter provides the opportunity for water suppliers to communicate their efforts to promote conservation and to reduce the demand on the water supply.

The section of the CWC addressing DMMs was significantly modified in 2014, based on recommendations from the Independent Technical Panel (ITP) to the legislature. The ITP was formed by DWR to provide information and recommendations to DWR and the Legislature on new demand management measures, technologies and approaches to water use efficiency (see http://www.water.ca.gov/wateruseefficiency/sb7/committees/urban/u2/). In its report to the Legislature, the ITP recommended that the UWMP Act should be amended to simplify, clarify, and update the demand management measure reporting requirements. The ITP recommended, and the legislature enacted, streamlining the retail agency requirements from 14 specific measures to six more general requirements plus an "other" category. For wholesalers, the requirements changed to three specific measures, an "other" category, as well as a requirement for a narrative description of asset management and wholesale supplier assistance programs.

The following organization is not required. Agencies may use other types of organization, such as organizing by type of DMM.

This chapter contains the following sections:

9.1 Demand Management Measures for Wholesale Agencies

9.2 Demand Management Measures for Retail Agencies

9.3 Implementation over the Past Five Years

9.4 Planned Implementation to Achieve Water Use Targets

9.5 Members of the California Urban Water Conservation Council

9.1 Demand Management Measures for Wholesale Agencies

CWC 10631

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

(1)(B) *The narrative pursuant to this paragraph shall include descriptions of the following water demand management measures:*

(ii) *Metering.*

(iv) *Public education and outreach.*

(vi) *Water conservation program coordination and staffing support.*

(vii) *Other demand management measures that have a significant impact on water use as measured in gallons per capita per day, including innovative measures, if implemented.*

(2) *For an urban wholesale water supplier, as defined in Section 10608.12, (provide) a narrative description of the items in clauses (ii), (iv), (vi), and (vii) of subparagraph (B) of paragraph (1), and a narrative description of its distribution system asset management and wholesale supplier assistance programs.*

WHOLESALE ONLY

Wholesale agencies must provide narrative descriptions of four specific measures, metering, public education and outreach, water conservation program coordination and staffing support, and other demand management measures, as well as a narrative of asset management and wholesale supplier assistance programs.

Additionally, wholesale suppliers are required to address their DMM implementation over the past five years. Guidance to address this requirement is described in Section 9.3.

9.1.1 Metering

WHOLESALE ONLY

A wholesale agency that is fully metered should state that fact in the UWMP. If an agency is not yet fully metered, it should discuss its plans for becoming fully metered.

RECOMMENDED

Agencies are encouraged to include a discussion of their programs for meter replacement and/or calibration.

9.1.2 Public education and outreach

WHOLESALE ONLY

Describe the public education and outreach efforts by the wholesale water agency, if any. This may include actions that are taken to assist the retail agencies that are served by the wholesaler.

Examples include:

- Mass media campaigns encouraging conservation;
- School education programs;
- Information booths at fairs and public events;
- Newsletters;
- Informative websites, online tools, or social media;
- Newspaper articles;
- Other activities not listed here.

9.1.3 Water conservation program coordination and staffing support

WHOLESALE ONLY

Describe the activities of the wholesale supplier's water conservation coordinator, if any.

RECOMMENDED

The description may include the name and contact information of the water conservation coordinator(s), the number of staff in the program and a description of program funding.

9.1.4 Other demand management measures

WHOLESALE ONLY

This category provides wholesale agencies the ability to report additional or innovative approaches to demand management that do not belong to the categories listed above.

If a wholesale agency includes a discussion of rate structures or supply management as part of its demand management measure discussion, it may provide detailed information of the rate structure in an appendix and summarize the key points in the main body of the UWMP.

9.1.5 Asset management

WHOLESALE ONLY

Provide a narrative description of the wholesale supplier's distribution system asset management program, including distribution system maintenance and improvements. Asset management programs will vary greatly from one supplier to another, from responding to needed repairs as they arise, to sophisticated GIS mapping with a structured improvement and repair program.

RECOMMENDED

Provide, or reference, any appropriate documentation related to the agency's asset management program.

9.1.6 Wholesale supplier assistance programs

WHOLESALE ONLY

Provide a description of the wholesale supplier's assistance programs to the retail water agencies that it serves. This may include assistance with rebate programs, public education and outreach on water conservation, or other efforts to reduce water demand. It is not necessary to duplicate descriptions that may have been provided in Section 9.1.2 Public Education and Outreach. UWMP preparers may simply provide a reference to that section, as applicable.

9.2 Demand Management Measures for Retail Agencies

CWC 10631

(f)(A)… *The narrative shall describe the water demand management measure that the supplier plans to implement to achieve its water use targets pursuant to Section 10608.20.*

(B) *The narrative pursuant to this paragraph shall include descriptions of the following water demand management measures:*

(i) *Water waste prevention ordinances.*

(ii) *Metering.*

(iii) *Conservation pricing.*

(iv) *Public education and outreach.*

(v) *Programs to assess and manage distribution system real loss.*

(vi) *Water conservation program coordination and staffing support.*

(vii) *Other demand management measures that have a significant impact on water use as measured in gallons per capita per day, including innovative measures, if implemented.*

R

RETAIL ONLY

Describe the planned efforts of the retail water agency in implementing each of the following DMM categories to meet water use targets. Agencies are also required to report these efforts over the previous five years. Guidance for this is provided in Section 9.3.

9.2.1 Water waste prevention ordinances

R

RETAIL ONLY

A water waste ordinance explicitly states that the waste of water is to be prohibited. The ordinance may prohibit specific actions that waste water, such as excessive runoff from landscape irrigation, or use of a hose outdoors without a shut off nozzle.

A water waste prevention ordinance is in place at all times and is not dependent upon a water shortage for implementation. However a water waste ordinance may include increasingly restrictive prohibitions that may be implemented in response to shortages.

If the water supplier has a water waste prevention ordinance in place, or another equivalent mechanism, include it as an attachment in the UWMP.

RECOMMENDED

Some agencies include a water waste prohibition in the first stage of their WSCP and this stage remains in place at all times.

9.2.2 Metering

CWC 526

(a) *Notwithstanding any other provisions of law, an urban water supplier that, on or after January 1, 2004, receives water from the federal Central Valley Project under a water service contract or subcontract... shall do both of the following:*

(1) *On or before January 1, 2013, install water meters on all service connections to residential and nonagricultural commercial buildings... located within its service area.*

CWC 527

(a) *An urban water supplier that is not subject to Section 526 shall do both the following:*

(1) *Install water meters on all municipal and industrial service connections located within its service area on or before January 1, 2025.*

R

RETAIL ONLY

An agency that is fully metered will state that fact in the UWMP. If an agency is not yet fully metered (the CWC requires full metering by 2025), it will discuss its plans for becoming fully metered in accordance with CWC 527 (see text box above).

RECOMMENDED

Agencies are encouraged to include a discussion of their programs for meter replacement and/or calibration.

Agencies may include a discussion of any significant sub-metering programs, especially landscape irrigation sub-metering, that they have implemented or plan to implement.

Agencies are also encouraged to include a discussion of any innovative metering programs, such as Advanced Metering Infrastructure (AMI), or Automatic Meter Reading (AMR) that are employed within their service area.

9.2.3 Conservation pricing

RETAIL ONLY

In this section, describe the pricing structure that is used by the water agency. A conservation pricing structure is always in place and is not dependent upon a water shortage for implementation, although a conservation rate structure could include drought rate structures. See Appendix N for an example of a conservation rate structure that includes a drought rate structure to be implemented as needed. Drought rate structures and surcharges are addressed in Chapter 8, Water Shortage Contingency Planning.

Conservation pricing sends a signal to customers regarding their water use. A common example of conservation pricing is a tiered rate structure, where efficient water use is billed at a low price and higher water use billed at progressively higher prices. Another example is the use of water budgets, wherein each customer is given a water budget and if that budget is exceeded, the customer must pay a penalty, or a higher water rate, for that portion of water that exceeds the water budget.

Agencies may provide detailed information of their drought and/or conservation rate structures in an appendix and summarize the key points in the main body of the UWMP in the following sections, as applicable:

- Section 8.4 Penalties, Charges, and Other Enforcement;
- Section 8.6 Impacts to Revenue and Expenditure;
- Section 9.2.3 Conservation Rate Structures.

The UWMP preparer may use the language from the agency's California Urban Water Conservation Council (CUWCC) report, if applicable, when describing the agency's conservation rate structure.

9.2.4 Public education and outreach

RETAIL ONLY

Describe the public education and outreach efforts by the water agency.

This may include:

- Marketing of rebates and give-aways;
- Communicating water use via water bills (e.g., increased frequency of billing, an easy to understand bill format, or bills that compare a customer's water use to the water use of similar customers);
- Providing school education programs;
- Information booths at fairs and public events;
- Newsletters;
- Informative websites, online tools, or social media;
- Newspaper articles;
- Other activities not listed here.

9.2.5 Programs to assess and manage distribution system real loss

RETAIL ONLY

Describe the agency's programs to detect and repair distribution system leaks. A reference to the distribution system losses reported in Chapter 4 is appropriate to include here.

RECOMMENDED

An agency may also include a description of routine and planned system maintenance to prevent losses.

9.2.6 Water conservation program coordination and staffing support

RETAIL ONLY

Describe the activities of the water conservation program, if any.

RECOMMENDED

The description may include the name and contact information of the water conservation coordinator(s), the number of staff in the program and a description of program funding.

9.2.7 Other demand management measures

RETAIL ONLY

This category provides agencies the ability to report additional or innovative approaches to demand management that do not belong to any of the categories above. This may include rebate programs offered by the agency.

9.3 Implementation over the Past Five Years

CWC 10631

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

(1)(A) *… a narrative description that addresses the nature and extent of each water demand management measure implemented over the past five years.*

ALL URBAN WATER SUPPLIERS

Suppliers shall provide a narrative description addressing the nature and extent of each DMM implemented over the past five years, from 2010 through 2015. Each DMM listed in Section 9.1 for wholesalers and 9.2 for retailers must be addressed.

Retail water suppliers should clearly describe those DMMs that are implemented by a wholesale agency on their behalf. This will avoid double counting DMM implementation.

- **Nature** – Describe the DMM program (e.g. the dollar value for individual toilet replacements, the process used to inform customers of a landscape water budget program, or the content of a school education program.)
- **Extent** – Quantify the implementation of the DMM (e.g., the number of customers that have used the toilet rebate program, the number of large landscape accounts that have been assigned a water budget, or the number of school presentations given by the agency).

9.4 Planned Implementation to Achieve Water Use Targets

CWC 10631

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

(1)(A) *…The narrative shall describe the water demand management measures that the supplier plans to implement to achieve its water use targets pursuant to Section 10608.20.*

RETAIL ONLY

Using the list of DMMs in Section 9.2, describe the DMMs that the agency plans to implement in order to achieve its water use targets (as described in CWC 10608.20 and Chapter 5 Baselines and Targets).

RECOMMENDED

Additional information, such as a description of the methods used to estimate the expected water savings from DMMs, or the agency's implementation plan for a particular DMM, may also be included.

9.5 Members of the California Urban Water Conservation Council

CWC 10631

(i) *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 subdivision (f) 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.*

R W

ALL URBAN WATER SUPPLIERS

CUWCC members have the option of submitting their 2013–2014 Best Management Practice (BMP) annual reports in lieu of, or in addition to, describing the DMMs in their UWMP. The option of submitting the CUWCC BMP report in lieu of describing the DMMs is only available if the supplier is in full compliance with the CUWCC's Memorandum of Understanding (MOU). The submitted reports must include documentation from the CUWCC that the supplier has met the MOU coverage requirements and is in full compliance with the MOU.

Chapter 10
Plan Adoption, Submittal, and Implementation

This chapter provides guidance for addressing the CWC requirements for a public hearing, the UWMP adoption process, submitting an adopted UWMP, plan implementation, and the process for amending an adopted UWMP.

This chapter includes the following sections:

10.1 Inclusion of all 2015 Data

10.2 Notice of Public Hearing

10.3 Public Hearing and Adoption

10.4 Plan Submittal

10.5 Public Availability

10.6 Amending an Adopted UWMP

10.1 Inclusion of All 2015 Data

R W

ALL URBAN WATER SUPPLIERS

2015 UWMPs must include the water use and planning data for the entire year of 2015. If an agency is reporting on a calendar year basis, the 2015 UWMP cannot be completed before the end of the calendar year 2015. If an agency is reporting on a fiscal year basis, they may complete their 2015 UWMP at the end of their fiscal year.

10.2 Notice of Public Hearing

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ALL URBAN WATER SUPPLIERS

Water suppliers must hold a public hearing prior to adopting the Plan. The public hearing provides an opportunity for the public to provide input to the plan before it is adopted. The governing body shall consider all public input.

There are two audiences to be noticed for the public hearing; cities and counties, and the public.

10.2.1 Notice to Cities and Counties

CWC 10621

(b) *Every urban water supplier required to prepare a plan shall… at least 60 days prior to the public hearing on the plan … notify any city or county within which the supplier provides waters supplies that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan.*

CWC 10642

…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…

ALL URBAN WATER SUPPLIERS

The following subsections provide guidance for the two required notices to cities and counties.

10.2.1.1 60 Day Notification

The CWC states that cities and counties must be notified that the supplier will be reviewing the UWMP and considering amendments to the Plan. This notice must be sent AT LEAST 60 days prior to the public hearing. (See also Section 2.5.3).

RECOMMENDED

In order to provide cities and counties ample opportunity to participate in the UWMP process, water agencies are encouraged to send this notification at the beginning of the UWMP planning process, well in advance of the required 60 days prior to the public hearing.

10.2.1.2 Notice of Public Hearing

The water supplier shall provide notice of the time and place of the public hearing to any city or county within which the supplier provides water. This applies to both public and private water suppliers.

RECOMMENDED

The notices to the cities and counties should include the location where the 2015 UWMP can be viewed, the UWMP revision schedule, and contact information of the UWMP preparer.

Notification letters can be addressed to the City Manager, County Administrator, or other local contacts, as appropriate for the supplier's service area.

TABLES

Table 10-1

Complete Table 10-1: Notification to cities and counties. RUWMPs will use multiple versions of Table 10-1; one for each participating agency.

Table 10-1 Wholesale: Notification to Cities and Counties (select one)		
☐	Supplier has notified more than 10 cities or counties in accordance with CWC 10621 (b) and 10642. **Completion of the table below is not required. Provide a separate list of the cities and counties that were notified.**	
	Provide the page location in the UWMP of this list.	
☐	Supplier has notified 10 or fewer cities or counties. **Complete the table below.**	
City Name	60 Day Notice	Notice of Public Hearing
	☐	☐
	Up to 10 entries allowed	
County Name	60 Day Notice	Notice of Public Hearing
	☐	☐
	Up to 10 entries allowed	
NOTES:		

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Table 10-1 Retail: Notification to Cities and Counties		
City Name	60 Day Notice	Notice of Public Hearing
	☐	☐
	Up to 10 entries allowed	
County Name	60 Day Notice	Notice of Public Hearing
	☐	☐
	Up to 10 entries allowed	
NOTES:		

10.2.2 Notice to the Public

CWC 10642

…Prior to adopting a plan, the urban water supplier shall make the plan available for public inspection…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…

Government Code 6066

Publication of notice pursuant to this section shall be once a week for two successive weeks. Two publications in a newspaper published once a week or oftener, with at least five days intervening between the respective publication dates not counting such publication dates, are sufficient. The period of notice commences upon the first day of publication and terminates at the end of the fourteenth day, including therein the first day.

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ALL URBAN WATER SUPPLIERS

The public hearing must be noticed in a local newspaper as prescribed in Government Code 6066. This notice must include time and place of hearing, as well as the location where the plan is available for public inspection.

In order to verify that this notification has taken place, the UWMP shall include a copy of the public notice.

10.3 Public Hearing and Adoption

CWC 10642

…Prior to adopting a plan, the urban water supplier shall hold a public hearing thereon.

CWC 10608.26

(a) *In complying with this part, an urban retail water supplier shall conduct at least one public hearing to accomplish all of the following:*

(1) *Allow community input regarding the urban retail water supplier's implementation plan for complying with this part.*

(2) *Consider the economic impacts of the urban retail water supplier's implementation plan for complying with this part.*

(3) *Adopt a method, pursuant to subdivision (b) of Section 10608.20 for determining its urban water use target.*

ALL URBAN WATER SUPPLIERS

The public hearing may take place at the same meeting as the adoption hearing of the governing board. If a water supplier chooses to combine these meetings, the agenda must include the public hearing as an agenda item.

RETAIL ONLY

As part of the public hearing, the retail supplier shall provide information on their baseline values, water use targets, and implementation plan required in the Water Conservation Act of 2009. This information is fully explained in Chapter 5 Baselines and Targets.

10.3.1 Adoption

> ***CWC 10642***
> *…After the hearing, the plan shall be adopted as prepared or as modified after the hearing.*

ALL URBAN WATER SUPPLIERS

The adoption hearing of the governing body may be combined with the public hearing; however the public hearing portion must take place before the adoption portion. This allows the governing body the opportunity to modify the UWMP in response to public input before adoption. Before submitting the UWMP to DWR, the governing body must formally adopt the plan.

Water agencies shall include the adoption resolution in the UWMP. This may be included as an attachment to the UWMP or as a web address indicating where the adoption resolution can be found online.

10.4 Plan Submittal

CWC 10621

(d) *An urban water supplier shall update and submit its 2015 plan to the department by July 1, 2016.*

CWC 10644

(a)(1) *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.*

CWC 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.*

The following sections provide guidance for submitting UWMPs to DWR, the State library, and cities and counties.

10.4.1 Submitting a UWMP to DWR

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ALL URBAN WATER SUPPLIERS

2015 UWMPs must be submitted to DWR within 30 days of adoption and by July 1, 2016. UWMP submittal will be done electronically through WUEdata, an online submittal tool that will be available in adequate time for UWMP submittal.

After the UWMP has been submitted, DWR will review the plan utilizing the provided checklist (Appendix F) and make a determination as to whether or not the UWMP addresses the requirements of the CWC. The DWR reviewer will contact the water supplier as needed during the review process. Upon completion of the Plan review, DWR will issue a letter to the agency with the results of the review.

10.4.2 Electronic Data Submittal

R W

ALL URBAN WATER SUPPLIERS

DWR is in the process of developing an online submittal tool, WUEdata, which will be used for the 2015 UWMPs. The tool will accept complete UWMPs, as well as tabular data from all the data tables. The WUE data online submittal tool is online at https://wuedata.water.ca.gov.secure/.

The availability of the tool will be announced to the Guidebook Advisory Committee, the Urban Stakeholder Committee, DWR's UWMP list serve, the Water Plan ENews, and posted on the DWR Urban Water Management webpage at http://www.dwr.water.ca.gov/urbanwatermanagement/uwmp2015.cfm

10.4.3 Submitting a UWMP to the California State Library

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ALL URBAN WATER SUPPLIERS

No later than 30 days after adoption, the water agency shall submit a CD or hardcopy of the adopted 2015 UWMP to the California State Library at:

California State Library
Government Publications Section
P.O. Box 942837
Sacramento, CA 94237-0001
Attention: Coordinator, Urban Water Management Plans

If delivered by courier or overnight carrier to the State Library, use the following street address instead of the PO Box:

California State Library
Government Publications Section
914 Capitol Mall
Sacramento, CA 95814

10.4.4 Submitting a UWMP to Cities and Counties

ALL URBAN WATER SUPPLIERS

No later than 30 days after adoption, the water agency shall submit a copy of the adopted 2015 UWMP to any city or county to which the supplier provides water. This copy may be in an electronic format. This will also satisfy Water Code Section 10635(b).

10.5 Public Availability

CWC 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.

ALL URBAN WATER SUPPLIERS

Include a statement in the UWMP describing the availability of the adopted UWMP for public review during normal business hours. Examples of public availability include placing a copy of the UWMP at the front desk of the agency's office, or posting the UWMP on the agency's website for public viewing.

10.6 Amending an Adopted UWMP

CWC 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).*

CWC 10644

(a)(1) *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.*

R W

ALL URBAN WATER SUPPLIERS

If the supplier amends an adopted UWMP, each of the steps for notification, public hearing, adoption, and submittal must also be followed for the amended plan.

APPENDIX C

DWR CHECKLIST

Checklist Arranged by Water Code Section

CWC Section	UWMP Requirement	Subject	Guidebook Location	UWMP Location *(Optional Column for Agency Use)*
10608.20(b)	Retail suppliers shall adopt a 2020 water use target using one of four methods.	Baselines and Targets	Section 5.7 and App E	**NA**
10608.20(e)	Retail suppliers shall 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.	Baselines and Targets	Chapter 5 and App E	**NA**
10608.22	Retail suppliers' per capita daily water use reduction shall be no less than 5 percent of base daily per capita water use of the 5 year baseline. This does not apply is the suppliers base GPCD is at or below 100.	Baselines and Targets	Section 5.7.2	**NA**
10608.24(a)	Retail suppliers shall meet their interim target by December 31, 2015.	Baselines and Targets	Section 5.8 and App E	**NA**
1608.24(d)(2)	If the retail supplier adjusts its compliance GPCD using weather normalization, economic adjustment, or extraordinary events, it shall provide the basis for, and data supporting the adjustment.	Baselines and Targets	Section 5.8.2	**NA**
10608.26(a)	Retail suppliers shall conduct a public hearing to discuss adoption, implementation, and economic impact of water use targets.	Plan Adoption, Submittal, and Implementation	Section 10.3	**10-4**
10608.36	Wholesale suppliers shall include an assessment of present and proposed future measures, programs, and policies to help their retail water suppliers achieve targeted water use reductions.	Baselines and Targets	Section 5.1	**5-1**
10608.40	Retail suppliers shall report on their progress in meeting their water use targets. The data shall be reported using a standardized form.	Baselines and Targets	Section 5.8 and App E	**NA**
10620(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.	Plan Preparation	Section 2.1	**2-1**
10620(d)(2)	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.	Plan Preparation	Section 2.5.2	**2-8**
10620(f)	Describe water management tools and	Water Supply	Section 7.4	**7-4**

	options to maximize resources and minimize the need to import water from other regions.	Reliability Assessment		
10621(b)	Notify, at least 60 days prior to the public hearing, 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.	Plan Adoption, Submittal, and Implementation	Section 10.2.1	**10-1**
10621(d)	Each urban water supplier shall update and submit its 2015 plan to the department by July 1, 2016.	Plan Adoption, Submittal, and Implementation	Sections 10.3.1 and 10.4	**10-5** **10-5**
10631(a)	Describe the water supplier service area.	System Description	Section 3.1	**3-1**
10631(a)	Describe the climate of the service area of the supplier.	System Description	Section 3.3	**3-3**
10631(a)	Indicate the current population of the service area.	System Description and Baselines and Targets	Sections 3.4 and 5.4	**3-5**
10631(a)	Provide population projections for 2020, 2025, 2030, and 2035.	System Description	Section 3.4	**3-5**
10631(a)	Describe other demographic factors affecting the supplier's water management planning.	System Description	Section 3.4	**3-5**
10631(b)	Identify and quantify the existing and planned sources of water available for 2015, 2020, 2025, 2030, and 2035.	System Supplies	Chapter 6	**6-1**
10631(b)	Indicate whether groundwater is an existing or planned source of water available to the supplier.	System Supplies	Section 6.2	**6-4**
10631(b)(1)	Indicate whether a groundwater management plan has 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.	System Supplies	Section 6.2.2	**6-11**
10631(b)(2)	Describe the groundwater basin.	System Supplies	Section 6.2.1	**6-4**
10631(b)(2)	Indicate if the basin has been adjudicated and include a copy of the court order or decree and a description of the amount of water the supplier has the legal right to pump.	System Supplies	Section 6.2.2	**6-11**
10631(b)(2)	For unadjudicated basins, indicate whether or not the department has identified the basin as overdrafted, or projected to become overdrafted. Describe efforts by the supplier to eliminate the long-term overdraft condition.	System Supplies	Section 6.2.3	**6-23**
10631(b)(3)	Provide a detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water	System Supplies	Section 6.2.4	**6-24**

	supplier for the past five years			
10631(b)(4)	Provide a detailed description and analysis of the amount and location of groundwater that is projected to be pumped.	System Supplies	Sections 6.2 and 6.9	**6-4** **6-38**
10631(c)(1)	Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage.	Water Supply Reliability Assessment	Section 7.1	**7-1**
10631(c)(1)	Provide data for an average water year, a single dry water year, and multiple dry water years	Water Supply Reliability Assessment	Section 7.2	**7-6**
10631(c)(2)	For any water source that may not be available at a consistent level of use, describe plans to supplement or replace that source.	Water Supply Reliability Assessment	Section 7.1	**7-1**
10631(d)	Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.	System Supplies	Section 6.7	**6-34**
10631(e)(1)	Quantify past, current, and projected water use, identifying the uses among water use sectors.	System Water Use	Section 4.2	**4-2**
10631(e)(3)(A)	Report the distribution system water loss for the most recent 12-month period available.	System Water Use	Section 4.3	**4-3**
10631(f)(1)	Retail suppliers shall provide a description of the nature and extent of each demand management measure implemented over the past five years. The description will address specific measures listed in code.	Demand Management Measures	Sections 9.2 and 9.3	**NA**
10631(f)(2)	Wholesale suppliers shall describe specific demand management measures listed in code, their distribution system asset management program, and supplier assistance program.	Demand Management Measures	Sections 9.1 and 9.3	**9-1** **9-6**
10631(g)	Describe the expected future 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.	System Supplies	Section 6.8	**6-36**
10631(i)	Describe desalinated water project opportunities for long-term supply.	System Supplies	Section 6.6	**6-34**
10631(j)	CUWCC members may submit their 2013-2014 CUWCC BMP annual reports in lieu of, or in addition to, describing the DMM implementation in their UWMPs. This option is only allowable if the supplier has been found to be in full compliance with the CUWCC MOU.	Demand Management Measures	Section 9.5	**9-7**
10631(j)	Retail suppliers will include documentation that they have provided their wholesale supplier(s) – if any - with water use projections from that source.	System Supplies	Section 2.5.1	**NA**

10631(j)	Wholesale suppliers will include documentation that they have provided their urban water suppliers with identification and quantification of the existing and planned sources of water available from the wholesale to the urban supplier during various water year types.	System Supplies	Section 2.5.1	**2-6**
10631.1(a)	Include projected water use needed for lower income housing projected in the service area of the supplier.	System Water Use	Section 4.5	**NA**
10632(a) and 10632(a)(1)	Provide an urban water shortage contingency analysis that specifies stages of action and an outline of specific water supply conditions at each stage.	Water Shortage Contingency Planning	Section 8.1	**8-2**
10632(a)(2)	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.	Water Shortage Contingency Planning	Section 8.9	**8-12**
10632(a)(3)	Identify actions to be undertaken by the urban water supplier in case of a catastrophic interruption of water supplies.	Water Shortage Contingency Planning	Section 8.8	**8-11**
10632(a)(4)	Identify mandatory prohibitions against specific water use practices during water shortages.	Water Shortage Contingency Planning	Section 8.2	**NA**
10632(a)(5)	Specify consumption reduction methods in the most restrictive stages.	Water Shortage Contingency Planning	Section 8.4	**8-6**
10632(a)(6)	Indicated penalties or charges for excessive use, where applicable.	Water Shortage Contingency Planning	Section 8.3	**8-6**
10632(a)(7)	Provide an analysis of the impacts of each of the actions and conditions in the water shortage contingency analysis on the revenues and expenditures of the urban water supplier, and proposed measures to overcome those impacts.	Water Shortage Contingency Planning	Section 8.6	**8-8**
10632(a)(8)	Provide a draft water shortage contingency resolution or ordinance.	Water Shortage Contingency Planning	Section 8.7	**8-7**
10632(a)(9)	Indicate a mechanism for determining actual reductions in water use pursuant to the water shortage contingency analysis.	Water Shortage Contingency Planning	Section 8.5	**8-7**
10633	For wastewater and recycled water, coordinate with local water, wastewater, groundwater, and planning agencies that operate within the supplier's service area.	System Supplies (Recycled Water)	Section 6.5.1	**6-26**
10633(a)	Describe the wastewater collection and treatment systems in the supplier's service area. Include quantification of the amount of wastewater collected and treated and the	System Supplies (Recycled Water)	Section 6.5.2	**6-27**

	methods of wastewater disposal.			
10633(b)	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.	System Supplies (Recycled Water)	Section 6.5.2.2	**6-27**
10633(c)	Describe the recycled water currently being used in the supplier's service area.	System Supplies (Recycled Water)	Section 6.5.3 and 6.5.4	**6-28** **6-30**
10633(d)	Describe and quantify the potential uses of recycled water and provide a determination of the technical and economic feasibility of those uses.	System Supplies (Recycled Water)	Section 6.5.4	**6-30**
10633(e)	Describe 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.	System Supplies (Recycled Water)	Section 6.5.4	**6-30**
10633(f)	Describe the actions 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.	System Supplies (Recycled Water)	Section 6.5.5	**6-33**
10633(g)	Provide a plan for optimizing the use of recycled water in the supplier's service area.	System Supplies (Recycled Water)	Section 6.5.5	**6-33**
10634	Provide information on the quality of existing sources of water available to the supplier and the manner in which water quality affects water management strategies and supply reliability	Water Supply Reliability Assessment	Section 7.1	**7-1**
10635(a)	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.	Water Supply Reliability Assessment	Section 7.3	**7-8**
10635(b)	Provide supporting documentation that Water Shortage Contingency 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 the plan to DWR.	Plan Adoption, Submittal, and Implementation	Section 10.4.4	**10-7**
10642	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.	Plan Preparation	Section 2.5.2	**2-8**
10642	Provide supporting documentation that the urban water supplier made the plan available for public inspection, published notice of the public hearing, and held a public hearing about the plan.	Plan Adoption, Submittal, and Implementation	Sections 10.2.2, 10.3, and 10.5	**10-3** **10-4** **10-8**

10642	The water supplier is to provide the time and place of the hearing to any city or county within which the supplier provides water.	Plan Adoption, Submittal, and Implementation	Sections 10.2.1	**10-1**
10642	Provide supporting documentation that the plan has been adopted as prepared or modified.	Plan Adoption, Submittal, and Implementation	Section 10.3.1	**10-5**
10644(a)	Provide supporting documentation that the urban water supplier has submitted this UWMP to the California State Library.	Plan Adoption, Submittal, and Implementation	Section 10.4.3	**10-7**
10644(a)(1)	Provide supporting documentation that the urban water supplier has submitted this UWMP to any city or county within which the supplier provides water no later than 30 days after adoption.	Plan Adoption, Submittal, and Implementation	Section 10.4.4	**10-7**
10644(a)(2)	The plan, or amendments to the plan, submitted to the department shall be submitted electronically.	Plan Adoption, Submittal, and Implementation	Sections 10.4.1 and 10.4.2	**10-6** **10-6**
10645	Provide supporting documentation that, not later than 30 days after filing a copy of its plan with the department, the supplier has or will make the plan available for public review during normal business hours.	Plan Adoption, Submittal, and Implementation	Section 10.5	**10-8**

Checklist Arranged by Subject

CWC Section	UWMP Requirement	Subject	Guidebook Location	UWMP Location *(Optional Column for Agency Use)*
10620(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.	Plan Preparation	Section 2.1	**2-1**
10620(d)(2)	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.	Plan Preparation	Section 2.5.2	**2-8**
10642	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.	Plan Preparation	Section 2.5.2	**2-8**
10631(a)	Describe the water supplier service area.	System Description	Section 3.1	**3-1**
10631(a)	Describe the climate of the service area of the supplier.	System Description	Section 3.3	**3-3**
10631(a)	Provide population projections for 2020, 2025, 2030, and 2035.	System Description	Section 3.4	**3-5**
10631(a)	Describe other demographic factors affecting the supplier's water management planning.	System Description	Section 3.4	**3-5**
10631(a)	Indicate the current population of the service area.	System Description and Baselines and Targets	Sections 3.4 and 5.4	**3-5**
10631(e)(1)	Quantify past, current, and projected water use, identifying the uses among water use sectors.	System Water Use	Section 4.2	**4-1**
10631(e)(3)(A)	Report the distribution system water loss for the most recent 12-month period available.	System Water Use	Section 4.3	**4-3**
10631.1(a)	Include projected water use needed for lower income housing projected in the service area of the supplier.	System Water Use	Section 4.5	**4-4**
10608.20(b)	Retail suppliers shall adopt a 2020 water use target using one of four methods.	Baselines and Targets	Section 5.7 and App E	**NA**
10608.20(e)	Retail suppliers shall provide baseline daily per capita water use, urban water use target, interim urban water use target, and compliance daily per capita water use, along	Baselines and Targets	Chapter 5 and App E	**NA**

	with the bases for determining those estimates, including references to supporting data.			
10608.22	Retail suppliers' per capita daily water use reduction shall be no less than 5 percent of base daily per capita water use of the 5 year baseline. This does not apply is the suppliers base GPCD is at or below 100.	Baselines and Targets	Section 5.7.2	**NA**
10608.24(a)	Retail suppliers shall meet their interim target by December 31, 2015.	Baselines and Targets	Section 5.8 and App E	**NA**
1608.24(d)(2)	If the retail supplier adjusts its compliance GPCD using weather normalization, economic adjustment, or extraordinary events, it shall provide the basis for, and data supporting the adjustment.	Baselines and Targets	Section 5.8.2	**NA**
10608.36	Wholesale suppliers shall include an assessment of present and proposed future measures, programs, and policies to help their retail water suppliers achieve targeted water use reductions.	Baselines and Targets	Section 5.1	**5-1**
10608.40	Retail suppliers shall report on their progress in meeting their water use targets. The data shall be reported using a standardized form.	Baselines and Targets	Section 5.8 and App E	**NA**
10631(b)	Identify and quantify the existing and planned sources of water available for 2015, 2020, 2025, 2030, and 2035.	System Supplies	Chapter 6	**6-1**
10631(b)	Indicate whether groundwater is an existing or planned source of water available to the supplier.	System Supplies	Section 6.2	**6-4**
10631(b)(1)	Indicate whether a groundwater management plan has 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.	System Supplies	Section 6.2.2	**6-11**
10631(b)(2)	Describe the groundwater basin.	System Supplies	Section 6.2.1	**6-4**
10631(b)(2)	Indicate if the basin has been adjudicated and include a copy of the court order or decree and a description of the amount of water the supplier has the legal right to pump.	System Supplies	Section 6.2.2	**6-11**
10631(b)(2)	For unadjudicated basins, indicate whether or not the department has identified the basin as overdrafted, or projected to become overdrafted. Describe efforts by the supplier to eliminate the long-term overdraft condition.	System Supplies	Section 6.2.3	**6-23**
10631(b)(3)	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	System Supplies	Section 6.2.4	**6-24**

10631(b)(4)	Provide a detailed description and analysis of the amount and location of groundwater that is projected to be pumped.	System Supplies	Sections 6.2 and 6.9	**6-4** **6-38**
10631(d)	Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.	System Supplies	Section 6.7	**6-34**
10631(g)	Describe the expected future 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.	System Supplies	Section 6.8	**6-36**
10631(i)	Describe desalinated water project opportunities for long-term supply.	System Supplies	Section 6.6	**6-34**
10631(j)	Retail suppliers will include documentation that they have provided their wholesale supplier(s) – if any - with water use projections from that source.	System Supplies	Section 2.5.1	**NA**
10631(j)	Wholesale suppliers will include documentation that they have provided their urban water suppliers with identification and quantification of the existing and planned sources of water available from the wholesale to the urban supplier during various water year types.	System Supplies	Section 2.5.1	**2-6**
10633	For wastewater and recycled water, coordinate with local water, wastewater, groundwater, and planning agencies that operate within the supplier's service area.	System Supplies (Recycled Water)	Section 6.5.1	**6-26**
10633(a)	Describe the wastewater collection and treatment systems in the supplier's service area. Include quantification of the amount of wastewater collected and treated and the methods of wastewater disposal.	System Supplies (Recycled Water)	Section 6.5.2	**6-27**
10633(b)	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.	System Supplies (Recycled Water)	Section 6.5.2.2	**6-27**
10633(c)	Describe the recycled water currently being used in the supplier's service area.	System Supplies (Recycled Water)	Section 6.5.3 and 6.5.4	**6-28** **630**
10633(d)	Describe and quantify the potential uses of recycled water and provide a determination of the technical and economic feasibility of those uses.	System Supplies (Recycled Water)	Section 6.5.4	**6-30**
10633(e)	Describe 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.	System Supplies (Recycled Water)	Section 6.5.4	**6-30**
10633(f)	Describe the actions which may be taken to	System Supplies	Section 6.5.5	**6-33**

	encourage the use of recycled water and the projected results of these actions in terms of acre-feet of recycled water used per year.	(Recycled Water)		
10633(g)	Provide a plan for optimizing the use of recycled water in the supplier's service area.	System Supplies (Recycled Water)	Section 6.5.5	**6-33**
10620(f)	Describe water management tools and options to maximize resources and minimize the need to import water from other regions.	Water Supply Reliability Assessment	Section 7.4	**7-10**
10631(c)(1)	Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage.	Water Supply Reliability Assessment	Section 7.1	**7-1**
10631(c)(1)	Provide data for an average water year, a single dry water year, and multiple dry water years	Water Supply Reliability Assessment	Section 7.2	**7-6**
10631(c)(2)	For any water source that may not be available at a consistent level of use, describe plans to supplement or replace that source.	Water Supply Reliability Assessment	Section 7.1	**7-1**
10634	Provide information on the quality of existing sources of water available to the supplier and the manner in which water quality affects water management strategies and supply reliability	Water Supply Reliability Assessment	Section 7.1	**7-1**
10635(a)	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.	Water Supply Reliability Assessment	Section 7.3	**7-8**
10632(a) and 10632(a)(1)	Provide an urban water shortage contingency analysis that specifies stages of action and an outline of specific water supply conditions at each stage.	Water Shortage Contingency Planning	Section 8.1	**8-2**
10632(a)(2)	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.	Water Shortage Contingency Planning	Section 8.9	**8-12**
10632(a)(3)	Identify actions to be undertaken by the urban water supplier in case of a catastrophic interruption of water supplies.	Water Shortage Contingency Planning	Section 8.8	**8-11**
10632(a)(4)	Identify mandatory prohibitions against specific water use practices during water shortages.	Water Shortage Contingency Planning	Section 8.2	**8-**
10632(a)(5)	Specify consumption reduction methods in the most restrictive stages.	Water Shortage Contingency Planning	Section 8.4	**8-**
10632(a)(6)	Indicated penalties or charges for excessive use, where applicable.	Water Shortage Contingency Planning	Section 8.3	**8-6**

10632(a)(7)	Provide an analysis of the impacts of each of the actions and conditions in the water shortage contingency analysis on the revenues and expenditures of the urban water supplier, and proposed measures to overcome those impacts.	Water Shortage Contingency Planning	Section 8.6	**8-8**
10632(a)(8)	Provide a draft water shortage contingency resolution or ordinance.	Water Shortage Contingency Planning	Section 8.7	**8-10**
10632(a)(9)	Indicate a mechanism for determining actual reductions in water use pursuant to the water shortage contingency analysis.	Water Shortage Contingency Planning	Section 8.5	**8-7**
10631(f)(1)	Retail suppliers shall provide a description of the nature and extent of each demand management measure implemented over the past five years. The description will address specific measures listed in code.	Demand Management Measures	Sections 9.2 and 9.3	**NA**
10631(f)(2)	Wholesale suppliers shall describe specific demand management measures listed in code, their distribution system asset management program, and supplier assistance program.	Demand Management Measures	Sections 9.1 and 9.3	**9-1** **9-6**
10631(j)	CUWCC members may submit their 2013-2014 CUWCC BMP annual reports in lieu of, or in addition to, describing the DMM implementation in their UWMPs. This option is only allowable if the supplier has been found to be in full compliance with the CUWCC MOU.	Demand Management Measures	Section 9.5	**9-7**
10608.26(a)	Retail suppliers shall conduct a public hearing to discuss adoption, implementation, and economic impact of water use targets.	Plan Adoption, Submittal, and Implementation	Section 10.3	**10-4**
10621(b)	Notify, at least 60 days prior to the public hearing, 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.	Plan Adoption, Submittal, and Implementation	Section 10.2.1	**10-1**
10621(d)	Each urban water supplier shall update and submit its 2015 plan to the department by July 1, 2016.	Plan Adoption, Submittal, and Implementation	Sections 10.3.1 and 10.4	**10-5** **10-5**
10635(b)	Provide supporting documentation that Water Shortage Contingency 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 the plan to DWR.	Plan Adoption, Submittal, and Implementation	Section 10.4.4	**10-7**
10642	Provide supporting documentation that the urban water supplier made the plan available for public inspection, published notice of the public hearing, and held a public hearing	Plan Adoption, Submittal, and Implementation	Sections 10.2.2, 10.3, and 10.5	**10-3** **10-4** **10-8**

	about the plan.			
10642	The water supplier is to provide the time and place of the hearing to any city or county within which the supplier provides water.	Plan Adoption, Submittal, and Implementation	Sections 10.2.1	**10-1**
10642	Provide supporting documentation that the plan has been adopted as prepared or modified.	Plan Adoption, Submittal, and Implementation	Section 10.3.1	**10-5**
10644(a)	Provide supporting documentation that the urban water supplier has submitted this UWMP to the California State Library.	Plan Adoption, Submittal, and Implementation	Section 10.4.3	**10-7**
10644(a)(1)	Provide supporting documentation that the urban water supplier has submitted this UWMP to any city or county within which the supplier provides water no later than 30 days after adoption.	Plan Adoption, Submittal, and Implementation	Section 10.4.4	**10-7**
10644(a)(2)	The plan, or amendments to the plan, submitted to the department shall be submitted electronically.	Plan Adoption, Submittal, and Implementation	Sections 10.4.1 and 10.4.2	**10-6** **10-6**
10645	Provide supporting documentation that, not later than 30 days after filing a copy of its plan with the department, the supplier has or will make the plan available for public review during normal business hours.	Plan Adoption, Submittal, and Implementation	Section 10.5	**10-8**

APPENDIX D

NOTIFICATION OF PREPARATION OF PLAN

UPPER SAN GABRIEL VALLEY MUNICIPAL WATER DISTRICT

Board of Directors:
Anthony R. Fellow, Ph.D., *Division 1*
Charles M. Treviño, *Division 2*
Ed Chavez, *Division 3*
Michael Touhey, *Division 4*
Bryan Urias, *Division 5*

January 29, 2016

TO: **Potentially Interested Agency**

FROM: **Shane Chapman, General Manager**
Upper San Gabriel Valley Municipal Water District

SUBJECT: **Urban Water Management Plan 2015 Update**

The Urban Water Management Planning Act requires every "urban water supplier[1]" to prepare and adopt an Urban Water Management Plan (UWMP) and periodically update that plan at least once every five years on or before December 31, in years ending in five and zero. Pursuant to Section 10621(d) of the UWMP Act, each urban water supplier shall update and submit its 2015 UWMP by July 1, 2016 to the California Department of Water Resources. The UWMP is a planning document and a source document to direct urban water suppliers to evaluate and compare their water supply and reliability to their existing water conservation efforts. Upper San Gabriel Valley Municipal Water District (Upper District) is currently in the process of preparing the 2015 UWMP Update.

As an urban water supplier, Upper District is required pursuant to Section 10620(d)(2) of the UWMP Act to coordinate with water management agencies, relevant public agencies and other water suppliers on the preparation of the UWMP. Upper District will be reviewing the UWMP and will make amendments and changes, as appropriate. Upper District invites you to submit comments prior to the development of our 2015 UWMP Update.

Please provide written comments within the next 15 business days to our office.

[1]Section 10617 of the Urban Water Management Planning Act states, "*"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.*

APPENDIX E

HISTORICAL RAINFALL IN SAN GABRIEL VALLEY

ANNUAL RAINFALL IN THE SAN GABRIEL VALLEY
FROM 1958-59 THROUGH 2014-15*

WATER YEAR (OCT - SEPT)	RAINFALL IN INCHES
1958-59	8.5
1959-60	10.6
1960-61	5.9
1961-62	22.4
1962-63	12.3
1963-64	9.4
1964-65	15.2
1965-66	19.6
1966-67	25.0
1967-68	15.0
1968-69	30.5
1969-70	11.1
1970-71	13.3
1971-72	8.5
1972-73	22.4
1973-74	16.8
1974-75	14.9
1975-76	12.1
1976-77	14.5
1977-78	38.4
1978-79	23.9
1979-80	34.8
1980-81	10.3
1981-82	18.9
1982-83	39.3
1983-84	10.6
1984-85	14.6
1985-86	22.0
1986-87	9.1
1987-88	14.9
1988-89	11.2
1989-90	12.4
1990-91	15.1
1991-92	22.8
1992-93	35.9
1993-94	11.6
1994-95	30.4
1995-96	15.6
1996-97	17.5
1997-98	36.1
1998-99	8.6
1999-00	14.4
2000-01	15.5
2001-02	6.4
2002-03	19.4
2003-04	12.7
2004-05	45.3
2005-06	16.8
2006-07	4.9
2007-08	16.4
2008-09	14.0
2009-10	20.2
2010-11	24.9
2011-12	10.9
2012-13	8.0
2013-14	6.3
2014-15	11.4
56-YEAR AVERAGE	**17.4**

*Annual rainfall determined as the average of rainfall at San Dimas (station 95), Pomona (station 356C), El Monte (station 108D), and Pasadena (station 610B).

†Pomona (station 356C) replaced Walnut (station 102D) in 2000-01.

††Pomona Fire Station (station 356D) replaced Pomona (Station 356C) in 2014-15.

APPENDIX F

METROPOLITAN SUPPLY AND DEMAND COMPARISON TABLES

Table 2-4
Single Dry-Year
Supply Capability[1] and Projected Demands
Repeat of 1977 Hydrology
(Acre-feet per year)

Forecast Year	2020	2025	2030	2035	2040
Current Programs					
In-Region Supplies and Programs	693,000	774,000	852,000	956,000	992,000
California Aqueduct[2]	644,000	665,000	692,000	718,000	718,000
Colorado River Aqueduct					
Total Supply Available[3]	1,451,000	1,457,000	1,456,000	1,455,000	1,454,000
Aqueduct Capacity Limit[4]	*1,200,000*	*1,200,000*	*1,200,000*	*1,200,000*	*1,200,000*
Colorado River Aqueduct Capability	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000
Capability of Current Programs	**2,537,000**	**2,639,000**	**2,744,000**	**2,874,000**	**2,910,000**
Demands					
Total Demands on Metropolitan	1,731,000	1,784,000	1,826,000	1,878,000	1,919,000
IID-SDCWA Transfers and Canal Linings	274,000	282,000	282,000	282,000	282,000
Total Metropolitan Deliveries[5]	**2,005,000**	**2,066,000**	**2,108,000**	**2,160,000**	**2,201,000**
Surplus	**532,000**	**573,000**	**636,000**	**714,000**	**709,000**
Programs Under Development					
In-Region Supplies and Programs	43,000	80,000	118,000	160,000	200,000
California Aqueduct	20,000	20,000	198,000	198,000	198,000
Colorado River Aqueduct					
Total Supply Available[3]	155,000	125,000	75,000	25,000	25,000
Aqueduct Capacity Limit[4]	*0*	*0*	*0*	*0*	*0*
Colorado River Aqueduct Capability	0	0	0	0	0
Capability of Proposed Programs	**63,000**	**100,000**	**316,000**	**358,000**	**398,000**
Potential Surplus	**595,000**	**673,000**	**952,000**	**1,072,000**	**1,107,000**

[1] Represents Supply Capability for resource programs under listed year type.

[2] California Aqueduct includes Central Valley transfers and storage program supplies conveyed by the aqueduct.

[3] Colorado River Aqueduct includes programs, IID-SDCWA transfer and exchange and canal linings conveyed by the aqueduct.

[4] Maximum CRA deliveries limited to 1.20 MAF including IID-SDCWA transfer and exchange and canal linings.

[5] Total demands are adjusted to include IID-SDCWA transfer and exchange and canal linings. These supplies are calculated as local supply, but need to be shown for the purposes of CRA capacity limit calculations without double counting.

Table 2-5
Multiple Dry-Year
Supply Capability[1] and Projected Demands
Repeat of 1990-1992 Hydrology
(Acre-feet per year)

Forecast Year	2020	2025	2030	2035	2040
Current Programs					
In-Region Supplies and Programs	239,000	272,000	303,000	346,000	364,000
California Aqueduct[2]	712,000	730,000	743,000	752,000	752,000
Colorado River Aqueduct					
Total Supply Available[3]	1,403,000	1,691,000	1,690,000	1,689,000	1,605,000
Aqueduct Capacity Limit[4]	*1,200,000*	*1,200,000*	*1,200,000*	*1,200,000*	*1,200,000*
Colorado River Aqueduct Capability	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000
Capability of Current Programs	**2,151,000**	**2,202,000**	**2,246,000**	**2,298,000**	**2,316,000**
Demands					
Total Demands on Metropolitan	1,727,000	1,836,000	1,889,000	1,934,000	1,976,000
IID-SDCWA Transfers and Canal Linings	274,000	282,000	282,000	282,000	282,000
Total Metropolitan Deliveries[5]	**2,001,000**	**2,118,000**	**2,171,000**	**2,216,000**	**2,258,000**
Surplus	**150,000**	**84,000**	**75,000**	**82,000**	**58,000**
Programs Under Development					
In-Region Supplies and Programs	36,000	73,000	110,000	151,000	192,000
California Aqueduct	7,000	7,000	94,000	94,000	94,000
Colorado River Aqueduct					
Total Supply Available[3]	80,000	75,000	50,000	25,000	25,000
Aqueduct Capacity Limit[4]	*0*	*0*	*0*	*0*	*0*
Colorado River Aqueduct Capability	0	0	0	0	0
Capability of Proposed Programs	**43,000**	**80,000**	**204,000**	**245,000**	**286,000**
Potential Surplus	**193,000**	**164,000**	**279,000**	**327,000**	**344,000**

[1] Represents Supply Capability for resource programs under listed year type.

[2] California Aqueduct includes Central Valley transfers and storage program supplies conveyed by the aqueduct.

[3] Colorado River Aqueduct includes programs, IID-SDCWA transfer and exchange and canal linings conveyed by the aqueduct.

[4] Maximum CRA deliveries limited to 1.20 MAF including IID-SDCWA transfer and exchange and canal linings.

[5] Total demands are adjusted to include IID-SDCWA transfer and exchange and canal linings. These supplies are calculated as local supply, but need to be shown for the purposes of CRA capacity limit calculations without double counting.

Table 2-6
Average Year
Supply Capability[1] and Projected Demands
Average of 1922-2012 Hydrologies
(Acre-feet per year)

Forecast Year	2020	2025	2030	2035	2040
Current Programs					
In-Region Supplies and Programs	693,000	774,000	852,000	956,000	992,000
California Aqueduct[2]	1,760,000	1,781,000	1,873,000	1,899,000	1,899,000
Colorado River Aqueduct					
Total Supply Available[3]	1,468,000	1,488,000	1,484,000	1,471,000	1,460,000
Aqueduct Capacity Limit[4]	*1,200,000*	*1,200,000*	*1,200,000*	*1,200,000*	*1,200,000*
Colorado River Aqueduct Capability	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000
Capability of Current Programs	**3,653,000**	**3,755,000**	**3,925,000**	**4,055,000**	**4,091,000**
Demands					
Total Demands on Metropolitan	1,586,000	1,636,000	1,677,000	1,726,000	1,765,000
IID-SDCWA Transfers and Canal Linings	274,000	282,000	282,000	282,000	282,000
Total Metropolitan Deliveries[5]	**1,860,000**	**1,918,000**	**1,959,000**	**2,008,000**	**2,047,000**
Surplus	**1,793,000**	**1,837,000**	**1,966,000**	**2,047,000**	**2,044,000**
Programs Under Development					
In-Region Supplies and Programs	43,000	80,000	118,000	160,000	200,000
California Aqueduct	20,000	20,000	225,000	225,000	225,000
Colorado River Aqueduct					
Total Supply Available[3]	5,000	25,000	25,000	25,000	25,000
Aqueduct Capacity Limit[4]	*0*	*0*	*0*	*0*	*0*
Colorado River Aqueduct Capability	0	0	0	0	0
Capability of Proposed Programs	**63,000**	**100,000**	**343,000**	**385,000**	**425,000**
Potential Surplus	**1,856,000**	**1,937,000**	**2,309,000**	**2,432,000**	**2,469,000**

[1] Represents Supply Capability for resource programs under listed year type.

[2] California Aqueduct includes Central Valley transfers and storage program supplies conveyed by the aqueduct.

[3] Colorado River Aqueduct includes programs, IID-SDCWA transfer and exchange and canal linings conveyed by the aqueduct.

[4] Maximum CRA deliveries limited to 1.20 MAF including IID-SDCWA transfer and exchange and canal linings.

[5] Total demands are adjusted to include IID-SDCWA transfer and exchange and canal linings. These supplies are calculated as local supply, but need to be shown for the purposes of CRA capacity limit calculations without double counting.

Draft

(November 13, 2015)

Upper San Gabriel Valley Municipal Water District

Average Year

(Average of 1922-2004 Hydrology)

Demographics[1]	2020	2025	2030	2035	2040
Population	878,904	895,073	926,489	943,758	961,998
Occupied Housing Units	252,020	256,797	261,779	266,572	272,061
Single Family	183,929	182,002	184,722	188,349	189,518
Multi-Family	68,091	74,795	77,057	78,223	82,543
Persons Per Household	3.45	3.45	3.51	3.51	3.50
Urban Employment	293,252	298,934	302,417	303,383	311,454

Conservation	2020	2025	2030	2035	2040
Conservation[2]	26,817	29,870	32,703	35,198	38,347
Installed Active Device Through 2015	3,420	2,920	1,683	972	645
Code-Based and Price-Effect Savings	23,397	26,949	31,021	34,227	37,702

Total Demands After Conservation	2020	2025	2030	2035	2040
Total Demand	218,253	217,660	218,284	218,728	219,122
Retail Municipal and Industrial[3]	176,253	175,660	176,284	176,728	177,122
Retail Agricultural	0	0	0	0	0
Seawater Barrier	0	0	0	0	0
Groundwater Replenishment	42,000	42,000	42,000	42,000	42,000

Local Supplies	2020	2025	2030	2035	2040
Total Local Supplies	164,817	165,309	166,843	167,439	168,219
Groundwater Production	146,833	146,413	147,511	147,708	148,095
Surface Production	9,000	9,000	9,000	9,000	9,000
Los Angeles Aqueduct	0	0	0	0	0
Seawater Desalination	0	0	0	0	0
Groundwater Recovery	0	0	0	0	0
Recycling	8,984	9,896	10,332	10,731	11,124
M&I and Agricultural	8,984	9,896	10,332	10,731	11,124
Groundwater Replenishment	0	0	0	0	0
Seawater Barrier	0	0	0	0	0
Other Non-Metropolitan Imports	0	0	0	0	0

Demands on Metropolitan	2020	2025	2030	2035	2040
Total Metropolitan Demands	53,436	52,351	51,441	51,288	50,903
Consumptive Use	11,436	10,351	9,441	9,288	8,903
Seawater Barrier	0	0	0	0	0
Replenishment Water[4]	42,000	42,000	42,000	42,000	42,000

All units are acre-feet except in Demographics Section.

1. Growth projections are based on SCAG 2012 Regional Transportation Plan and SANDAG Series 13 Forecast.
2. Includes code-based, price-effect and existing active savings through FY2014; does not include future active conservation savings. Conservation is 1990 base year. Pre-1990 add 250,000 acre-feet.
3. Retail M&I projections include conservation.
4. Replenishment Water include direct and in-lieu replenishment.

Draft

(November 13, 2015)

Upper San Gabriel Valley Municipal Water District

Single Dry-Year

(Repeat of 1977 Hydrology)

Demographics[1]	2020	2025	2030	2035	2040
Population	878,904	895,073	926,489	943,758	961,998
Occupied Housing Units	252,020	256,797	261,779	266,572	272,061
Single Family	183,929	182,002	184,722	188,349	189,518
Multi-Family	68,091	74,795	77,057	78,223	82,543
Persons Per Household	3.45	3.45	3.51	3.51	3.50
Urban Employment	293,252	298,934	302,417	303,383	311,454

Conservation	2020	2025	2030	2035	2040
Conservation[2]	26,817	29,870	32,703	35,198	38,347
Installed Active Device Through 2015	3,420	2,920	1,683	972	645
Code-Based and Price-Effect Savings	23,397	26,949	31,021	34,227	37,702

Total Demands After Conservation	2020	2025	2030	2035	2040
Total Demand	218,971	218,375	219,001	219,447	219,843
Retail Municipal and Industrial[3]	176,971	176,375	177,001	177,447	177,843
Retail Agricultural	0	0	0	0	0
Seawater Barrier	0	0	0	0	0
Groundwater Replenishment	42,000	42,000	42,000	42,000	42,000

Local Supplies	2020	2025	2030	2035	2040
Total Local Supplies	164,834	165,338	166,893	167,494	168,292
Groundwater Production	146,850	146,442	147,561	147,763	148,168
Surface Production	9,000	9,000	9,000	9,000	9,000
Los Angeles Aqueduct	0	0	0	0	0
Seawater Desalination	0	0	0	0	0
Groundwater Recovery	0	0	0	0	0
Recycling	8,984	9,896	10,332	10,731	11,124
M&I and Agricultural	8,984	9,896	10,332	10,731	11,124
Groundwater Replenishment	0	0	0	0	0
Seawater Barrier	0	0	0	0	0
Other Non-Metropolitan Imports	0	0	0	0	0

Demands on Metropolitan	2020	2025	2030	2035	2040
Total Metropolitan Demands	54,137	53,037	52,108	51,952	51,551
Consumptive Use	12,137	11,037	10,108	9,952	9,551
Seawater Barrier	0	0	0	0	0
Replenishment Water[4]	42,000	42,000	42,000	42,000	42,000

All units are acre-feet except in Demographics Section.

1. Growth projections are based on SCAG 2012 Regional Transportation Plan and SANDAG Series 13 Forecast.
2. Includes code-based, price-effect and existing active savings through FY2014; does not include future active conservation savings. Conservation is 1990 base year. Pre-1990 add 250,000 acre-feet.
3. Retail M&I projections include conservation.
4. Replenishment Water include direct and in-lieu replenishment.

Draft

(November 13, 2015)

Upper San Gabriel Valley Municipal Water District

Multi Dry-Year

(Repeat of 1990-1992 Hydrology)

Demographics[1]	2020	2025	2030	2035	2040
Population	878,904	895,073	926,489	943,758	961,998
Occupied Housing Units	252,020	256,797	261,779	266,572	272,061
Single Family	183,929	182,002	184,722	188,349	189,518
Multi-Family	68,091	74,795	77,057	78,223	82,543
Persons Per Household	3.45	3.45	3.51	3.51	3.50
Urban Employment	293,252	298,934	302,417	303,383	311,454

Conservation	2020	2025	2030	2035	2040
Conservation[2]	26,817	29,870	32,703	35,198	38,347
Installed Active Device Through 2015	3,420	2,920	1,683	972	645
Code-Based and Price-Effect Savings	23,397	26,949	31,021	34,227	37,702

Total Demands After Conservation	2020	2025	2030	2035	2040
Total Demand	217,501	220,283	220,666	221,153	221,563
Retail Municipal and Industrial[3]	175,501	178,283	178,666	179,153	179,563
Retail Agricultural	0	0	0	0	0
Seawater Barrier	0	0	0	0	0
Groundwater Replenishment	42,000	42,000	42,000	42,000	42,000

Local Supplies	2020	2025	2030	2035	2040
Total Local Supplies	165,437	165,240	166,577	167,376	168,139
Groundwater Production	147,608	146,524	147,327	147,724	148,093
Surface Production	9,000	9,000	9,000	9,000	9,000
Los Angeles Aqueduct	0	0	0	0	0
Seawater Desalination	0	0	0	0	0
Groundwater Recovery	0	0	0	0	0
Recycling	8,829	9,716	10,251	10,652	11,046
M&I and Agricultural	8,829	9,716	10,251	10,652	11,046
Groundwater Replenishment	0	0	0	0	0
Seawater Barrier	0	0	0	0	0
Other Non-Metropolitan Imports	0	0	0	0	0

Demands on Metropolitan	2020	2025	2030	2035	2040
Total Metropolitan Demands	52,064	55,043	54,088	53,777	53,424
Consumptive Use	10,064	13,043	12,088	11,777	11,424
Seawater Barrier	0	0	0	0	0
Replenishment Water[4]	42,000	42,000	42,000	42,000	42,000

All units are acre-feet except in Demographics Section.

1. Growth projections are based on SCAG 2012 Regional Transportation Plan and SANDAG Series 13 Forecast.
2. Includes code-based, price-effect and existing active savings through FY2014; does not include future active conservation savings. Conservation is 1990 base year. Pre-1990 add 250,000 acre-feet.
3. Retail M&I projections include conservation.
4. Replenishment Water include direct and in-lieu replenishment.

APPENDIX G

LONG BEACH JUDGMENT

Superior Court of the State of California
For the County of Los Angeles

BOARD OF WATER COMMISSIONERS OF THE CITY OF LONG BEACH, et al.,
Plaintiffs

vs.

SAN GABRIEL VALLEY WATER COMPANY, et al.,
Defendants

No. 722647

SETTLEMENT DOCUMENTS

STIPULATION FOR JUDGMENT
JUDGMENT
MAP OF WHITTIER NARROWS ENGINEERING APPENDIX
REIMBURSEMENT CONTRACT

Approved by Joint Negotiating Committees July 6, 1964.

EXHIBIT NO. 7

SUPERIOR COURT OF THE STATE OF CALIFORNIA

FOR THE COUNTY OF LOS ANGELES

BOARD OF WATER COMMISSIONERS OF THE CITY OF LONG BEACH, a municipal corporation; CENTRAL BASIN MUNICIPAL WATER DISTRICT, a municipal water district; and CITY OF COMPTON, a municipal corporation,

Plaintiffs,

vs.

SAN GABRIEL VALLEY WATER COMPANY, a corporation; AZUSA AGRICULTURAL WATER COMPANY, a corporation; AZUSA VALLEY WATER COMPANY, a corporation; CALIFORNIA WATER & TELEPHONE COMPANY, a corporation; THE COLUMBIA LAND AND WATER COMPANY, a corporation; COVINA IRRIGATING COMPANY, a corporation; CROSS WATER COMPANY, a corporation; DUARTE WATER COMPANY, a corporation; EAST PASADENA WATER CO. LTD., a corporation; GLENDORA IRRIGATING COMPANY, a corporation; SAN DIMAS WATER COMPANY, a corporation; SOUTHERN CALIFORNIA WATER COMPANY, a corporation; SUBURBAN WATER SYSTEMS, a corporation; SUNNY SLOPE WATER CO., a corporation; VALLECITO WATER CO., a corporation; CITY OF ALHAMBRA, a municipal corporation; CITY OF ARCADIA, a municipal corporation; CITY OF AZUSA, a municipal corporation; CITY OF COVINA, a municipal corporation; CITY OF EL MONTE, a municipal corporation; CITY OF GLENDORA, a municipal corporation; CITY OF MONROVIA, a municipal corporation; CITY OF MONTEREY PARK, a municipal corporation; CITY OF SOUTH PASADENA, a municipal corporation; BALDWIN PARK COUNTY WATER DISTRICT, a county water district; and SAN GABRIEL COUNTY WATER DISTRICT, a county water district,

Defendants,

UPPER SAN GABRIEL VALLEY MUNICIPAL WATER

NO. 722,647

STIPULATION FOR JUDGMENT

DISTRICT, a municipal water district, and CALIFORNIA DOMESTIC WATER COMPANY, a corporation,

Intervenors.

Plaintiffs Central Basin Municipal Water District, a municipal water district (herein sometimes referred to as Central Municipal); City of Long Beach, a municipal corporation, acting by and through the Board of Water Commissioners of the City of Long Beach; and City of Compton, a municipal corporation; and defendants City of Alhambra, a municipal corporation; City of Arcadia, a municipal corporation; City of Azusa, a municipal corporation; Azusa Agricultural Water Company, a corporation, sued herein as DOE 1; Azusa Valley Water Company, a corporation, for itself and as successor by merger to Azusa Irrigating Company, a corporation; Baldwin Park County Water District, a county water district; California Water and Telephone Company, a corporation; Columbia Land and Water Company, a corporation; City of Covina, a municipal corporation; Covina Irrigating Company, a corporation; Cross Water Company, a corporation, sued herein as DOE 2; Duarte Water Company (formerly Duarte Domestic Water Company), a corporation; East Pasadena Water Company, Ltd., a corporation, for itself and as successor by merger to California-Michigan Land and Water Company, a corporation; City of El Monte, a municipal corporation; City of Glendora, a municipal corporation; Glendora Irrigating Company, a corporation; City of Monrovia, a municipal corporation; City of Monterey Park, a municipal corporation; San Dimas Water Company, a corporation, sued herein as DOE 3; San Gabriel County Water District, a county water district; San Gabriel Valley Water Company, a corporation; Southern California Water Company, a corporation; City of South Pasadena, a municipal corporation; Suburban Water Systems, a corporation; Sunny Slope Water Company, a corporation; and Vallecito Water Company, a corporation; and

intervening defendant Upper San Gabriel Valley Municipal Water District, a municipal water district (herein sometimes referred to as Upper District); and intervening defendant California Domestic Water Company, a corporation; stipulate and agree as follows:

1. A Judgment in the form attached hereto as Exhibit I may be made and entered by the Court in the above-entitled action.

2. The following facts, considerations and objectives, among others, provide the basis for this Stipulation for Judgment:

(a) By their complaint plaintiffs seek a determination of the rights of the defendants, other than Upper District, in and to the waters of the San Gabriel River System and further seek to restrain defendants, other than Upper District, from an alleged interference with the rights of plaintiffs and persons represented by Central Municipal in and to said waters.

(b) At the present time, and for some time prior to the commencement of this action, the water supply of the San Gabriel River System has been inadequate to supply the diversions and extractions of both plaintiffs and defendants other than Central Municipal and Upper District but including the persons represented by Central Municipal and by Upper District, and as a result said diversions and extractions have exceeded, and still exceed, the natural replenishment of the water supply of the San Gabriel River System.

(c) The parties recognize and agree that the natural outflow from the San Gabriel Valley

to the Lower Area as defined in the Judgment has varied, and will vary from year to year, depending on the amount of precedent rainfall and other conditions.

(d) The parties recognize and agree that there is a need for a declaration of rights and a physical solution for the problems resulting from the inadequate and varying water supplies of the San Gabriel River System.

(e) The parties agree that the physical solution contained in said Judgment will bring about a fair division of the water of the San Gabriel River System as between plaintiffs and defendants other than Central Municipal and Upper District but including the persons represented by Central Municipal and by Upper District.

(f) The parties recognize that it may be necessary for defendants or some of them to use supplemental water in order to comply with the obligations imposed under said physical solution.

(g) Defendant Upper District is now a member unit of The Metropolitan Water District of Southern California, which will be supplied with water from sources in northern California under an existing contract with the State of California. Certain of the defendants not within the area of defendant Upper District are within the area of San Gabriel Valley Municipal Water District, which district also has contracted with the State of California for delivery of water from sources in northern California. It is anticipated that the

importation of this water will augment the natural supply of ground water within Upper Area as defined in the Judgment. Defendant Upper District intends to replenish the San Gabriel Valley with supplemental supplies.

3. The parties hereto hereby waive any and all Findings of Fact, Conclusions of Law, and any and all notice of the making or entry herein of the attached form of Judgment, and all rights of appeal, if any, from such Judgment.

4. Plaintiffs and defendants agree that during the period prior to entry of the attached form of Judgment, they will cooperate in endeavoring to collect such information as the Watermaster would obtain if the attached form of Judgment had been entered and the Watermaster had been appointed by the Court pursuant to paragraph 6 of the Judgment, which information is herein referred to as "said information." To that end, the parties hereto hereby agree that promptly following the complete execution of this stipulation by all parties, Upper District and Central Municipal shall each notify the other in writing as to the identity of the person who it expects will be nominated as the representative of Upper Area Parties or Lower Area Parties, as the case may be, under paragraph 6 of the Judgment. Upon receiving such notice, Upper District and Central Municipal shall each instruct its designated nominee that until the attached form of Judgment is entered and the Watermaster has been appointed pursuant to paragraph 6 of the Judgment he shall in cooperation with the other designated nominee do all things reasonably necessary to obtain such of said information as is available from the parties hereto or any public agency.

5. Judgment shall not be rendered pursuant hereto unless and until the execution of this stipulation by Central Basin Municipal Water District and by Upper San Gabriel Valley

Municipal Water District shall have been validated by a decree or decrees rendered in a proceeding or proceedings instituted in a court of competent jurisdiction of the State of California, and either such decree or decrees shall have become final or both of said Districts shall have further stipulated that said Judgment shall be rendered.

6. This stipulation may be executed in counterparts (each counterpart being an exact copy or duplicate of the original) and all counterparts collectively shall be considered as constituting one complete Stipulation for Judgment.

DATED: _____, 1964.

Attorneys (for the respective party listed opposite and to the right of the respective attorneys listed below)	Signature of Stipulating Party and Its Designation of Mailing Address
Leonard Putnam City Attorney Clifford E. Hayes Principal Deputy City Attorney City of Long Beach By _____	Board of Water Commissioners of the City of Long Beach By _____ Its _____ President By _____ Its _____ Secretary 1800 East Wardlow Road Long Beach 7, California
Burris & Lagerlof Stanley C. Lagerlof H. Jess Senecal Jack T. Swafford By _____	

Burris & Lagerlof Stanley C. Lagerlof H. Jess Senecal Jack T. Swafford By _____	Central Basin Municipal Water District By _____ Its President By _____ Its Secretary 7439 East Florence Avenue Downey, California
Lloyd A. Bulloch City Attorney City of Compton _____	City of Compton By _____ Its Mayor 205 South Willowbrook Avenue Compton, California
Burris & Lagerlof Stanley C. Lagerlof H. Jess Senecal Jack T. Swafford By _____	
Don D. Bercu City Attorney City of Alhambra _____	City of Alhambra By _____ Its Mayor City Hall 111 South First Street Alhambra, California
Taylor & Smith By _____	

James A. Nicklin
City Attorney
City of Arcadia

_____

Surr & Hellyer

By _____

Clayson, Stark, Rothrock
& Mann

By _____

City of Arcadia

By _____

Its Mayor

City Hall
Arcadia, California

Harry C. Williams
City Attorney
City of Azusa

_____

Taylor & Smith

By _____

Taylor & Smith

By _____

City of Azusa

By _____

Its Mayor

City Hall
213 East Foothill Boulevard
Azusa, California

Azusa Agricultural Water Company

By _____

Its ____ President

By _____

Its _____ Secretary

18352 East Foothill Boulevard
Azusa, California

Surr & Hellyer

By _____

Clayson, Stark, Rothrock
& Mann

By _____

Azusa Valley Water Company

By _____

Its ____ President

By _____

Its _____ Secretary

P. O. Box "W"
Azusa, California

Surr & Hellyer

By _____

Clayson, Stark, Rothrock
& Mann

By _____

Baldwin Park County Water District

By _____

Its ____ President

By _____

Its _____ Secretary

14521 East Ramona Boulevard
Baldwin Park, California

Bacigalupi, Elkus &
Salinger

By _____

Surr & Hellyer

By _____

Clayson, Stark, Rothrock
& Mann

By _____

California Water & Telephone
Company

By _____

Its ____ President

By _____

Its _____ Secretary

300 Montgomery Street
San Francisco, California

Allard, Shelton & O'Connor

By _____

Surr & Hellyer

By _____

Clayson, Stark, Rothrock
& Mann

By _____

Columbia Land & Water Company

By _____

Its ____ President

By _____

Its _____ Secretary

P. O. Box 296
San Dimas, California

Allard, Shelton & O'Connor

By _____

Surr & Hellyer

By _____

Clayson, Stark, Rothrock
& Mann

By _____

Kerckhoff & Kerckhoff

By _____

Surr & Hellyer

By _____

Clayson, Stark, Rothrock
& Mann

By _____

George C. Gillette

_____

Henry W. Shatford
Shatford & Shatford

By _____

Surr & Hellyer

By _____

Clayson, Stark, Rothrock
& Mann

By _____

City of Covina

By _____

Its Mayor

City Hall
Covina, California

Covina Irrigating Company

By _____

Its ____ President

By _____

Its _____ Secretary

146 East College Street
Covina, California

Cross Water Company

By _____

Its ____ President

By _____

Its _____ Secretary

15825 East Main Street
La Puente, California

Duarte Water Company

By _____

Its ____ President

By _____

Its _____ Secretary

1101 South Oak Avenue
Duarte, California

Gray & Maddox

By _____

Surr & Hellyer

By _____

Clayson, Stark, Rothrock
& Mann

By _____

James A. Nicklin
City Attorney
City of El Monte

_____

Surr & Hellyer

By _____

Clayson, Stark, Rothrock
& Mann

By _____

Leonard A. Shelton
City Attorney
City of Glendora

_____

Surr & Hellyer

By _____

Clayson, Stark, Rothrock
& Mann

By _____

East Pasadena Water Company, Ltd.

By _____

Its ____ President

By _____

Its _____ Secretary

269 South Rosemead
Pasadena, California

City of El Monte

By _____

Its Mayor

City Hall
El Monte, California

City of Glendora

By _____

Its Mayor

City Hall
Glendora, California

Allard, Shelton & O'Connor

By _____

Surr & Hellyer

By _____

Clayson, Stark, Rothrock
& Mann

By _____

Glendora Irrigating Company

By _____

Its ____ President

By _____

Its _____ Secretary

224 North Michigan Avenue
Glendora, California

Homer H. Bell
City Attorney
City of Monrovia

_____

Surr & Hellyer

By _____

Clayson, Stark, Rothrock
& Mann

By _____

City of Monrovia

By _____

Its Mayor

City Hall
Monrovia, California

Charles R. Martin
City Attorney
City of Monterey Park

_____

Taylor & Smith

By _____

City of Monterey Park

By _____

Its Mayor

City Hall
320 West Newmark Avenue
Monterey Park, California

Allard, Shelton & O'Connor

By _____

Surr & Hellyer

By _____

Clayson, Stark, Rothrock
& Mann

By _____

San Dimas Water Company

By _____

Its ____ President

By _____

Its _____ Secretary

P. O. Box 181
San Dimas, California

Surr & Hellyer

By _____

Clayson, Stark, Rothrock
& Mann

By _____

San Gabriel County Water District

By _____

Its ____ President

By _____

Its _____ Secretary

8229 East Las Tunas Drive
San Gabriel, California

J. E. Skelton

_____

Surr & Hellyer

By _____

Clayson, Stark, Rothrock
& Mann

By _____

San Gabriel Valley Water Company

By _____

Its ____ President

By _____

Its _____ Secretary

11142 Garvey Avenue
El Monte, California

O'Melveny & Myers

By _____

Surr & Hellyer

By _____

Clayson, Stark, Rothrock
& Mann

By _____

Charles R. Martin
City Attorney
City of South Pasadena

_____

Surr & Hellyer

By _____

Clayson, Stark, Rothrock
& Mann

By _____

Frank E. Gray

_____

Surr & Hellyer

By _____

Clayson, Stark, Rothrock
& Mann

By _____

Hahn & Hahn

By _____

Southern California Water Company

By _____

Its ____ President

By _____

Its _____ Secretary

11911 South Vermont Avenue
Los Angeles 44, California

City of South Pasadena

By _____

Its Mayor

825 Mission Street
South Pasadena, California

Suburban Water Systems

By _____

Its ____ President

By _____

Its _____ Secretary

16340 East Maplegrove Street
La Puente, California

Sunny Slope Water Company

By _____

Its ____ President

By _____

Its _____ Secretary

1040 El Campo Drive
Pasadena, California

Surr & Hellyer

By _____

Clayson, Stark, Rothrock
& Mann

By _____

Stearns, Gross and Moore

By _____

Ralph B. Helm

_____

Vallecito Water Company

By _____

Its ____ President

By _____

Its _____ Secretary

749 South Ninth Avenue
City of Industry, California

California Domestic Water Company

By _____

Its ____ President

By _____

Its _____ Secretary

P. O. Box 1026, Perry Annex
Whittier, California

Upper San Gabriel Valley
Municipal Water District

By _____

Its ____ President

By _____

Its _____ Secretary

11229 East Valley Boulevard
El Monte, California

SUPERIOR COURT OF THE STATE OF CALIFORNIA

FOR THE COUNTY OF LOS ANGELES

BOARD OF WATER COMMISSIONERS OF THE CITY OF LONG BEACH, a municipal corporation; CENTRAL BASIN MUNICIPAL WATER DISTRICT, a municipal water district; and CITY OF COMPTON, a municipal corporation,

Plaintiffs,

vs.

SAN GABRIEL VALLEY WATER COMPANY, a corporation; AZUSA AGRICULTURAL WATER COMPANY, a corporation; AZUSA VALLEY WATER COMPANY, a corporation; CALIFORNIA WATER & TELEPHONE COMPANY, a corporation; THE COLUMBIA LAND AND WATER COMPANY, a corporation; COVINA IRRIGATING COMPANY, a corporation; CROSS WATER COMPANY, a corporation; DUARTE WATER COMPANY, a corporation; EAST PASADENA WATER CO. LTD., a corporation; GLENDORA IRRIGATING COMPANY, a corporation; SAN DIMAS WATER COMPANY, a corporation; SOUTHERN CALIFORNIA WATER COMPANY, a corporation; SUBURBAN WATER SYSTEMS, a corporation; SUNNY SLOPE WATER CO., a corporation; VALLECITO WATER CO., a corporation; CITY OF ALHAMBRA, a municipal corporation; CITY OF ARCADIA, a municipal corporation; CITY OF AZUSA, a municipal corporation; CITY OF COVINA, a municipal corporation; CITY OF EL MONTE, a municipal corporation; CITY OF GLENDORA, a municipal corporation; CITY OF MONROVIA, a municipal corporation; CITY OF MONTEREY PARK, a municipal corporation; CITY OF SOUTH PASADENA, a municipal corporation; BALDWIN PARK COUNTY WATER DISTRICT, a county water district; and SAN GABRIEL COUNTY WATER DISTRICT, a county water district,

Defendants,

UPPER SAN GABRIEL VALLEY MUNICIPAL WATER DISTRICT, a municipal water district, and CALIFORNIA DOMESTIC WATER COMPANY, a corporation,

Intervenors.

NO. 722,647

JUDGMENT

Exhibit I

The original complaint herein was filed by Plaintiffs on May 12, 1959, and an amended complaint was filed herein on June 8, 1961. Each Defendant in this action filed an answer to the amended complaint denying the material allegations therein. On _____, 1964, and _____, 1964, respectively, Upper San Gabriel Valley Municipal Water District, a municipal water district, and California Domestic Water Company, a corporation, intervened in the action as Defendants. On _____, 1964, there was filed herein a Stipulation for Judgment signed by all of the parties to this action.

After due examination and consideration of the pleadings, said Stipulation for Judgment and other documents and papers on file herein, it appears to the Court that:

(a) In bringing and maintaining this action, plaintiff Central Basin Municipal Water District, a municipal water district, has done so as a representative of and for the benefit of all owners of water rights within, all owners of land within, and all inhabitants of, the district, except to the extent that defendant California Domestic Water Company is representing itself.

(b) In intervening in this action, defendant Upper San Gabriel Valley Municipal Water District, a municipal water district, has done so as representative of and for the benefit of all owners of water rights within, all owners of land within, and all inhabitants of, the district, except to the extent that other Defendants who are within the district are representing themselves.

(c) There is a need for a physical solution to the complex water problems which have given rise to this action.

(d) The physical solution embodied in this Judgment is a feasible, equitable and just resolution of the issues presented by the amended complaint and answers thereto on file herein, and it will bring about a fair division of the water supply of the San Gabriel River System between Upper Area and Lower Area, as those terms are hereinafter defined.

(e) On the basis of the Stipulation for Judgment filed herein and the consent of all Plaintiffs and Defendants it is in the interests of justice and in furtherance of the water policy of the State of California to proceed without trial and to make and enter this Judgment.

Now, therefore, it is hereby ORDERED, ADJUDGED AND DECREED:

JURISDICTION 1. The Court has jurisdiction of the subject matter of this action and of the Upper Area Parties and Lower Area Parties, as those terms are hereinafter defined.

EXHIBITS 2. The following Exhibits marked A and B, are attached to this Judgment and made a part hereof:

(a) Exhibit A -- Map entitled "Rio Hondo and San Gabriel River in Vicinity of Whittier Narrows Dam".

(b) Exhibit B -- Engineering Appendix.

DEFINITIONS 3. As used in this Judgment, the following terms shall have the meanings assigned to them:

(a) Central Municipal -- Central Basin Municipal Water District.

(b) Upper District -- Upper San Gabriel Valley Municipal Water District.

(c) Lower Area Parties -- the Plaintiffs, and

all persons, firms and corporations, public or private, who are represented by Central Municipal.

(d) Upper Area Parties -- the Defendants, and all persons, firms and corporations, public or private, who are represented by Upper District.

(e) Upper Area -- the area (exclusive of the Raymond Basin and the portion of San Gabriel Mountains tributary thereto) wherein surface and subsurface waters are tributary to Whittier Narrows upstream from the common boundary of Upper District and Central Municipal through Whittier Narrows.

(f) Lower Area -- the area which lies downstream from the common boundary of Central Municipal and Upper District through Whittier Narrows and which is included within the incorporated limits of the Plaintiffs.

(g) Whittier Narrows -- a gap between Merced Hills and Puente Hills shown on Exhibit A.

(h) Montebello Forebay -- the area designated as such on Exhibit A.

(i) Export to Lower Area -- water diverted from surface streams in Upper Area or pumped or developed from underground sources in Upper Area, and in either case conveyed by conduit through Whittier Narrows.

(j) Subsurface Flow -- all water which passes as ground water through Whittier Narrows at the "narrowest section" as shown on Exhibit A.

(k) Surface Flow -- all water other than Export to Lower Area and Subsurface Flow, which passes from Upper Area to Lower Area through Whittier Narrows.

(l) Usable Water -- all Surface Flow, Subsurface Flow and Export to Lower Area, but excluding:

(1) that portion of Surface Flow, if any, which crosses the southerly boundary of Montebello Forebay as surface runoff less the amount of Surface Flow which has been caused to flow out of Montebello Forebay as surface runoff by any spreading of water in Montebello Forebay by or on behalf of Lower Area Parties, or any of them;

(2) water imported by or on behalf of Lower Area Parties from outside of the watershed of the San Gabriel River System;

(3) Reclaimed Water, as defined in subparagraph (o) herein, provided, however, that Reclaimed Water (other than that reclaimed by or on behalf of Lower Area Parties) which is percolated and commingled with ground water in Upper Area shall be deemed Subsurface Flow, Surface Flow, or Export to Lower Area as the case may be, when and if it passes through Whittier Narrows;

(4) that portion, if any, of Export to Lower Area which in any Water Year after September 30, 1966, exceeds 23,395 acre-feet;

(5) Make-up Water, as defined in subparagraph (m) herein; and

(6) any water whether flowing on the surface or beneath the surface of the ground which has passed any of the points of surface measurement in Whittier Narrows shown on Exhibit B and prior to its passing from Upper Area to Lower Area is intercepted and returned upstream by conduit or otherwise so that it could again pass any such points of measurement.

(m) Make-up Water -- water of usable quality for ground water recharge required to be delivered to Lower Area under terms of paragraph 5 of this Judgment.

(n) Water Year -- October 1 through the following September 30.

(o) Reclaimed Water -- water reclaimed from sewage generated in the watershed of the San Gabriel River System above Whittier Narrows.

DECLARATION OF RIGHT

4. Lower Area Parties have rights in the water supply of the San Gabriel River System. The nature and extent of such rights is not known; however, Lower Area Parties and all other persons downstream from Whittier Narrows who receive water from the San Gabriel River System or have rights in and to such water, shall have, as against Upper Area Parties and all other pumpers of water in the San Gabriel Valley, a right to receive from Upper Area an average annual usable supply of ninety-eight thousand four hundred fifteen (98,415) acre-feet of water over a long-term period of normal rainfall derived as set forth in Exhibit B, consisting

of Surface Flow, Subsurface Flow, Export to Lower Area and Make-up Water. If in the future a court of competent jurisdiction shall decree that any person downstream from Whittier Narrows within Central and West Basin Water Replenishment District who is not bound by this Judgment, shall have, as against Upper Area Parties and substantially all other pumpers in the San Gabriel Valley, a right to receive from Upper Area a stated amount of usable supply consisting of Surface Flow, Subsurface Flow, Export to Lower Area or Make-up Water, which right arose out of and is based upon the ownership of land or the production of water downstream from Whittier Narrows and within Central and West Basin Water Replenishment District, then and in that event the stated amount of such right so decreed shall not increase the declared rights as set forth in this paragraph 4.

PHYSICAL SOLUTION

5. In recognition of the complexities of annual supply and demand and variations in the components thereof, the Court hereby declares the following physical solution to be a fair and equitable basis for satisfaction of the declared right set forth in paragraph 4 hereof. Compliance with this paragraph 5 shall constitute full and complete satisfaction of said declared right.

AVERAGE ANNUAL ENTITLEMENT

(a) It is determined that the amount of Lower Area average annual entitlement to Usable Water is ninety-eight thousand four hundred fifteen (98,415) acre-feet.

BASIS OF ANNUAL ENTITLEMENT

(b) The outflow of water from Upper Area through Whittier Narrows to Lower Area has

varied from year to year and will vary from year to year in the future depending on changing conditions of supply and demand; and as to any Water Year, the average annual rainfall for the San Gabriel Valley during the ten (10) consecutive Water Years ending with that Water Year, is a reasonable basis for determining the entitlement of Lower Area to Usable Water for such Water Year.

DETERMINATION OF RAINFALL

(c) The rainfall in each Water Year for the San Gabriel Valley shall be determined by application of the procedures described in Exhibit B.

RAINFALL ADJUSTMENT TABLE

(d) The quantity of water which Lower Area is entitled to receive in any Water Year (hereinafter called Lower Area Annual Entitlement) shall be determined in accordance with the following table, except that no determination of Lower Area Annual Entitlement shall be made for the last year of any Long-term Accounting Period as hereinafter defined.

TABLE A

LOWER AREA ANNUAL ENTITLEMENT
BASED ON 10-YEAR AVERAGE RAINFALL
FOR SAN GABRIEL VALLEY

(In Acre-feet)

Inches of Rainfall	0	.1	.2	.3	.4	.5	.6	.7	.8	.9
14	64,200	64,900	65,700	66,500	67,200	68,000	68,700	69,500	70,300	71,100
15	71,800	72,600	73,400	74,100	74,900	75,600	76,400	77,200	77,900	78,700
16	79,500	80,200	81,000	81,800	82,600	83,300	84,000	84,800	85,600	86,400
17	87,100	87,900	88,700	89,400	90,200	91,000	91,500	92,500	93,200	94,000
18	94,800	95,300	96,200	96,900	97,600	98,300	98,800	99,500	100,100	100,800
19	101,400	102,000	102,700	103,300	103,900	104,500	105,100	105,700	106,300	107,000
20	107,600	108,200	108,800	109,400	110,100	110,700	111,300	111,900	112,500	113,100
21	113,700	114,300	115,000	115,600	116,200	116,800	117,400	118,100	118,600	119,300
22	119,900	120,400	121,000	121,600	122,200	122,700	123,300	123,900	124,400	125,000
23	125,500	126,100	126,700	127,200	127,800	128,400	128,900	129,500	130,100	130,600
24	131,200	131,700	132,200	132,700	133,100	133,700	134,100	134,700	135,100	135,600

DETERMINATION OF ACCRUED DEBIT OR CREDIT

(e) The difference between the aggregate of water entitlements determined as provided in this Judgment and the aggregate of Usable Water and delivered Make-up Water shall be computed as of the end of each Water Year. Any excess of water entitlements over the quantity of Usable Water and Make-up Water received by Lower Area after September 30, 1963, is hereinafter referred to as Accrued Debit of Upper Area. Any excess of Usable Water and Make-up Water received by Lower Area after September 30, 1963, over water entitlements, is hereinafter referred to as Accrued Credit of Upper Area.

ACCRUED DEBIT

(f) If at the end of any Water Year it is determined pursuant to subparagraph (e) of this paragraph 5 that there is an Accrued Debit of Upper Area, then Upper District shall cause Make-up Water to be delivered to Lower Area during the following Water Year in an amount not less than the sum of (1) one-third of such Accrued Debit of Upper Area, and (2) that portion, if any, of such Accrued Debit of Upper Area over 25,000 acre-feet which remains after deducting said one-third. If Upper District shall fail to deliver Make-up Water as next above provided and Plaintiffs shall have diligently pursued their legal and equitable remedies to cause Upper District to so deliver, and either: (1) it shall be finally determined that Upper District is not obligated to so deliver, or (2) it shall appear that Upper District will not thereafter deliver Make-up Water, then Defendants and any successor or successors in interest by title to a Defendant's water right in Upper Area shall be obligated to so deliver Make-up Water. The provisions of this paragraph are subject to the provisions of paragraph 5(h) below.

ACCRUED CREDIT

(g) If at the end of any Water Year it is determined pursuant to subparagraph (e) of this paragraph 5 that there is an Accrued Credit of Upper Area, then there shall be no obligation to deliver Make-up Water to Lower Area during the following Water Year.

LONG-TERM ACCOUNTING

(h) Following September 30, 1963, a Long-term Accounting shall be made from time to time but not sooner than at the end of 15 Water Years, nor later than 25 Water Years after September 30, 1963, or after the last such accounting, whichever is later. A Long-term Accounting shall be made sooner than said 25-year period whenever the average annual rainfall in the San Gabriel Valley for a period of 15 Water Years or more after September 30, 1963, or after the last such accounting, whichever is later, is at least 18 inches but not more than 19 inches.

In making such Long-term Accounting for any such period (herein called Long-term Accounting Period), the aggregate of all Usable Water and Make-up Water received by Lower Area during such period shall be determined and (a) there shall be deducted from said aggregate the amount of Make-up Water, if any, delivered during such period by reason of the existence of an Accrued Debit of Upper Area at the end of the immediately preceding Long-term Accounting Period, or (b) there shall be added to said aggregate the amount of any Accrued Credit of Upper Area determined to exist at the end of the immediately preceding Long-term Accounting Period. The net aggregate amount of Usable Water and Make-up Water so computed shall be compared to the result to be obtained by (1) multiplying the 98,415 acre-feet of water to be received by

Lower Area as its average annual usable supply by the number of Water Years in the Long-term Accounting Period, and (2) adjusting the product by the percentage by which the average annual rainfall (to the nearest one hundredth of an inch) for the Long-term Accounting Period involved exceeds or is less than 18.52 inches. (i.e.:

98,415 x (number of Water Years in Period) x $\left(\frac{\text{average rainfall for the Period}}{18.52}\right)$.)

If as a result of such comparison it is determined that there is a deficiency in the net aggregate amount of Usable Water and Make-up Water received during the Long-term Accounting Period, then such deficiency shall be compensated in the following Water Year by delivery of Make-up Water to Lower Area in the manner and by the means provided herein. If it is determined as a result of such comparison that there is an excess of net aggregate Usable Water and Make-up Water received, then the amount of such excess shall be carried forward as an Accrued Credit of Upper Area.

MAKE-UP WATER DELIVERY

(i) Make-up Water which Defendants are obligated to deliver through Upper District may be delivered by any one or more of the following means:

SURFACE FLOW DELIVERY

(1) By causing water other than Reclaimed Water to flow on the surface into Montebello Forebay by any means and from any source, provided that such deliveries shall

be at such rates or flows and at such times as may be scheduled by the Watermaster.

RECLAIMED WATER CREDIT

(2) By paying to Central Municipal for the benefit of all Lower Area Parties the total amount or any portion of the total amount which Central and West Basin Water Replenishment District or any Plaintiff shall have expended in reclaiming water or for the purchase of Reclaimed Water in the preceding Water Year, and which water when so reclaimed or purchased shall have been passed through Whittier Narrows to Lower Area. Upon written request made by Upper District not later than three months after the end of a Water Year, Central Municipal shall give a written notice to Upper District and the Watermaster of the total number of acre-feet of such Reclaimed Water so reclaimed or purchased during the preceding Water Year and of the cost per acre-foot therefor at the existing Whittier Narrows Water Reclamation Plant for reclamation of waste water, and at any future additions thereto, and payment therefor at said cost, or costs, may be made not later than one year after receipt of such written notice. Such payment shall be made for the total production of Reclaimed Water from the existing plant in the preceding Water Year before Upper District shall be entitled to make payment for all, or any portion of,

Reclaimed Water produced in that year by any future addition to that plant. Such payment by Upper District on behalf of Defendants shall be deemed a delivery of Make-up Water equal to the quantity of Reclaimed Water for which the expenditure of a like sum would have paid at the cost, or costs, per acre-foot so paid for such Reclaimed Water. In no event, however, shall any payment by Upper District under this subparagraph (i)(2) be deemed a delivery of Make-up Water in excess of 14,735 acre-feet in any Water Year during which the amount of Make-up Water required to be furnished by Upper Area is available to it at ground water replenishment rates for delivery to Lower Area, except with the prior written consent of Plaintiffs.

DIRECT DELIVERY

(3) By delivering, or causing to be delivered, water to any of Lower Area Parties with consent of Plaintiffs for use in Lower Area.

WATER RIGHTS BOUND

(j) It is further determined and adjudicated that the obligations provided above in subparagraphs (f) and (h) of this paragraph 5 for each Defendant shall constitute and be a servitude upon the existing water rights of each Defendant in and to the water supply of the San Gabriel River System upstream from Lower Area and shall run with and forever bind said water rights for the benefit of the water

rights of Lower Area Parties.

TRANSFER OF WATER RIGHTS

(k) If any Defendant, other than Upper District, shall desire to transfer all or any of its said water rights to a person, firm or corporation, public or private, who or which is not then bound by this Judgment as a Defendant, such Defendant shall as a condition to being discharged as hereinafter provided cause such transferee to appear in this action and file a valid and effective express assumption of the obligations imposed upon such Defendant under this Judgment as to such transferred water rights. Such appearance and assumption of obligations shall include the filing of a designation of the address to which shall be mailed all notices, requests, objections, reports and other papers permitted or required by the terms of this Judgment.

If any Defendant shall have transferred all of its said water rights and each transferee not theretofore bound by this Judgment as a Defendant shall have appeared in this action and filed a valid and effective express assumption of the obligations imposed upon such Defendant under this Judgment as to such transferred water rights, such transferring Defendant shall thereupon be discharged from all obligations hereunder. If any Defendant other than Upper District shall cease to own any rights in and to the water supply of the San Gabriel River System upstream from Lower Area, and shall have caused the appearance

and assumption provided for in the third preceding sentence with respect to each voluntary transfer, then upon application to this Court and after notice and hearing such Defendant shall thereupon be relieved and discharged from all further obligations hereunder. Any such discharge of any Defendant hereunder shall not impair the aggregate rights of Lower Area Parties or the responsibility hereunder of the remaining Defendants or any of the successors.

WATERMASTER PROVISIONS

WATERMASTER APPOINTMENT

6. A Watermaster comprised of three persons to be nominated as hereinafter provided shall be appointed by and serve at the pleasure of and until further order of this Court. One shall be a representative of Upper Area Parties nominated by and through Upper District, one shall be a representative of Lower Area Parties nominated by and through Central Municipal, and one shall be jointly nominated by Upper District and Central Municipal. If a dispute arises in choosing the joint appointee, the Court shall make the appointment. If Central Municipal or Upper District shall at any time or times nominate a substitute appointee in place of the appointee last appointed to represent Lower Area Parties, in the case of Central Municipal, or to represent Upper Area Parties, in the case of Upper District, or if Central Municipal and Upper District shall at any time or times jointly nominate a substitute appointee in place of the joint appointee last appointed,

such substitute appointee shall be appointed by the Court in lieu of such last appointee or joint appointee. Each such nomination shall be made in writing, served upon the other parties to this action and filed with the Court. The Watermaster when so appointed shall administer and enforce the provisions of this Judgment and the instructions and subsequent orders of this Court.

POWERS AND DUTIES

7. The Watermaster shall have the following powers and duties and shall take all steps necessary to make the following determinations for each Water Year promptly after the end of such Water Year:

(a) the amount of Surface Flow,

(b) the amount of Subsurface Flow,

(c) the amount of Export to Lower Area,

(d) the amount of water which passed as Surface Flow or Subsurface Flow across the boundary between Upper Area and Lower Area through Whittier Narrows and which was imported by or on behalf of Lower Area Parties from outside of the watershed of the San Gabriel River System above Whittier Narrows,

(e) the amount and quality of Reclaimed Water reclaimed by or on behalf of Lower Area,

(f) the total amount of Make-up Water delivered to Lower Area, together with the respective amounts delivered by each method specified in paragraph 5 of this Judgment,

(g) the amount of Usable Water received by Lower Area,

(h) the amount of local storm inflow, originating in Lower Area, to the channel of

each of Rio Hondo and San Gabriel River within Montebello Forebay,

(i) the surface outflow from Montebello Forebay in the channel of each of the Rio Hondo and San Gabriel River,

(j) the number of inches of depth of average rainfall in the San Gabriel Valley,

(k) the average annual rainfall in the San Gabriel Valley for the ten consecutive Water Years just ended,

(l) Lower Area Annual Entitlement or the entitlement for the Long-term Accounting Period, determined pursuant to subparagraph (d) or (h), respectively, of paragraph 5 of this Judgment,

(m) Accrued Debit of Upper Area, if any, or Accrued Credit of Upper Area, if any, as it exists at the end of such Water Year, and

(n) the amount, if any, of Make-up Water which Upper District is obligated to deliver during the following Water Year.

DETERMINATIONS TO BE BASED ON EXHIBIT B

8. Each of the above required determinations shall be based on and conform to the procedures specified in this Judgment and in Exhibit B insofar as said exhibit provides a procedure.

REPORTS MEASUREMENTS AND DATA

9. The Watermaster shall report to the Court and to each party in writing at the same time and not more than five months after the end of each Water Year the determinations required by paragraph 7 above.

The Watermaster shall cause to be installed and maintained in good working order such measuring

devices in Whittier Narrows and elsewhere as are necessary or required and not otherwise available for the making of the determinations required by paragraph 7 above.

The Watermaster shall collect and assemble from each of the parties, and the parties shall make available to the Watermaster, such records, reports and other data as may reasonably be required in the making of the determinations required of the Watermaster under paragraph 7 above. All records, reports and data received, maintained or compiled by the Watermaster shall be open to inspection by any party or its representative.

OBJECTIONS

10. Any party who objects to any determination made by the Watermaster pursuant to paragraph 7 above, may make such objection in writing to the Watermaster within thirty (30) days after the Watermaster gives the required written notice of such determination. Within thirty (30) days after expiration of the time within which objection may be made to such determination, the Watermaster shall consider all objections thereto and shall amend, modify or affirm the determination and give notice thereof at the same time to all parties and shall file a copy of such final determination with the Court. If the Watermaster denies any objection in whole or in part, the party whose objection was so denied may within thirty (30) days after service of the final determination upon it, make written objection to such denial by filing its objections with the Court after first mailing a copy of such objections to the

Watermaster and to each party, and such party shall bring its objections on for hearing before the Court upon notice and motion and at such time as the Court may direct. If the Watermaster shall change or modify any determination, then any party may within fifteen (15) days after service of such final determination upon it object to such change or modification by following the procedure prescribed above in the case of a denial of an objection to the first determination. If objection to a final determination is filed with the Court as herein provided and brought on for hearing, then such final determination may be confirmed or modified in whole or in part as the Court may deem proper.

CHANGE IN METHOD OF MEASUREMENT

11. If the Watermaster shall deem it advisable to make a change in the method of making any measurement required under the terms of this Judgment, the Watermaster shall notify all parties of such proposed change, and if within sixty (60) days of such notification no party shall file written objections to such change with the Watermaster, the Watermaster may put such proposed change into effect. If, however, any party files its written objection to the proposed change, it shall by notice of motion filed not later than fifteen (15) days after the expiration of said 60-day period and served on the Watermaster and all parties bring its objection on for hearing before the Court at such time as the Court may direct, and the Court shall rule on whether the Watermaster may make such proposed change.

BUDGET

12. In addition to the above-specified administrative powers and duties, the Watermaster shall prepare a tentative budget for each Water Year, stating the estimated expense for discharging the duties of the Watermaster set forth in this Judgment. The Watermaster shall mail a copy of the tentative budget to each of the parties at the same time at least sixty (60) days before the beginning of each Water Year. However, with respect to the first Water Year following the entry of this Judgment, the tentative budget shall be mailed not later than one hundred and twenty (120) days from the entry of this Judgment. If any party has an objection to a tentative budget, or any suggestions with respect thereto, that party shall present the same in writing to the Watermaster within fifteen (15) days after service of the tentative budget upon it. If no objections are received, the tentative budget shall become the final budget. If objections to the tentative budget are received, the Watermaster shall, within fifteen (15) days after the expiration of the time for presenting objections, consider all such objections, prepare a final budget, and mail a copy thereof to each party, together with a statement of the amount assessed, if any, to each party, computed as provided in paragraph 13. If the Watermaster denies any objection in whole or in part, the party whose objection was so denied may, within fifteen (15) days after service of the final budget upon it, make written objection to such denial by filing

its objections with the Court after first mailing a copy of such objections to each party, and such party shall bring its objections on for hearing before the Court upon notice and motion and at such time as the Court may direct. If the Watermaster makes a change in the tentative budget, then any party may within fifteen (15) days after service of the final budget upon it object to any such change by following the procedure prescribed above in the case of a denial of an objection to the tentative budget. If objection to the final budget is filed with the Court as herein provided and brought on for hearing, then such final budget may be confirmed or adjusted in whole or part as the Court may deem proper.

FEES AND EXPENSES

13. The fees, compensation and expenses of the Watermaster hereunder shall be borne by the parties in the following proportions: 50% by Upper District, 41.2% by Central Municipal, 7.125% by the City of Long Beach, and 1.675% by the City of Compton, or such other division among the Plaintiffs as they may agree upon in writing and file with the Watermaster.

Payment of the amount assessed to a party, whether or not subject to adjustment by the Court as provided in paragraph 12, shall be paid on or prior to the beginning of the Water Year to which the final budget and statement of assessed costs is applicable. If such payment by any party is not made on or before said date, the Watermaster shall add a penalty of 5% thereof to such party's

statement. Payment required of any party hereunder may be enforced by execution issued out of this Court, or as may be provided by order hereinafter made by this Court. All such payments and penalties received by the Watermaster shall be expended by him for the administration of this Judgment. Any money remaining at the end of any Water Year shall be available for use in the following Water Year.

SUCCESSOR OF UPPER DISTRICT

14. If a public agency or district shall be formed hereafter which shall include the present area of Upper District and shall have ability equal to or greater than that which Upper District now has to perform the obligations under this Judgment, and shall appear in this action and file a valid and effective assumption of such obligations, then Upper District upon application to this Court, and after notice and hearing, shall thereupon be relieved and discharged from all further obligations hereunder.

CONTINUING JURISDICTION OF THE COURT

15. Full jurisdiction, power and authority is retained and reserved by the Court for the purpose of enabling the Court upon application of any party by motion and upon at least thirty (30) days notice thereof, and after hearing thereon (i) to make such further or supplemental orders or directions as may be necessary or appropriate for the construction, enforcement or carrying out of this Judgment, and (ii) to modify, amend or amplify any of the provisions of this Judgment whenever substantial developments affecting the physical, hydrological or other conditions dealt

with herein may, in the Court's opinion, justify or require such modification, amendment or amplification.

If at any time Plaintiffs and at least two-thirds of the Defendants including any two of the cities of Alhambra, Azusa and Monterey Park, shall file with the Court a written stipulation (i) that henceforth in determining any one or more of the component parts of Usable Water received by Lower Area in any Water Year, the Watermaster shall not use the method specified in this Judgment but shall use instead a new, different or altered method as specified and described in such stipulation, and (ii) that such new, different or altered method or methods shall be applied to redetermine the average annual amount of Usable Surface Flow, Subsurface Flow and Export to Lower Area which Lower Area received each Water Year during the period October 1, 1934 to September 30, 1959, referred to as the base period, and that on the basis of such redetermination the Court may modify paragraphs 4 and 5 of this Judgment to establish a new and different water entitlement and yearly adjustment thereto which shall thereafter control, then and in that event, after hearing pursuant to motion and notice to all parties, held at such time as the Court may direct, the Court may deny the motion or it may grant it and (a) approve the future use of the stipulated new, different or altered method or methods, by the Watermaster, and (b) by use of the stipulated new, different or altered method or

methods, redetermine the average annual amount of Usable Surface Flow, Subsurface Flow and Export to Lower Area received each Water Year during the base period, and on the basis thereof modify paragraphs 4 and 5 of this Judgment to provide for a new and different water entitlement and yearly adjustment thereto, which modifications shall be effective and control commencing with the Water Year following the entry of the order so modifying paragraphs 4 and 5.

REPORT OF TRANSFER OF WATER RIGHTS

16. Every transfer of any of those water rights of Defendants which are the subject of Paragraph 5(j) of this Judgment, whether such transfer is voluntary or involuntary, shall be reported promptly in writing by the transferor to the Watermaster; and the Watermaster shall give prompt written notice of such transfer to each party and to each transferee involved in every other transfer of any of those water rights. Such report by the transferor and notice by the Watermaster shall contain the following information as to each such transfer:

(a) The identity of the transferor;

(b) The identity of the transferee;

(c) The effective date of the transfer;

(d) A brief description of the document by which such transfer is made, and the recording data, if any;

(e) A statement as to whether the transfer was voluntary or involuntary;

(f) A statement whether or not after such transfer the transferor still has or

claims to have any of the water rights which are the subject of Paragraph 5(j) of this Judgment.

NOTICES

17. All notices, requests, objections, reports and other papers permitted or required by the terms of this Judgment shall be given or made by written document and shall be served by mail on each party and on each transferee of water rights who has appeared and filed the assumption of obligations required by paragraph 5(k) of this Judgment, and where required or appropriate, on the Watermaster. For all purposes of this paragraph the mailing address of each party shall be that set forth below its signature to the Stipulation for Judgment, and the mailing address of each transferee of water rights shall be that set forth in the appearance and assumption of obligations required by paragraph 5(k) of this Judgment, until changed as provided below. No further notice of any kind as to any matter arising hereunder, including notice to attorneys of record for any party or such transferee, need be given, made or served.

If any party or any such transferee of water rights shall desire to change its designation of mailing address, it shall file a written notice of such change with the clerk of this court and shall serve a copy thereof by mail on the Watermaster. Upon the receipt of any such notice the Watermaster shall promptly give written notice thereof to each party and to each transferee of water rights.

EFFECTIVE DATE

18. The rights decreed and the obligations imposed by this Judgment shall be effective October 1, 1963, and shall accrue from that date.

COSTS

19. None of the parties shall recover any costs from any other party.

Dated: _____, 1964.

_____
Judge

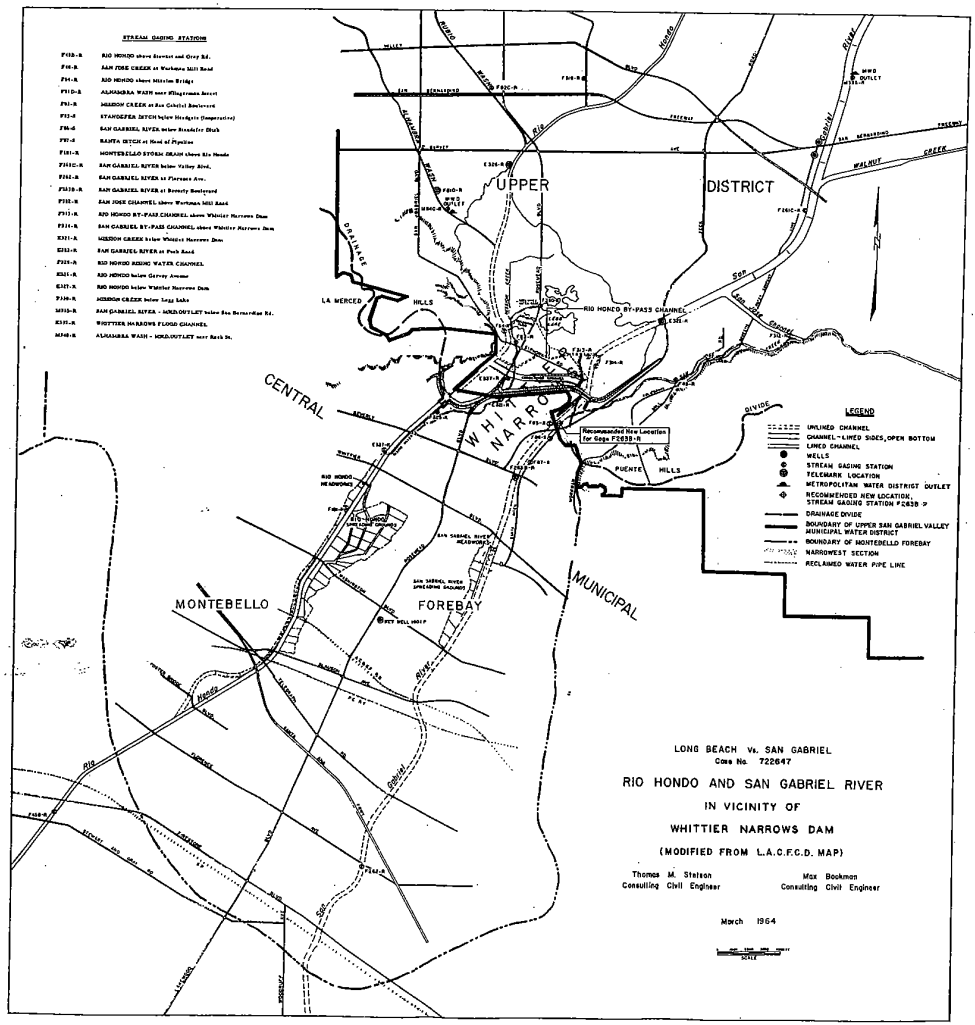


EXHIBIT A

LONG BEACH v. SAN GABRIEL

ENGINEERING APPENDIX

EXHIBIT B

ENGINEERING APPENDIX

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ENGINEERING APPENDIX

INTRODUCTION

Pursuant to the declaration of rights contained in paragraph 4 of the Judgment and the physical solution contained in paragraph 5 of the Judgment, the purpose of this exhibit is to establish the basis for calculations and measurements to provide for operation of the Judgment in the future.

Unless otherwise provided in this exhibit, all terms used herein are used in the same sense as defined or used in the Judgment.

The derivation of the Lower Area average annual entitlement is based upon the data presented herein covering the base period. However, if a more accurate method of determining Subsurface Flow is developed at some future time, it will be acceptable for use in carrying out the terms of this Judgment so long as it can also apply to the base period and to the years over which the Judgment shall have operated to that time.

I. DERIVATION OF LOWER AREA AVERAGE ANNUAL ENTITLEMENT

The Lower Area average annual entitlement is stipulated in paragraph 5 (a) of the Judgment to be 98,415 acre-feet. It was derived from three components of water supply over the base period, October 1, 1934, through September 30, 1959. Said components were: (1) Usable Surface Flow, (2) Subsurface Flow, and (3) Export to Lower Area.

A. Usable Surface Flow

For the base period, Usable Surface Flow was calculated as that portion of Surface Flow which percolated

in Montebello Forebay, less the calculated amounts of Lower Area Replenishment Water (hereby defined as water imported from outside of the watershed of the San Gabriel River system by or on behalf of Lower Area Parties for replenishment of Montebello Forebay and passing from Upper Area to Lower Area), and less one-half of the Raymond Basin sewage discharged in Upper Area from the Tri-City Sewage Treatment Plant.

Table 1 presents the calculation of Usable Surface Flow during the base period. The average annual quantity was calculated to be 51,620 acre-feet. Its derivation is summarized in the following tabulation.

		Average annual quantity in acre-feet
1. Surface Flow		108,560
2. Montebello Forebay surface outflow	45,000	
3. Local storm inflow within Montebello Forebay	1,660	
4. Portion of Surface Flow leaving Montebello Forebay (2 minus 3)		43,340
5. Surface Flow percolated in Montebello Forebay (1 minus 4)		65,220
6. Lower Area Replenishment Water (Colorado River water) passing through Whittier Narrows	11,870	
7. One-half of Raymond Basin sewage discharged in Upper Area	1,730	
8. Usable Surface Flow (5 minus 6 minus 7)		51,620

TABLE 1

CALCULATION OF USABLE SURFACE FLOW

DURING BASE PERIOD

(Acre-Feet)

	Surface Flow						Montebello Forebay surface outflow								
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Water Year	Rio Hondo F-64	Mission Creek F-83	Rio Hondo Bypass F-313	Sycamore Canyon	San Gabriel River at maximum rising water	Total (2+3+4+5+6)	Rio Hondo F-45	San Gabriel River F-262	Subtotal (8+9)	Montebello Storm Drain F-181	Outflow of Surface Flow (10-11)	Surface Flow percolated in Montebello Forebay (7-12)	Colorado River water passing Whittier Narrows	One-half of Raymond Basin sewage discharged in Upper Area	Usable Surface Flow (13-14-15)
1934-35	29,230	9,140	0	390	22,410	61,170	6,000	4,700	10,700	1,650	9,050	52,120		2,650	49,470
36	20,700	9,810	0	70	16,140	46,720	4,220	1,750	5,970	890	5,080	41,640		2,735	38,905
37	50,900	10,840	0	260	47,750	109,750	26,870	21,000	47,870	2,170	45,700	64,050		2,865	61,185
38	209,330	14,700	0	510	109,120	333,660	172,100	60,000	232,100	2,050	230,050	103,610		2,960	100,650
39	30,650	16,330	0	200	38,380	85,560	9,540	2,540	12,080	980	11,100	74,460		2,970	71,490
1939-40	27,660	16,210	0	110	29,510	73,490	4,850	1,900	6,750	890	5,860	67,630		2,985	64,645
41	130,650	18,120	0	1,070	112,440	262,280	93,260	75,780	169,040	4,090	164,950	97,330		3,205	94,125
42	28,810	18,740	0	80	43,770	91,400	6,730	13,570	20,300	960	19,340	72,060		3,140	68,920
43	59,470	17,410	0	150	222,670	299,700	41,910	186,420	228,330	2,580	225,750	73,950		3,235	70,715
44	51,390	18,850	0	220	121,420	191,880	26,820	79,930	106,750	2,390	104,360	87,520		3,545	83,975
1944-45	32,300	18,020	0	70	57,130	107,520	8,460	26,110	34,570	770	33,800	73,720		3,490	70,230
46	43,160	15,630	0	70	51,580	110,440	11,280	16,480	27,760	870	26,890	83,550		3,635	79,915
47	48,410	14,230	0	110	56,790	119,540	16,030	27,650	43,680	1,350	42,330	77,210		3,785	73,425
48	25,370	12,670	0	20	20,970	59,030	3,510	0	3,510	910	2,600	56,430		2,065	54,365
49	11,100	10,640	0	40	13,590	35,370	1,490	0	1,490	860	630	34,740		0	34,740
1949-50	12,280	8,780	0	110	11,780	32,950	2,840	0	2,840	1,240	1,600	31,350		0	31,350
51	7,880	6,700	0	0	8,420	23,000	780	0	780	890	-110	23,110		0	23,110
52	34,570	6,090	0	530	56,800	97,990	26,040	24,250	50,290	3,330	46,960	51,030		0	51,030
53	16,120	6,210	0	50	22,350	44,730	3,450	980	4,430	1,430	3,000	41,730		0	41,730
54	23,390	3,580	7,230	100	18,130	52,430	10,760	3,790	14,550	2,190	12,360	40,070	15,690	0	24,380
1954-55	11,350	3,100	9,730	70	14,630	38,880	8,000	1,000	9,000	1,210	7,790	31,090	23,130	0	7,960
56	16,180	2,310	14,990	150	28,930	62,560	14,540	10,360	24,900	2,110	22,790	39,770	42,870	0	-3,100
57	16,840	1,840	20,400	50	22,220	61,350	4,640	1,390	6,030	1,120	4,910	56,440	51,870	0	4,570
58	119,320	2,660	15,300	540	91,320	229,140	30,260	23,960	54,220	3,250	50,970	178,170	103,900	0	74,270
1958-59	39,800	3,920	0	10	39,790	83,520	3,900	3,130	7,030	1,230	5,800	77,720	59,390	0	18,330
TOTALS	1,096,860	266,530	67,650	4,980	1,278,040	2,714,060	538,280	586,690	1,124,970	41,410	1,083,560	1,630,500	296,850	43,265	1,290,385
Averages	43,870	10,660	2,710	200	51,120	108,560	21,530	23,470	45,000	1,660	43,340	65,220	11,870	1,730	51,620

3

B. Subsurface Flow

The State of California, Department of Water Resources, published in April 1962, Appendix B, "Safe Yield Determinations", of Bulletin No. 104, a report entitled "Planned Utilization of the Ground Water Basins of the Coastal Plain of Los Angeles County". That report included estimates of the seasonal Subsurface Flow through Whittier Narrows for each Water Year during the period 1934-35 through 1956-57. By applying the same methods of computation, the estimates have been extended through the Water Year 1958-59 and a 25-year average of 28,400 acre-feet derived.

Table 2 sets out the Subsurface Flow for each Water Year in the base period and the average annual Subsurface Flow during the base period.

TABLE 2

SUBSURFACE FLOW
DURING BASE PERIOD

Water Year	Acre-Feet
1934-35	33,500
36	33,500
37	31,100
38	25,600
39	25,000
1939-40	23,900
41	23,300
42	21,800
43	21,900
44	23,700
1944-45	23,500
46	23,100
47	22,400
48	25,700
49	30,300
1949-50	34,000
51	32,800
52	32,100
53	32,800
54	33,200
1954-55	33,600
56	32,200
57	32,600
58	30,500
1958-59	27,800
TOTAL	709,900
Average	28,400

C. Export to Lower Area

During the base period there were a number of water producers or water service agencies which produced water by surface diversions or wells in Upper Area and exported it to Lower Area. At the present time, and for the past several years, all such water has been pumped from wells in Upper Area.

There are four water service agencies which currently so export water. They are the Rincon Ditch Company, California Domestic Water Company, Suburban Water Systems, and the City of Whittier.

Table 3 sets forth Export to Lower Area for each Water Year during the base period and the average annual Export to Lower Area during the base period.

TABLE 3

EXPORT TO LOWER AREA
DURING BASE PERIOD

Water Year	Acre-Feet
1934-35	15,049
35-36	21,644
36-37	22,668
37-38	25,151
38-39	27,532
1939-40	22,566
40-41	24,191
41-42	27,514
42-43	30,484
43-44	31,182
1944-45	25,953
45-46	27,456
46-47	29,877
47-48	30,165
48-49	25,515
1949-50	18,363
50-51	21,651
51-52	16,302
52-53	18,141
53-54	18,360
1954-55	18,796
55-56	20,728
56-57	19,686
57-58	22,031
58-59	23,881
TOTAL	584,886
Average	23,395

D. Derivation of Lower Area Average Annual Entitlement

Table 4 presents the derivation of the Lower Area average annual entitlement.

TABLE 4

LOWER AREA AVERAGE ANNUAL ENTITLEMENT

(In acre-feet for base period)

Usable Surface Flow (Table 1)	51,620
Subsurface Flow (Table 2)	28,400
Export to Lower Area (Table 3)	23,395
Sub-total	103,415
Stipulated deduction	5,000
Lower Area average annual entitlement	98,415

II. DETERMINATION OF FUTURE LOWER AREA ANNUAL ENTITLEMENT

In determining a future Lower Area Annual Entitlement, as set forth in paragraph 5 (d) of the Judgment, the annual rainfall for San Gabriel Valley shall be determined in accordance with procedures set forth below, which are those presently utilized by the Los Angeles County Flood Control District. The 90-year (1872-73 through 1961-62) average rainfall for San Gabriel Valley has been calculated by said District to be eighteen and fifty-two one-hundredths (18.52) inches. For purposes of this Judgment, this quantity shall be the long-term average annual rainfall for San Gabriel Valley and shall not be subject to change.

The arithmetic average of the annual rainfall recorded at the four precipitation stations listed below shall constitute the rainfall for San Gabriel Valley for the respective Water Year.

Station No.	Location
95	114 East First Street, San Dimas
102C	19711 East Valley Blvd., Walnut
108C	119 South Hoyt Avenue, El Monte
610B	City Hall, Pasadena

Table 5 presents the annual rainfall for San Gabriel Valley for the Water Years 1954-55 through 1962-63.

TABLE 5

ANNUAL RAINFALL FOR SAN GABRIEL VALLEY

Water Year	Rainfall, Inches
1954-55	13.9
56	16.7
57	13.7
58	30.2
59	8.5
1959-60	10.6
61	5.9
62	22.4
63	12.3

The average rainfall in inches for the ten (10) consecutive Water Years ending with the year for which entitlement is being calculated shall be used as the basis for determining Lower Area Annual Entitlement.

Lower Area Annual Entitlements have been computed for 10-year average rainfall in increments of one-tenth (0.1) inch between fourteen (14) and twenty-five (25) inches and are set forth in Table A in paragraph 5 (d) of the Judgment. The following outlines the procedure for determining Lower Area Annual Entitlement from Table A:

(1) Derive the 10-year average rainfall for San Gabriel Valley to the nearest one-tenth (0.1) inch;

(2) Enter Table A in left-hand column at whole number of inches of rainfall; and

(3) Read horizontally to the vertical column representing the appropriate tenth of an inch of rainfall to obtain the quantity of Lower Area Annual Entitlement in acre-feet.

III. FUTURE MEASUREMENTS

It will be necessary to maintain records of measurement of stream flow, flow in pipelines, rainfall and depth to ground water at a number of locations. The purpose of this Part III is to locate and identify those measurement stations and to specify the manner in which the measurements are to be used in the future operation of the Judgment. The line through Whittier Narrows shown on Exhibit A as "narrowest section" is the line at which accounting shall be made of the water to be received in the future by Lower Area Parties. The Watermaster shall, insofar as practicable, utilize measurement data available from existing sources. When such data are not available the Watermaster may make such measurements as may be necessary or reasonably required for the purposes of this Judgment. The Watermaster is hereby authorized to re-establish, rebuild or replace measuring stations whenever necessary for the operation of this Judgment.

A. Surface Water Measurements and Calculations

There may be several categories of water flowing on the surface through Whittier Narrows. Among them may be local stream flow, Lower Area Replenishment Water, Reclaimed Water and Make-up Water. The Watermaster shall have the responsibility of determining the quantities of each category of water flowing through Whittier Narrows in the future.

The approximate locations of stream measuring stations in and near Whittier Narrows are shown on Exhibit A. The surface

water measurements and calculations shall include the following:

1. Measurements of Surface Flow.
   a. Rio Hondo above Mission Bridge, Station F64-R.
   b. Mission Creek at San Gabriel Boulevard, Station F83-R.
   c. Rio Hondo By-pass Channel, Station F313-R.
   d. Whittier Narrows Flood Channel, Station E337-R.
   e. Calculation of Sycamore Canyon runoff based on annual rainfall to nearest inch at Station 170-C as shown on Table 6.
   f. San Gabriel River near Parkway Bridge. This is to be a new station to replace the existing station on San Gabriel River at Beverly Boulevard, Station F263B-R.
   g. The portion of Reclaimed Water from Whittier Narrows Reclamation Plant diverted to Rio Hondo.
2. Measurement of local storm inflow to the channel of each of the Rio Hondo and San Gabriel River within Montebello Forebay.
   a. Montebello storm drain, Station F181-R.
   b. Calculation of unmeasured local storm inflow.
3. Measurements of diversions to spreading grounds Montebello Forebay.
4. Measurement of surface outflow from Montebello Forebay in the channel of each of Rio Hondo and

San Gabriel River.
   a. Rio Hondo above Stewart and Gray Road, Station F45B-R.
   b. San Gabriel River at Florence Avenue, Station F262-R.
5. Measurement of Lower Area Replenishment Water imported to Upper Area from outside the watershed of the San Gabriel River system.
   a. Rio Hondo By-pass Channel, Station F313-R.
   b. San Gabriel By-pass Channel, Station F314-R.
   c. San Gabriel River MWD Outlet, Station M335-R.
   d. Alhambra Wash MWD Outlet, Station M340-R.
   e. Any other measuring point or points in Upper Area at which such replenishment water is released.
6. Measurement of total Reclaimed Water from Whittier Narrows Reclamation Plant reclaimed by or on behalf of Lower Area Parties.

In the event that any of the aforementioned gaging stations are inoperative for any reason and for any period of time the Watermaster shall estimate the quantity that would have been measured at the station had it been operative. The estimate shall be based on correlation to nearby operative measuring stations or on other reasonable engineering methods.

TABLE 6

RAINFALL - RUNOFF RELATIONSHIP OF SYCAMORE CANYON*

Annual rainfall, in inches at Precipitation Station No. 170-C	Estimated runoff in acre-feet
6	5
7	10
8	15
9	25
10	35
11	45
12	60
13	75
14	90
15	105
16	125
17	145
18	170
19	200
20	240
21	275
22	315
23	355
24	400
25	445
26	490
27	535
28	580
29	630
30	685

Extrapolate for rainfall values in excess of 30 inches.

* Located on Westerly side of Whittier Narrows, upstream from dam and downstream from stream gaging Station F64-R. Approximate drainage area is 2.77 square miles.

B. Subsurface Flow

The determination of Subsurface Flow involves certain measurements and procedures which are set forth in this section. In connection with a recent comprehensive study made by the State of California, Department of Water Resources, for Bulletin No. 104, "Planned Utilization of the Ground Water Basins of the Coastal Plain of Los Angeles County", estimates were made of Subsurface Flow through Whittier Narrows. The State concluded that a reasonable method of determining Subsurface Flow was by the transmissibility method, which is based on Darcy's Law applied

at the location shown on Exhibit A as "narrowest section". Darcy's Law states that $Q = PIA$, in which

Q = Subsurface Flow

P = Permeability, in gallons per day per square foot under unit hydraulic gradient

I = Slope of water table

A = Cross-sectional area

Under this Judgment calculations shall be made by the Watermaster for the spring and fall of each year and because of slight variations due to the nature of the data available, Subsurface Flow for any one year will be equal to the tri-annual average of the quantities calculated for the three years ending with the year of calculation. In this manner, annual Subsurface Flow shall be based on the average of six calculations, the first of which shall be the spring of 1962.

The elevation of the ground surface at the "narrowest section" of Whittier Narrows is deemed to be 208 feet above sea level, and the width of the section is deemed to be 7,900 feet. Water levels fluctuate at Whittier Narrows and the cross-sectional area of the ground water at Whittier Narrows will vary with fluctuations in ground water elevation.

It should be noted that $T = PD$, where T = transmissibility in gallons per day per foot of width under unit hydraulic gradient and D = saturated depth in feet. Therefore $PA = TW$ and $Q = PAI = TWI$. The product TW (or PA) for the entire cross-sectional area was determined to be 4,739.5 x 1,000,000 gallons per day, or 7,333.6 cfs. The actual slope of the water table, I, would then be applied to the calculated quantity of TW (or PA).

The average permeability of the material to a depth of 100 feet below the ground surface has been determined to be equal to 2,000 gallons per day per square foot, which is

equal to .003095 cubic feet per second per square foot. This represents the average permeability in the zone of water level fluctuation.

In order to correct for the unsaturated depth, the equation $Q = TWI$ is modified to $Q = (TW - C)I$ where

$C = P_1Wd$,

C = The flow which would occur in the unsaturated section if it were saturated, in cubic feet per second under unit hydraulic gradient.

P_1 = Average permeability for a distance of 100 feet below the ground surface.

W = The cross-sectional width, or 7,900 feet.

d = The distance from the water surface to the top of the ground, or 208 feet minus ground water elevation.

Utilizing the values of permeability shown above, then

C = 24.45 d, in cubic feet per second, for values of "d" to a depth of 100 feet below the ground surface.

The "effective transmissibility" is equal to the total transmissibility times the width at the narrowest section minus C, or,

$Tw_e = TW - C$

$Tw_e = 7{,}334 - C$, in cubic feet per second.

Subsurface Flow is equal to the effective transmissibility times the average slope of the water table. The formula derived from the foregoing, may be stated as follows:

$Q = 724\ I\ [7{,}334 - 24.45\ (208 - E)]$

Where: Q = Subsurface Flow in acre-feet per year,

I = Average adjusted slope of ground water surface at narrowest section, and

E = Ground water elevation of the water surface in feet above sea level at the narrowest cross-section.

The detailed steps to be carried out by the Watermaster are as follows:

(1) Ground water level contour maps in the vicinity of Whittier Narrows are drawn on the basis of water level measurements.

(2) A line representing the narrowest cross-section is drawn on the ground water contour maps.

(3) This line is subdivided into four equal lengths.

(4) The average slope of the water table at each of the three points within the narrowest section is determined along a line perpendicular to the ground water contours in the manner heretofore used by the State of California, Department of Water Resources.

(5) Adjustment is made to the ground water slope at each of the three points so that it is perpendicular to the narrowest section by:

(a) measuring the angle, in degrees, between the line representing the narrowest cross-section and the tangent to the flow line at the narrowest cross-section,

(b) applying the sine of that angle to the previously determined slope to determine the adjusted slope, and

(c) obtaining an average of the three adjusted slopes to represent the average slope through the narrowest cross-section.

(6) The elevation of the water surface at the narrowest cross-section is determined by interpolating between the ground water contours.

(7) The distance to the ground water surface is computed from the top of the ground by the formula: $d = 208 - E$, where E represents the average water level elevation of the narrowest cross-section, in feet.

(8) The correction factors for the transmissibility for the area from the top of ground to the water surface is computed by the formula $C = 24.45\ d$, in cubic feet per second.

(9) The effective transmissibility is computed by the formula $Tw_e = 7{,}334 - C$, in cubic feet per second.

(10) Subsurface Flow is computed by multiplying the effective transmissibility by the average adjusted slope.

(11) The computed Subsurface Flow, in cubic feet per second, is converted to acre-feet per year by multiplying it by 724.

The selected wells within the vicinity of Whittier Narrows which have been used for drawing the ground water contours are as follows:

Location No.	State No.
2927B	2S 11W 06M01S
2927D	06K01S
2928	07B01S
2936	06A01S
2936A	1S 11W 31J03S
2938A	2S 11W 07H1S
2938D	05N05S
2939	08N01S
2939B	18B01S
2939G	07R01S
2947C	-
2947F	05L01S
2947N	05P01S
2948	05N04S
2948E	08B02S
2948F	08L03S
2957H	-

The Watermaster shall obtain measurements of ground water elevations in the spring and fall of each year when they are at their approximate high and low levels, respectively. Such measurements may be made at, but need not be limited to, all of the above listed wells.

C. Export to Lower Area

If present measuring devices on existing conduits are inadequate, the Watermaster shall install or cause to be installed adequate measuring devices to determine the amount of Export to Lower Area.

IV. ACCOUNTING

Utilizing the appropriate measurements described in the previous portion of this Exhibit B, the Watermaster shall maintain accounts for the determination of Lower Area Annual Entitlement, the annual amount of Usable Water, Make-up Water to be delivered, Make-up Water received, the annual total amount of Usable Water and Make-up Water, the accumulated Lower Area Annual Entitlements, the accumulated amounts of Usable Water and Make-up Water received subsequent to September 30, 1963, Accrued Debit of Upper Area or Accrued Credit of Upper Area, and records necessary for accomplishing the Long-term Accounting.

In maintaining the accounting records listed above, the Watermaster shall establish the necessary accounting procedures to accomplish the recordation of data and required calculations for accomplishment of the provisions set forth in paragraph 5 of the Judgment.

A. Components of Usable Water

1. Surface Flow. Surface Flow shall be measured as set forth in Part III.A. of this exhibit to include all water other than Export to Lower Area and Subsurface Flow which passes from Upper Area to Lower Area through Whittier Narrows. When the new station to be constructed on the San Gabriel River near Parkway Bridge is completed, it shall replace the gaging station on the San Gabriel River at Beverly Boulevard, Station F263B-R. Until such new station is in operation, Surface Flow as measured at Station F263B-R shall be increased by the amount of Surface Flow which has percolated or been diverted between Station F263B-R and the point of maximum rising water. The Watermaster shall determine the quantity so percolated or diverted based upon available measurements by the Los Angeles County Flood Control District.

2. Subsurface Flow. Subsurface Flow shall be calculated in accordance with the procedures heretofore set forth.

3. Export to Lower Area. The Watermaster shall reduce to acre-feet the meter readings on each of the conduits transporting through Whittier Narrows water diverted from surface streams in Upper Area or pumped or developed from underground sources in Upper Area. These quantities shall be used to determine Export to Lower Area except that after September 30, 1966, Export to Lower Area used for determination of Usable Water shall not exceed 23,395 acre-feet per year. (Paragraph 3(1) of this Judgment.)

B. Calculation of Usable Water

After determining the amounts of Surface Flow, Subsurface Flow and Export to Lower Area during a Water Year, as provided above, the Watermaster, in order to determine the extent to which such water constitutes the receipt of Usable Water by Lower Area during such Water Year, shall deduct from the total of such amounts, the following:

1. Lower Area Replenishment Water. An amount equal to the total quantity of Lower Area Replenishment Water released in Upper Area in each Water Year subsequent to September 30, 1963, less such amount, if any, as the Watermaster determines to be lost due to evaporation or transpiration prior to the receipt of such water in Lower Area;

2. Reclaimed Water. An amount equal to the total quantity of Reclaimed Water which is reclaimed by or on behalf of Lower Area Parties;

3. Make-up Water. An amount equal to the quantity of Make-up Water delivered to Lower Area during such Water Year, calculated as hereafter provided, to the extent included in

Surface Flow or Export to Lower Area;

4. Paragraph 3(1)(6) Water. An amount equal to the quantity of any water which falls within the scope of paragraph 3(1)(6) of the Judgment; and

5. Unusable Surface Flow. An amount equal to the quantity of Unusable Surface Flow, which is determined by deducting from the total outflow as measured at Stations F45B-R and F262-R: (1) Local Storm Outflow and (2) the portion of Surface Flow which has been caused to pass said stations by reason of any spreading of water in Montebello Forebay by or on behalf of Lower Area Parties.

Local Storm Outflow is a portion of local storm inflow originating in Montebello Forebay upstream from said measuring stations, the amount of which outflow is to be determined as hereinafter provided. When actual measurements of local storm inflow are not available, the amount thereof discharging to the channels of Rio Hondo or San Gabriel River within Montebello Forebay upstream from stations F45B-R and F262-R shall be estimated by correlation with the local storm inflow measured at Montebello Storm Drain, Station F181-R. Such quantities shall be estimated on the basis of the individual drainage areas of storm drain projects and the runoff per unit area determined from the Montebello Storm Drain, Station F181-R, during the particular time interval under consideration. When water is flowing out of Montebello Forebay on the surface in the Rio Hondo or San Gabriel River channels, the Watermaster shall determine Local Storm Outflow as follows:

a. Local Storm Outflow from Rio Hondo. When outflow occurs at Station F45B-R, all local storm inflow, both measured and estimated, which enters the Rio Hondo channel between that station and Upper Area shall constitute Local Storm Outflow from Rio Hondo, but the amount thereof shall not exceed the amount of

outflow at Station F45B-R for such periods.

b. Local Storm Outflow from San Gabriel River. At such times as local storm inflow does not join Surface Flow in San Gabriel River, the portion of such local storm inflow passing Station F262-R shall constitute Local Storm Outflow. In addition, at such times as Surface Flow in the San Gabriel River commingles with the local storm inflow, then the Watermaster shall determine Local Storm Outflow as follows:

(1) Calculate the total amount of local storm inflow to the San Gabriel River during such times, but such amount to be used in the determination of Local Storm Outflow shall not exceed the amount of San Gabriel River outflow passing Station F262-R during such periods.

(2) Calculate the Local Storm Outflow passing Station F262-R during such times, which calculation shall be based on the Surface Flow and local storm inflow to the San Gabriel River channel, giving appropriate weight to the quantities involved and the distance the respective quantities of water traverse Montebello Forebay in said channel.

(3) These two calculations shall then be averaged arithmetically and the resulting amount shall be Local Storm Outflow from San Gabriel River.

C. Determination and Delivery of Make-up Water

1. By Additions to Surface Flow (paragraph 5(i)(1) of Judgment). The determination of the amount of Make-up Water which is delivered to Lower Area as an addition to Surface Flow shall be based upon (a) measurements of Make-up Water at the

delivery outlet of such water upstream from Whittier Narrows, (b) measurements of water consisting in whole or in part of Make-up Water passing the applicable stations listed in Part III.A.1. of this Exhibit B, and (c) such deductions from the measurements of Make-up Water at said stations so listed as are necessary to take into account (i) the amount of any water other than Make-up Water included in the measurements at said stations so listed, (ii) any losses due to evaporation or transpiration of Make-up Water after such measurement and prior to its receipt in Lower Area, and (iii) any percolation of Make-up Water after such measurement and prior to the time it reaches the "narrowest section" in Whittier Narrows.

As changing conditions may require, the Watermaster shall change the points of measurement of Make-up Water in order to obtain those measurements necessary to determine the amount of Make-up Water delivered to Lower Area Parties by means of increasing Surface Flow.

2. By Payment for Reclaimed Water (paragraph 5(i)(2) of the Judgment). The Watermaster shall determine (a) the quantity of Reclaimed Water reclaimed at the Whittier Narrows Water Reclamation Plant as it existed October 1, 1963, and which when so reclaimed shall have been passed through Whittier Narrows, and (b) the quantity, if any, of Reclaimed Water reclaimed at any future additions to said plant after September 30, 1963, and which when so reclaimed shall have been passed through Whittier Narrows. Such quantities shall be ascertained from the records of Los Angeles County Flood Control District.

Upon being advised that a payment has been made by Upper District or Defendants to Central Municipal pursuant to the provisions of paragraph 5(i)(2) of the Judgment, the Watermaster shall credit Upper Area Parties with the delivery of Make-up Water computed according to said paragraph of the

Judgment.

3. By Deliveries to a Lower Area Party (paragraph 5(i)(3) of the Judgment). Any Make-up Water delivered directly to a Lower Area Party with the consent of Plaintiffs shall be metered and the meter records reduced to acre-feet per year. Upon being advised that a Lower Area Party has received a direct delivery of Make-up Water pursuant to the provisions of paragraph 5(i)(3) of the Judgment, the Watermaster shall credit Upper Area Parties with delivery of such Make-up Water in the Water Year in which it was so delivered.

D. Long-term Accounting

The Watermaster shall maintain a record of the annual rainfall in the San Gabriel Valley, including a running average of such rainfall, so that the Watermaster will be informed when a Long-term Accounting shall be carried out as specified in paragraph 5(h) of the Judgment, and shall thereafter perform the necessary calculations for accomplishment of the adjustment, if any, between the aggregate amount of water received compared to the aggregate entitlement for the period.

E. Water Usable for Ground Water Replenishment

With respect to any delivery of Make-up Water the Watermaster shall determine the suitability of such water for ground water replenishment. The Watermaster shall gather, insofar as readily available from public and private agencies, data relating to the quality of all categories of water, Surface Flow, Subsurface Flow, Export to Lower Area, Reclaimed Water, Lower Area Replenishment Water and Make-up Water.

REIMBURSEMENT CONTRACT

LONG BEACH v. SAN GABRIEL

)d.

REIMBURSEMENT CONTRACT

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REIMBURSEMENT CONTRACT

THIS CONTRACT is made by and between UPPER SAN GABRIEL VALLEY MUNICIPAL WATER DISTRICT, herein called "Upper District", and the cities of ALHAMBRA, ARCADIA, AZUSA, COVINA, EL MONTE, GLENDORA, MONTEREY PARK, MONROVIA, SOUTH PASADENA, and WHITTIER; BALDWIN PARK COUNTY WATER DISTRICT, and SAN GABRIEL COUNTY WATER DISTRICT; AZUSA AGRICULTURAL WATER COMPANY, AZUSA VALLEY WATER COMPANY, CALIFORNIA DOMESTIC WATER COMPANY, CALIFORNIA WATER & TELEPHONE COMPANY, COLUMBIA LAND AND WATER COMPANY, COVINA IRRIGATING COMPANY, CROSS WATER COMPANY, DUARTE WATER COMPANY, EAST PASADENA WATER COMPANY, LTD., GLENDORA IRRIGATING COMPANY, SAN DIMAS WATER COMPANY, SAN GABRIEL VALLEY WATER COMPANY, SOUTHERN CALIFORNIA WATER COMPANY, SUBURBAN WATER SYSTEMS, SUNNYSLOPE WATER COMPANY, and VALLECITO WATER COMPANY, corporations, herein collectively called "Pumpers."

ed.

RECITALS

1. The Action. In the matter of Board of Water Commissioners of the City of Long Beach, et al. v. San Gabriel Valley Water Company, et al., (L. A. Superior Court No. 722,647) the water rights of substantially all major water producers in the main San Gabriel Valley are sought to be restricted.

2. Judgment. The parties named above, except City

of Whittier, are concurrently executing a Stipulation that a Judgment substantially in the form annexed hereto shall be rendered and it is anticipated that such Judgment will be rendered in the action.

3. Public Interest in Settlement. It is in the best interests of the Pumpers and in the best interests of the water users and taxpayers within the corporate boundaries of those Pumpers which are public agencies, of the consumers of those Pumpers which are utilities or mutual water companies, and of all residents and taxpayers of Upper District, that said action be settled and disposed of in accordance with the terms of said judgment in order to preserve the water supplies within Upper Area.

DEFINITIONS

1. "Contract Costs" -- All costs hereafter paid by Upper District:

ed.

(a) In providing Make-up Water under the terms of the judgment. In computing such cost of providing Make-up Water, any cost which Upper District shall pay which it would have paid even though it had not provided Make-up Water shall be excluded; and particularly but not exclusively, no amount which shall be paid to The Metropolitan Water District of Southern California as a condition to any past or future annexation shall be

deemed a cost of providing Make-up Water. Such costs may include interest paid by Upper District upon money borrowed for advancements made by it or interest which would have been received by the District, but which it lost by reason of making such advancements.

(b) In complying with the terms of said judgment.

(c) In keeping the records, making the determinations and collecting the moneys required by the later provisions of this contract.

2. "Assessable Pumpage" -- The amount of ground water produced in the applicable calendar year by or on behalf of any Pumper by pumping or extraction thereof from the Upper Area, including ground water produced under rights hereafter acquired from any source.

ed.

3. Common Terms With Judgment -- All terms specially defined in said judgment are used herein in the sense in which they are therein defined, and said special definitions are incorporated herein by this reference.

OPERATIVE PROVISIONS

1. Consideration for Execution. The great majority of the defendants in the action are situated in whole or in part within Upper District and pump water therein. Certain defendants, including the Cities of Alhambra, Azusa and

Monterey Park, as well as the City of Whittier which is not a defendant, lie outside Upper District. Execution of this agreement by all parties to it is essential to induce each party hereto to execute this agreement, and likewise, execution of the Stipulation for Judgment by all defendants in the action is necessary to induce each party hereto to execute this contract. Each party executes this contract in consideration of its execution by the other parties, and in consideration of the execution of the Stipulation by the parties thereto. Moreover, by this contract each party other than City of Whittier waives its right to cross-complain in the action so as to bring City of Whittier into the action as a party.

2. Intervention by Upper District. In consideration of the execution of this contract by Pumpers and to contribute to the physical solution of providing adequate water for its inhabitants, Upper District has intervened as a defendant in the action and agrees to execute the stipulation for said judgment.

3. Administration. Upper District shall administer the provisions of Paragraphs 6 through 9, below, as to all Pumpers, including additional parties hereto mentioned in Paragraph 16.

4. Covenant to Reimburse. Each Pumper hereby agrees to pay to Upper District such Pumper's share of Contract

Costs allocated and determined as provided below.

5. Allocation of Costs Among Pumpers. Pumpers agree among themselves, each for the benefit of all other Pumpers, to share and participate in the payment of any sums due Upper District hereunder in such proportion as the Assessable Pumpage of each Pumper bears to the total Assessable Pumpage of all Pumpers for the applicable period covered by any assessment as hereinafter provided, subject to the provisions of Paragraph 9 below.

6. Reports by Pumpers. Pumpers shall file under penalty of perjury the reports hereinafter specified in the form provided by Upper District, as follows:

(a) Time and Procedure for Filing. Each year, on or before March 1, each Pumper shall file with Upper District a written report of its extractions of water from Upper Area for the preceding calendar year containing the information set forth in subparagraph (b) of this paragraph.

(b) Contents of the Report. Such annual reports to Upper District shall set forth:

(1) The name and address of the Pumper; and

(2) The number of acre feet of water which was pumped or extracted from Upper Area by or on behalf of the Pumper during

the calendar year covered.

(c) Determination in Lieu of Report. In the event any Pumper fails to so file such report, Upper District may make a determination of the Assessable Pumpage of such Pumper, which determination shall be final and binding.

7. Notice of Assessment. On or before June 1 of each year, Upper District shall serve a Notice of Assessment on each Pumper covering the preceding calendar year which will contain a statement of:

(a) The amount of Assessable Pumpage by each Pumper;

(b) A detailed statement of Contract Costs during the preceding calendar year, if any; and

(c) A statement of the amount of such Contract Costs which are assessable to and payable by the Pumper to whom such notice is sent.

ed.

8. Payment--Delinquency and Default. All assessments herein provided for shall be due and payable on the following July 31. In the event of nonpayment of any assessment, Upper District may bring an action and shall have the right to recover such assessment, together with interest thereon at the rate of 7% per annum from the date of delinquency and costs of suit, including any reasonable attorneys' fees incurred.

If, after due diligence, Upper District is unable to collect a Pumper's allocated cost, such uncollectible amount (including interest, costs and attorneys' fees) shall be prorated among and paid by the other Pumpers in the same proportions as they paid assessments for the year or years in question. Said proration shall be billed and payable with the next succeeding assessment.

9. Redetermination of Assessable Pumpage. Any Pumper may at any time within 90 days after receipt of any Notice of Assessment request a redetermination of the Assessable Pumpage of such Pumper or of any other Pumper or Pumpers reflected in such notice. Such request shall be addressed in writing to Upper District and shall set forth the basis of the requesting Pumper's belief that such data are incorrect. Upon the receipt of any request, the following procedures shall be undertaken by Upper District:

ed.

(a) Notice of Request for Redetermination. Upper District shall forthwith notify in writing any Pumper whose Assessable Pumpage has been questioned, of the fact of such request and the name of the requesting Pumper. Notice shall further be sent to all Pumpers that procedures will be undertaken pursuant to this paragraph, and shall state briefly the issues to be determined.

(b) Availability of Records. Subsequent to such notice, the records of the Pumper whose Assessable Pumpage is subject to a request for redetermination shall be made available at reasonable hours and upon reasonable demand to Upper District, insofar as such records are relevant to a determination of the Assessable Pumpage of the Pumper during the period involved.

(c) Investigation and Notice of Hearing. Upper District shall conduct an investigation and shall by written decision served on all Pumpers redetermine or affirm such Assessable Pumpage. Upper District may at its option set a date for hearing. In such event, at least ten days' notice in writing of said hearing date shall be given to all Pumpers.

ed.

(d) Conduct of Hearing and Decision. If hearing be held, Upper District shall not be bound therein by strict rules of evidence, but may rely on any evidence which it deems of probative value. Any Pumper may present evidence and arguments thereat. The written decision of Upper District, with or without such hearing, shall be served on all Pumpers and shall be conclusive for purposes of this contract, unless said issue is submitted

to a court of competent jurisdiction within 90 days from notice of such decision.

(e) Reallocation of Contract Costs. If Assessable Pumpage is modified by any such decision, Contract Costs shall be reallocated in accordance therewith. Said reallocation shall be billed and payable with the next succeeding assessment.

10. Water Rights Unaffected. This contract relates solely to the equitable allocation of Contract Costs and does not involve or constitute an admission or agreement as to the water rights of any Pumper. Execution of this contract shall not prevent any party hereto from bringing or maintaining any action or proceeding to determine rights to pump, extract or store water, or to limit or curtail any pumping, extraction or storage of water in or from Upper Area or elsewhere, except as limited by Paragraphs 1 and 16 of the Operative Provisions hereof.

ed.

11. Changed Conditions. It is recognized that conditions in Upper Area may hereafter change to such an extent that it may become equitable to modify either the total obligation of Pumpers to Upper District hereunder or the allocation of Contract Costs. While this contract is entered into to assure Upper District of reimbursement of an amount up to its entire Contract Costs, it is not intended hereby, and this contract shall not be deemed, to prevent Upper District

from modifying and reducing such obligation or from applying other relief which may reduce the burden on Pumpers. Without limitation upon the power of Upper District to otherwise reduce the aggregate amount payable under this contract, the following specific instances of changed conditions are contemplated:

(a) Allocation of Portion of Burden to Taxes. It may at some future date appear equitable and fair to allocate all or a portion of Contract Costs to ad valorem taxes or other revenues of Upper District. In such event, Upper District may, in the discretion of its Board of Directors, allocate all or a portion of Contract Costs to such revenue sources and the remainder, if any, thereof, shall be payable under the terms of this contract.

(b) Imposition of Pump Tax. If Upper District should acquire and exercise the right to levy a tax upon the pumping or extraction of ground water, then the aggregate of such tax shall be credited proportionally amongst Pumpers with respect to Assessable Pumpage within Upper District.

(c) Adjudication of Rights. If all or substantially all of the water rights within Upper Area shall be adjudicated (including the rights of all Pumpers), and its natural and safe yield

determined, then this contract shall be deemed modified to the extent that Assessable Pumpage shall include only that amount of water produced over and above the safe yield portion of adjudicated rights owned by any Pumper; provided that this subparagraph (c) shall not apply to any year in which the aggregate of all Assessable Pumpage as so modified is less than 25,000 acre feet.

12. Effective Date. This contract shall be effective ten (10) days after notice in writing of execution thereof by all parties, which notice shall be given to all Pumpers by Upper District, but shall cease and terminate on July 1, 1966, unless by said date (a) this contract shall have been validated as provided below, and (b) the Judgment shall have been rendered.

13. Validation. Within four months after this contract becomes effective, a proceeding or proceedings shall be instituted by Upper District in a court of competent jurisdiction by an appropriate action or actions for determination of the validity of this contract.

14. Term. The term of this contract shall commence upon its effective date and continue so long as the Judgment, as entered or as modified, shall remain in effect, subject, however, to the provisions of Paragraph 12 above.

15. Notices. Any notice to be served upon any party hereunder may be served either personally or by mail. If served by mail, such notice shall be mailed in the County of Los Angeles, State of California, by certified mail, postage prepaid, return receipt requested, or by registered mail, and shall be addressed to the party to be served at its address as set forth below, or (in the case of Upper District) at such other address as it may have last specified in writing to the Pumper or Pumpers involved for the service of notices hereunder, or (in the case of a Pumper) at such other address as it may have last specified in writing to Upper District for the service of notices hereunder. Any notice so served by mail shall be deemed to have been served upon the first business day (excluding Saturdays, Sundays and holidays) after such mailing.

ed.

16. Additional Parties. In addition to Pumpers and their successors and assigns referred to in Paragraph 17 below, any other person or entity who or which shall pump or extract water in or from Upper Area (herein referred to as an "additional party"), may become a party to this contract, provided (a) Upper District shall give its written consent thereto, and (b) no Pumper or additional party shall serve upon Upper District its written objection thereto. If Upper District shall give its written consent to execution of this contract by an applying additional party, it shall

then give written notice of such application and consent by Upper District to each Pumper and each additional party, and if within thirty (30) days after such notice no Pumper or additional party shall have served upon Upper District its written objection to execution of this contract by the applying additional party, such additional party's application shall be deemed to have been accepted and it may become a party to this contract by delivery to Upper District of a duly executed instrument in writing stating that such person or entity joins in and becomes a party to this contract.

Any additional party so joining shall become bound by all obligations of this contract, becoming due or which should be performed within the terms of this contract on and after the ensuing January 1. Such obligations include the duty to make the report of extractions during the preceding calendar year (i.e., the year in which the contract

ed.

is executed) required by Paragraph 6, and to make the payment based upon such extractions as required by Paragraph 5, provided, however, that such additional party shall have no liability under Paragraph 8 with respect to any nonpayments of an assessment based upon extractions by a Pumper or other additional party prior to the year in which such additional party joins in this contract.

As to each Pumper who executes this contract after it becomes effective, Upper District agrees that for a

period of 90 days after giving its said written consent, it will bring no action against such additional party to limit or define its rights to pump water in or from Upper Area. Further, if more than one such Pumper shall become a party to this agreement at the same time as any other pumper, each will execute and shall be deemed to have executed this contract and to have joined therein in consideration of the joinder in this contract by the other or others concurrently joining in this contract.

Any such additional party shall be deemed a Pumper for all purposes of this agreement.

17. Successors and Assigns. This contract shall inure to the benefit of and bind the successors in ownership of the water rights of the parties. If any Pumper shall sell or transfer or agree to sell or transfer its water rights in Upper Area or any part of such water rights, such Pumper shall require as a condition of any such sale, transfer or agreement that the purchaser or transferee, if not already a party to this contract, shall execute this contract and become a party thereto. Upon a full transfer of such rights by a Pumper and assumption by the assignee as above provided, the assigning Pumper shall be discharged of obligation hereunder. If such Pumper fails to obtain such assumption (except in cases of a transfer under order of court or by operation of law) the assigning Pumper shall

remain bound by the contract and production of water by said assignee by the exercise of the right assigned shall be treated as production by such Pumper.

18. Execution in Counterparts. This contract may be executed in counterparts (each counterpart being an exact copy or duplicate of the original) and all counterparts collectively shall be considered as constituting one complete contract.

IN WITNESS WHEREOF this contract is executed by the undersigned by its duly authorized officer.

Dated: _____.

_____

(SEAL) By _____

By _____

APPENDIX H

MAIN SAN GABRIEL BASIN JUDGMENT

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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	Case No.: 924128 **AMENDED JUDGMENT** (And Exhibits Thereto)

HONORABLE MAUREEN DUFFY-LEWIS

Assigned Judge Presiding

DEPARTMENT 38

June 21, 2012

(This version includes prior Amendments and updated Exhibits through June 21, 2012.)

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"M" – Watermaster Members, Officers, and Staff, Including Calendar Year 2012 (New)

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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, Defendant	Case No.: 924128 **AMENDED JUDGMENT** Hearing: June 21, 2012 Department 38, 9:30 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 MAUREEN DUFFY-LEWIS**, ASSIGNED JUDGE PRESIDING, on June 21, 2012; Frederic A. Fudacz 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 of 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; amended again on July 22, 1988 by amending Section 37(e) thereof and Ordering an Amended Judgment herein; again amended on January 29, 1991, by amending Sections 10(j), 40, and by adding Sections 40(a), 40(b), 40(c), 40(d), 40(e) and 40(f); again amended on April 2, 1991, by

amending Sections 10(ff), 10(jj), and 34(h); again amended on February 24, 1992, by amending Section 40(b); again amending Appendices in 2000; and again on June 21, 2012 by amending Sections 10(ff), 26, 29(d), 34(b), 34(c), 34(g), 34(h), 34(j), 36, 42, 44, 45, 46(a), 47, 50, 54, Exhibit H Sections 2, 3(d), 4; adding Sections 34(p), 34(q), 34(r); and deleting Section 53 entirely.

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 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. (Amended 1/29/91)

(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. (Prior to June 21, 2012)

(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(n).

(ff) Supplemental Water – (Prior Judgment Section 4(ee)) Nontributary water imported through a Responsible Agency and reclaimed water or water obtained from other available sources when water is not available in a timely fashion from a Responsible Agency. (Amended 6/21/12)

(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.

(jj) Reclaimed Water – Water which, as a result of treatment of waste, is suitable for a direct beneficial use or a controlled use that would not otherwise occur. (Amended 4/2/91)

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 2012.

Exhibit "M" – (New) Watermaster Members, Officers and Staff, Including

Calendar Year 2012.

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 an 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 Administration 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 and except as provided in section 34(r) herein, 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 revisions 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. Notwithstanding the foregoing and without in any way changing or limiting the Transporting Parties' entitlement to transport water as set forth herein, any party may enter into an agreement with Watermaster to store Supplemental Water and export said stored Supplemental Water under specific terms and conditions approved by Watermaster. Such storage and export shall be subject to (1) a determination by Watermaster that no material injury to the Basin or parties will result therefrom; (2) execution of an agreement with Watermaster setting forth the terms and conditions upon which water may be stored in or exported from the Basin; and (3) compliance

with Watermaster Rules and Regulations respecting Basin storage and export. (Amended 6/21/12)

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 as 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. Notwithstanding section 27 herein, Watermaster nominations may be promptly certified by the Court upon 10 calendar days' notice thereof, plus the time prescribed by statute for service by mail, e-mail or other electronic means. (Amended 6/21/12)

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, except 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 (n) hereof.

32. Compensation. (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. Organization. (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) Minutes. 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, own, lease, acquire and hold, as trustee for the benefit of the Parties, all necessary personal property and equipment, and such limited real property such as office quarters, monitoring wells, the key well, and other facilities necessary to fulfill Watermaster's basin management responsibilities under this Judgment. (Amended 6/21/12)

(c) Employment of Experts and Agents. To employ such administrative personnel, engineering, geologic, accounting, legal, public policy education or other

specialized services (but not including registered lobbyists) 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. (Amended 6/21/12)

(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, or in accordance with the provisions of Sections 45 and 46 hereto. Upon approval by the Watermaster at its regularly scheduled public meeting, when necessary to secure Supplemental Water, Watermaster may borrow funds in excess of the annual amount of Assessments levied but uncollected. Prior to borrowing funds, Watermaster shall meet and confer with Responsible Agencies and seek their input. Watermaster shall adopt Rules and Regulations specifying: (i) how debt repayment will be allocated among the Parties; (ii) that Watermaster obtain prior approval of the Court before incurring debt that exceeds the total of one year's levied Assessments; and (iii) such other matters as Watermaster deems appropriate for Rules and Regulations respecting the purchase of Supplemental Water using debt. (Amended 6/21/12)

(h) Purchase of and Recharge with Supplemental Water. To purchase Supplemental Water and to introduce the same into the Basin, including Reclaimed Water, for replenishment, Replacement Water, and cyclic storage purposes in the Basin subject to the affirmative vote of six (6) members of Watermaster, provided, the

California Department of Public Health and the Los Angeles Regional Water Quality Control Board have approved such Reclaimed Water for said uses, Watermaster has given prior notice to all parties of its intention to use said Reclaimed Water for such purposes, held noticed hearings thereon, and approves such uses. Reclaimed Water used by Watermaster as Supplemental Water for said purposes shall not be a violation of Sections 3(b) or 3(c) of Exhibit "H" hereto. (Amended 4/2/91 and 6/21/12)

(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. (Amended 6/21/12)

(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.

(p) Authority to Sue. To prosecute litigation, engage in dispute resolution and file amicus curiae briefs in the furtherance of Watermaster's responsibilities under this Judgment. (Amended 6/21/12)

(q) Public Policy Education. To perform public policy education activities in furtherance of Watermaster's responsibilities under this Judgment. (Amended 6/21/12)

(r) Export Agreements. Watermaster may fix terms and conditions under which parties and non-parties may store Supplemental Water in and export said stored Supplemental Water from the Basin. (Amended 6/21/12)

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. The tables set forth in Exhibits C, D, E, K, L and M are listed for reference purposes only. Future updates to those exhibits shall be set forth in the Watermaster annual report. In lieu of mailing the annual report, Watermaster in its discretion may post the report on its website, mail or e-mail a notice of availability to the parties, and/or provide a hard copy of the report upon request. If a party does not have a valid e-mail address or internet access, that party shall identify an alternative method of service to be approved by Watermaster in its sole discretion. (Amended 6/21/12)

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. 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 provisions of this Judgment. Both the quantity and quality of said water resource are thereby preserved and its beneficial utilization maximized.

(Amended 1/29/91)

(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 Section 37 and 40 of the Amended Judgment herein. (Amended 1/29/91)

(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, whether existing at the time of this Judgment or subsequent hereto. (Amended 2/24/92)

(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 the 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. (Amended 1/29/91)

(d) For the 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. (Amended 1/29/91)

(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. (Amended 1/29/91)

(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. (Amended 1/29/91)

41. General Pattern of Contemplated Operations. (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, Watermaster shall recharge Replacement Water in accordance with the Watermaster Operating Criteria and, insofar as practicable, to maintain the water level at the Key Well above Elevation two hundred (200). (Amended 6/21/12)

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 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)

(a) Statement of Authority and Need for Flexibility: Watermaster shall have the power to levy and collect Assessments from the parties (other than non-consumptive users, or Production under Special Category Rights or Cyclic Storage Agreements) based upon Production during the preceding Fiscal Year. Assessments on Minimal Producers will apply only to (1) existing parties who become Minimal Producers in the future; and (2) Minimal Producers who intervene after June 21, 2012. Because Supplemental Water may not be available for extended periods of time, Watermaster requires flexibility with respect to the procedures for purchasing Supplemental Water supplies, as and when those supplies become available. This Judgment is a Physical Solution entered pursuant to California Constitution Article X, Section 2, which recognizes that the timing and amount of Watermaster Assessments for Replacement Water costs must be determined in light of this uncertainty. This Judgment therefore grants Watermaster the flexibility and discretion necessary to purchase and pre-purchase Supplemental Water and levy assessments in an appropriate and equitable manner and amount to maximize the opportunities to secure necessary Supplemental Waters in the best interest of the parties and the long-term sustainability of the Basin. In accordance with Rules and Regulations adopted by Watermaster, to further enhance flexibility, Watermaster may borrow money

from any available fund maintained by it for purposes other than Replacement Water purchases, or use accrued funds, to purchase Supplemental Water. (Amended 6/21/12)

(b) Authorized Assessments: Said Assessments may be for one or more of the following purposes:

(1) Watermaster Administration Costs. (Former Section 45(a)) 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. (Amended 6/21/12)

(2) Replacement Water Costs. (Former Section 45(b)) 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, and other relevant factors, including the projected cost and availability of Supplemental Water supplies. Subject to Rules and Regulations adopted by Watermaster, Watermaster Replacement Water Assessment rates may be in an amount calculated to allow Watermaster to purchase more than one acre-foot of Supplemental Water for each acre-foot of excess Production to which such Assessment applies, when such purchases are necessary to secure Supplemental Water supplies for the benefit of the Basin and parties. (Amended 6/21/12)

(3) Make-Up Obligation. (Former Section 45(c)) 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.

(4) In-Lieu Water Cost. (Former Section 45(d)) 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.

(5) Basin Water Quality Improvement. (Former Section 45(e)) 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 Section 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.

(6) Export and Storage. Watermaster shall levy an assessment to account for costs, burdens or losses incurred in connection with such exported or stored

water, including a fee for storage administration. Such storage or export shall be subject to (1) a determination by Watermaster that no material injury to the Basin or parties will result therefrom; (2) execution of an agreement with Watermaster setting forth the terms and conditions upon which water may be stored in or exported from the Basin; and (3) compliance with Watermaster Rules and Regulations respecting Basin storage and export. (Amended 6/21/12)

(7) Water Resource Development Assessment. Watermaster may levy an Assessment on all Pumping, as determined through Rules and Regulations to be adopted by the Watermaster, to support the purchase, financing, and/or development of new or additional Supplemental Water sources, in cooperation with one or more Responsible Agencies as appropriate. (Amended 6/21/12)

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, and at such other time[s] of the year as determined by Watermaster, Watermaster shall levy applicable Administration Assessments, Replacement Water Assessments, Make-Up Water Assessments, In-Lieu Water Assessments, and Water Resource Development Assessments, if any. Watermaster shall give written notice of all applicable Assessments to each party on or before August 15, of each year, and at such other time[s] as determined by Watermaster. To provide flexibility and maximize the opportunity to secure Replacement Water supplies when available, in accordance with criteria set forth in the Watermaster Rules and Regulations, Watermaster may levy supplemental assessments as necessary to create sufficient funds to purchase and pre-purchase such Replacement Water supplies for the benefit of the Basin and parties. (Amended 6/21/12)

(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 in a timely fashion when needed, Watermaster may (1) collect funds at an appropriate level and hold them in trust, together with interest accrued thereon, for purchase of such water when available; (2) purchase water from the remaining Responsible Agencies which are the most beneficial and appropriate sources observing all legal and contractual constraints on the availability of such water; or (3) purchase Supplemental Water from any other available source. Watermaster shall consult with the Responsible Agencies involved and in good faith shall determine the appropriate source of Supplemental Water under such circumstances. Should Watermaster arrange to purchase Supplemental Water from a source not involving a Responsible Agency, Watermaster shall provide the Responsible Agencies an opportunity to provide said Supplemental Water or comparable water supplies on comparable terms. (Amended 6/21/12)

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 who initiated production on or before June 21, 2012, are exempted from the operation of this Physical Solution, so long as such party's annual Production does not exceed five (5) acre-feet. 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. As of June 21, 2012, there shall be no new Minimal Producers, and any new Producer shall be subject to all provisions of the Judgment. (Amended 6/21/12)

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. Deleted Section (Amended 6/21/12)

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. In lieu of mailing any item required to be served under this Judgment, Watermaster may serve such item by electronic service, which may include posting the document to Watermaster's website, sending an e-mail of the document to that party, or sending a notice of availability to that party indicating the document's availability for viewing on the Watermaster website. If a party does not have a valid e-mail address or internet access, that party shall identify an alternative method of service to be approved by Watermaster in its sole discretion.

Any party desiring to be relieved of receiving notices of Watermaster activity may file a waiver of notice on a form to be provided by Watermaster. Thereafter such party shall be

removed from the active party service list and not receive any notices required under this Judgment. The parties have a duty to keep Watermaster informed of their current e-mail and mailing addresses. If mail or e-mail is returned undeliverable to Watermaster for an incorrect address, Watermaster in its sole discretion may remove that party from the active party service list. (Amended 6/21/12)

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: June 21, 2012

s/ Maureen Duffy-Lewis
Maureen Duffy-Lewis, Judge
Specially Assigned

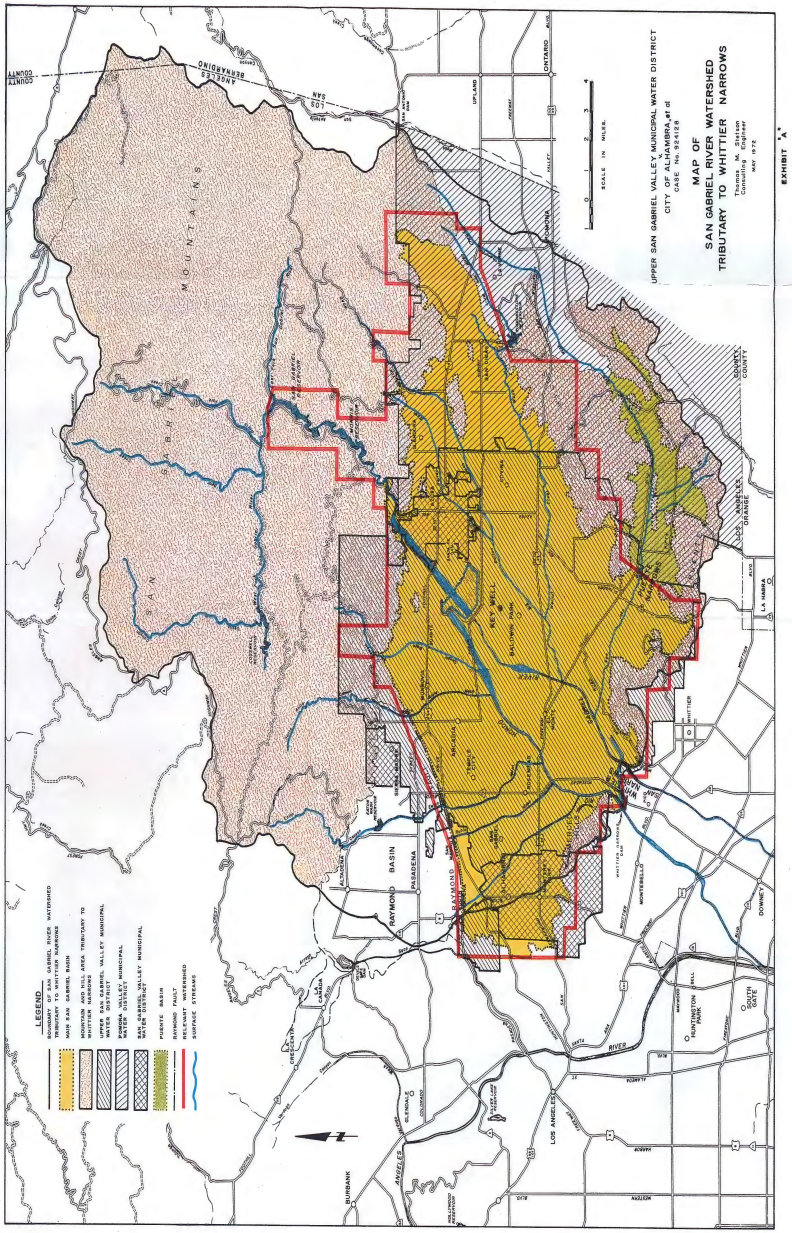


EXHIBIT "B"

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;

EXHIBIT "C"

TABLE SHOWING BASE ANNUAL DIVERSION RIGHTS OF CERTAIN DIVERTERS AS OF JUNE 21, 2012

DIVERTER	BASE ANNUAL DIVERSION RIGHT (ACRE-FEET)
Covell, Ralph	2.12
(Successor to Rittenhouse, Catherine and Rittenhouse, James)[1]	
(Transferred to Aqua Capital Management LP)[2]	-2.12
	0.00
Maddock, A. G.	3.40
(Transferred to San Gabriel Valley Water Company)[2]	-3.40
	0.00
Rittenhouse, Catherine	**0.00**
(Transferred to Covell, Ralph)[1]	
Rittenhouse, James	**0.00**
(Transferred to Covell, Ralph)[1]	
Ruebhausen, Arline	18.34
(Held in common with Ruebhausen, Victor)	
(Transferred to City of Glendora)[2]	-18.34
	0.00
Ruebhausen, Victor	--
(See Ruebhausen, Arline)	
TOTAL	**0.00**

1/ Permanent transfer of rights as recorded at entry of Judgment.
2/ Permanent transfer of rights after entry of Judgment.
3/ Intervenor after Judgment.

EXHIBIT "D"

TABLE SHOWING RIGHTS AND PUMPER'S SHARE OF EACH PUMPER AS OF JUNE 21, 2012

PUMPER	PRESCRIPTIVE PUMPING ACRE-FEET	PUMPER'S SHARE %
6W Farms, Inc.	1,217.40	0.61599
(Formerly Woodland Farms, Inc.)		
(Transferred to:		
Miller Brewing Company	-919.50	-0.46526
Richard J. Woodland)[2]	-297.90	-0.15073
	0.00	**0.00000**
Adams Ranch Mutual Water Company	**100.00**	**0.05060**
A & E Plastik Pak Co., Inc.	**0.00**	**0.00000**
(Transferred to Industry Properties, Ltd.)[1]		
Alhambra, City of	**8,812.05**	**4.45876**
Amarillo Mutual Water Company	**709.00**	**0.35874**
American Sheds, Inc.[3]		
(Successor to Southwestern Portland Cement Company)[2]	742.00	0.37544
(Transferred to USA Waste of California, Inc.)[2]	-742.00	-0.37544
	0.00	**0.00000**
Anchor Plating Co., Inc.[3]		
(Successor to Bodger & Sons, DBA Bodger Seeds Ltd.)[2]	10.00	0.00506
(Transferred to Crown City Plating Co.)[2]	-10.00	-0.00506
	0.00	**0.00000**
Anderson Family Marital Trust[3]		
(Successor to Anderson, Ray L. and Helen T.)[2]	50.16	0.02538
(Transferred to:		
Brondino, Jeanne	-25.08	-0.01269
Heinrich, Carolyn)[2]	-25.08	-0.01269
	0.00	**0.00000**

PUMPER	PRESCRIPTIVE PUMPING ACRE-FEET	PUMPER'S SHARE %
Anderson, Ray[3]		
(Successor to Covina Valley Unified School District)[2]	50.16	0.02538
(Transferred to Anderson, Ray L. and Helen T.)[2]	-50.16	-0.02538
	0.00	**0.00000**
Anderson, Ray L. and Helen T.[3]		
(Successor to Anderson, Ray)[2]	50.16	0.02538
(Transferred to Anderson Family Marital Trust)[2]	-50.16	-0.02538
	0.00	**0.00000**
Andrade, Macario and Consuelo; and Andrade, Robert and Jayne[3]		
(Successor to J. F. Isbell Estate, Inc.)[2]	8.36	0.00423
(Transferred to Susan Andrade)[2]	-8.36	-0.00423
	0.00	**0.00000**
Andrade, Susan[3]		
(Successor to Andrade, Macario and Consuelo; and Andrade, Robert and Jayne)[2]	8.36	0.00423
	8.36	**0.00423**
Arcadia, City of	9,252.00	4.68137
(Successor to First National Finance Corporation)[2]	60.90	0.03081
(Transferred to City of Monrovia)[2]	-951.00	-0.48119
	8,361.90	**4.23099**
Associated Southern Investment Company	16.50	0.00335
(Transferred to Southern California Edison Company)[2]	-16.50	-0.00335
	0.00	**0.00000**
AZ-Two, Inc.[3]	--	--
(See Southdown, Inc.)		
Azusa Associates, LLC[3]		
(Successor to Snyder, Esther)[2]	18.51	0.00937
(Transferred to Aqua Capital Management LP)[2]	-18.51	-0.00937
	0.00	**0.00000**
Azusa-Western Inc.	742.00	0.37544
(Transferred to Southwestern Portland Cement Co.)[2]	-742.00	-0.37544
	0.00	**0.00000**
Bahnsen & Beckman Ind., Inc.	840.50	0.42528
(Transferred to Woodland, Richard)[2]	-840.50	-0.42528
	0.00	**0.00000**

PUMPER	PRESCRIPTIVE PUMPING ACRE-FEET	PUMPER'S SHARE %
Bahnsen, Betty M.	441.90	0.22359
(Transferred to Dawes, Mary Kay)[2]	-441.90	-0.22359
	0.00	**0.00000**
Baldwin Park County Water District	--	--
(See Valley County Water District)		
Bandel Family Trust[3]		
(Successor to Garnier, Camille A, Deceased,	16.70	0.00845
Estate of)[2]	**16.70**	**0.00845**
Banks, Gale C. and Vicki Lynn[3]		
(Successor to Doyle, Mr. and Mrs.; and	50.00	0.02530
Madruga, Mr. and Mrs.)[2]	**50.00**	**0.02530**
Base Line Water Company	430.20	0.21767
(Transferred to Hughes Development Corporation)[2]	-430.20	-0.21767
	0.00	**0.00000**
Beverly Acres Mutual Water Company	--	--
(See Beverly Acres Mutual Water Users Association)		
Beverly Acres Mutual Water Users Association	93.00	0.04706
(Formerly Beverly Acres Mutual Water Company)		
(Transferred to:		
San Gabriel Valley Water Company;	-50.00	-0.02530
Nicholson Trust)[2]	-43.00	-0.02176
	0.00	**0.00000**
Birenbaum, Max	6.00	0.00304
(Held in common with Birenbaum, Sylvia;		
Schneiderman, Alan; Schneiderman, Lydia;		
Wigodsky, Bernard; Wigodsky, Estera)		
(Transferred to City of Whittier)[2]	-6.00	-0.00304
	0.00	**0.00000**
Birenbaum, Sylvia	--	--
(See Birenbaum, Max)		
Blue Diamond Concrete Materials Div., The Flintkote Company	1,399.33	0.70804
(Transferred to Sully-Miller Contracting Co.)[2]	-1,399.33	-0.70804
	0.00	**0.00000**

PUMPER	PRESCRIPTIVE PUMPING ACRE-FEET	PUMPER'S SHARE %
Bodger & Sons DBA Bodger Seeds Ltd.	10.00	0.00506
(Transferred to Anchor Plating Co., Inc.)[2]	-10.00	-0.00506
	0.00	**0.00000**
Botello Water Company	**0.00**	**0.00000**
Brezina, Raymond W. and Susan W. Trust 2001[3]	**0.00**	**0.00000**
Brondino, Jeanne[3]		
(Successor to Anderson Family Marital Trust)[2]	25.08	0.01269
	25.08	**0.01269**
Burbank Development Company	50.85	0.02563
(Transferred to Wright, Darrell A., Wright, Merle M. &	-50.85	-0.02563
Carlson, Jeanne W.)[2]	**0.00**	**0.00000**
Cadway, Inc.[3]		
(Successor to:		
Corcoran, Jack S. and R. L.	100.00	0.05060
Corcoran, Jack S. and R. L.	100.00	0.05060
Corcoran, Jack S. and R. L.	273.50	0.13839
Corcoran, Jack S. and R. L.	30.00	0.01518
Garnier, Janus	203.00	0.10272
Sloan Ranches	129.60	0.06558
Corcoran, Jack S. and R.L.)[2]	243.50	0.12320
(Transferred to:		
California Domestic Water Company	-243.50	-0.12321
California Domestic Water Company	-129.60	-0.06558
California Domestic Water Company)[2]	-63.30	-0.03203
	643.20	**0.32545**
Cal Fia	118.10	0.05976
(Transferred to Suburban Water Systems)[2]	-118.10	-0.05976
	0.00	**0.00000**
California-American Water Company	**7,868.70**	**3.98144**
(San Marino System)		
California Country Club[3]	**0.00**	**0.00000**
(Formerly CCC Management)		

PUMPER	PRESCRIPTIVE PUMPING ACRE-FEET	PUMPER'S SHARE %
California Domestic Water Company	11,024.82	5.57839
(Successor to:		
Cantrill Mutual Water Company[1]	42.50	0.02150
Industry Properties, Ltd.[2]	73.50	0.03719
Modern Accent Corporation[2]	256.86	0.12997
Fisher, Russell[2]	19.00	0.00961
Graveline, George Wayne and Alexis June, Trust[2]	216.60	0.10959
Cadway, Inc.[2]	243.50	0.12321
Cadway, Inc[2]	129.60	0.06558
Cadway, Inc.[2])	63.30	0.03203
	12,069.68	**6.10707**
California Materials Company	**0.00**	**0.00000**
CalMat	--	--
(Formerly Conrock Company)		
(See Vulcan Materials Company)		
Cantrill Mutual Water Company	**0.00**	**0.00000**
(Transferred to California Domestic Water Company)[1]		
Canyon Water Company[3]		
(Successor to McIntyre, William)[2]	1.00	0.00051
	1.00	**0.00051**
Canyon Water & Development Corporation[3]	**0.00**	**0.00000**
CCC Management[3]	--	--
(See California Country Club)		
Cedar Avenue Mutual Water Company	121.10	0.06127
(Transferred to San Gabriel Valley Water Company)[2]	-121.10	-0.06127
	0.00	**0.00000**
CEMEX California Aggregates, Inc.[3]	--	--
(Formerly Southdown)		
Champion Mutual Water Company	**147.68**	**0.07472**
Chevron U.S.A.	**2.00**	**0.00101**
(Formerly Standard Oil of California)		
Chronis, Christine[3]	--	--
(See Polopolus, et al.)		

PUMPER	PRESCRIPTIVE PUMPING ACRE-FEET	PUMPER'S SHARE %
Clayton Manufacturing Company	511.80	0.25896
(Transferred to City of Glendora)[2]	-511.80	-0.25896
	0.00	**0.00000**
Coiner, James W., dba Coiner Nursery[3]	--	--
Collison, E. O.	**0.00**	**0.00000**
Comby, Erma M.	--	--
(See Wilmott, Erma M.)		
Conrock Company	--	--
(See CalMat)		
(Formerly Consolidated Rock Products Co.)		
Consolidated Rock Products Co.	--	--
(See Conrock Company)		
Corcoran, Jack S.	747.00	0.37797
(Held in common with Corcoran, R. L.)		
(Transferred to:		
Cadway, Inc.	-100.00	-0.05060
Cadway, Inc.	-100.00	-0.05060
Cadway, Inc.	-273.50	-0.13839
Cadway, Inc.	-30.00	-0.01518
Cadway, Inc.)[2]	-243.50	-0.12320
	0.00	**0.00000**
Corcoran, R. L.	--	--
(See Corcoran, Jack S.)		
County Sanitation District No. 18 of Los Angeles County	**4.50**	**0.00228**

PUMPER	PRESCRIPTIVE PUMPING ACRE-FEET	PUMPER'S SHARE %
Covell, et al.	111.05	0.05619
(Successor to Rittenhouse, Catherine and Rittenhouse, James)[1]		
(Held in common with Tate, Phillip G. and Sieglinde A.; Goedert, Lillian E.; Goedert, Marion W.; Lakin, Kendall R.; Lakin, Kelly R.; Snyder, Harry; Snyder, Esther)		
(Transferred to:		
Lakin, Kelly R.	-9.26	-0.00468
Goedert, Lillian E.	-9.26	-0.00468
Tate, Phillip G. and Sieglinde A.	-57.83	-0.02926
Snyder, Esther	-18.51	-0.00937
Aqua Capital Management LP)[2]	-16.19	-0.00820
	0.00	**0.00000**
Covina, City of	2,507.89	1.26895
(Transferred to:		
Covina Irrigating Company	-1,734.00	-0.87737
Covina Irrigating Company)[2]	-300.00	-0.15179
	473.89	**0.23979**
Covina-Valley Unified School District	50.16	0.02538
(Transferred to Anderson, Ray)[2]	-50.16	-0.02538
	0.00	**0.00000**
Crevolin, A. J.	**2.25**	**0.00114**
Crocker National Bank, Executor of the Estate of A. V. Handorf	**0.00**	**0.00000**
(Transferred to Modern Accent Corp.)[1]		
Cross Water Company	1,103.00	0.05581
(Transferred to Industry Waterworks System, City of)[2]	-1,103.00	-0.05581
	0.00	**0.00000**
Crown City Plating Company	190.00	0.09614
(Successor to Anchor Plating Co., Inc.)[2]	10.00	0.00506
(Transferred to Valencia Heights Water Company)[2]	-200.00	-0.10120
	0.00	**0.00000**
Davidson Optronics, Inc.	22.00	0.01113
(Transferred to Covina Irrigating Company)[2]	-22.00	-0.01113
	0.00	**0.00000**

PUMPER	PRESCRIPTIVE PUMPING ACRE-FEET	PUMPER'S SHARE %
Dawes, Mary Kay[3]	**441.90**	**0.22359**
(Successor to Bahnsen, Betty M.)[2]		
Del Rio Mutual Water Company	**199.00**	**0.10069**
Denton, Kathryn W., Trustee for San Jose Ranch Company	185.50	0.09386
(Transferred to White, June G., Trustee of the June G. White share of the Garnier Trust)[2]	-185.50	-0.09386
	0.00	**0.00000**
Doyle, Mr. and Mrs.; and Madruga, Mr. and Mrs.[3]		
(Successor to Sawpit Farms, Limited)[2]	50.00	0.02530
(Transferred to Banks, Gale C. and Vicki Lynn)[2]	-50.00	-0.02530
	0.00	**0.00000**
Driftwood Dairy	**163.80**	**0.08288**
Duhalde, L.	**0.00**	**0.00000**
(Transferred to El Monte Union High School District)[1]		
Dunning, George		
(Held in common with Dunning, Vera H.)		
(Successor to Vera H. Dunning)[2]	324.00	0.16394
(Transferred to Dunning Trust, George A. V.)[2]	-324.00	-0.16394
	0.00	**0.00000**
Dunning Trust, George A. V.[3]		
(Successor to Dunning, George)[2]	324.00	0.16394
(Transferred to Loyola Marymount University)[2]	-324.00	-0.16394
	0.00	**0.00000**
Dunning, Vera H.	324.00	0.16394
(See Dunning, George)		
(Transferred to Dunning, George)[2]	-324.00	-0.16394
	0.00	**0.00000**
Durfee Property, LLC[3]		
(Successor to Texaco, Inc.)[2]	50.00	0.02530
(Transferred to San Gabriel Valley Water Company)[2]	-50.00	-0.02530
	0.00	**0.00000**
East Pasadena Water Company, Ltd.	**1,407.69**	**0.71227**

PUMPER	PRESCRIPTIVE PUMPING ACRE-FEET	PUMPER'S SHARE %
Eckis, Rollin[3]		
(Successor to Sawpit Farms, Limited)[2]	123.00	0.06224
(Transferred to City of Monrovia)[2]	-123.00	-0.06224
	0.00	**0.00000**
El Encanto Properties	33.40	0.01690
(Transferred to La Puente Valley County Water District)[2]	-33.40	-0.01690
	0.00	**0.00000**
El Monte, City of	2,784.23	1.40878
(Successor to W. E. Hall Company)[2]	0.20	0.00010
	2,784.43	**1.40888**
El Monte Cemetery Association	**18.50**	**0.00936**
El Monte Union High School District	9.80	0.00496
(Successor to Duhalde, L.)[1]	6.40	0.00324
(Transferred to City of Whittier)[2]	-16.20	-0.00820
	0.00	**0.00000**
Everett, Mrs. Alda B.	**0.00**	**0.00000**
(Held in common with Everett, W.B., Executor of the Estate of I. Worth Everett)		
Everett, W.B., Executor of the Estate of I. Worth Everett	--	--
(See Everett, Mrs. Alda B.)		
Faix, Incorporated	**0.00**	**0.00000**
(Successor to Frank F. Pellissier & Sons, Inc.)[1]		
(Transferred to Faix, Ltd.)[1]		
Faix, Ltd.	6,490.00	3.28384
(Successor to Faix, Incorporated)[1]		
(Transferred to Pellissier Irrevocable QTIP Trust, et al, Laurence R., Co-tenancy of)[2]	-6,490.00	-3.28384
	0.00	**0.00000**
First National Finance Corporation	60.90	0.03081
(Transferred to City of Arcadia)[2]	-60.90	-0.03081
	0.00	**0.00000**
Fisher, Russell	19.00	0.00961
(Held in common with Hauch, Edward and Warren, Clyde)		
(Transferred to California Domestic Water Company)[2]	-19.00	-0.00961
	0.00	**0.00000**

PUMPER	PRESCRIPTIVE PUMPING ACRE-FEET	PUMPER'S SHARE %
Fox Family Trust Michael Edward Fox and Crystal Marie Fox, Trustees[3]		
(Successor to Maggiore, Valarie; Fox, Crystal; and Kirklen, Jeffery)[2]	**145.83**	**0.07378**
Frank F. Pellissier & Sons, Inc.	**0.00**	**0.00000**
(Transferred to Faix, Incorporated)[1]		
Fruit Street Water Company	207.00	0.10474
(Transferred to:		
Gifford, Brooks, Jr.,	-101.29	-0.05125
City of La Verne)[2]	-105.71	-0.05349
	0.00	**0.00000**
Garnier, Anton C. and Anita, Family Trust[3]		
(Successor to:		
South Covina Water Service	203.00	0.10271
Garnier, Camille A., Deceased, Estate of	8.30	0.00420
Garnier, Janus)[2]	3.00	0.00152
	214.30	**0.10843**
Garnier, Camille A., Deceased, Estate of[3]		
(Successor to South Covina Water Service)[2]	83.30	0.04215
(Transferred to:		
The Ruth Elaine Ailor Garnier Trust	-41.70	-0.02110
The George Wayne and Alexis June Graveline Trust	-8.30	-0.00420
The Anton C. and Anita Garnier Family Trust	-8.30	-0.00420
Janus Garnier	-8.30	-0.00420
The Bandel Family Trust)[2]	-16.70	-0.00845
	0.00	**0.00000**
Garnier, Janus[3]		
(Successor to :		
Garnier, Camille A. Deceased, Estate of	8.30	0.00420
South Covina Water Service)[2]	203.00	0.10272
(Transferred to:		
George Wayne and Alexis June Graveline Trust	-5.30	-0.00268
The Anton C. and Anita Garnier Family Trust	-3.00	-0.00152
Cadway, Inc.)[2]	-203.00	-0.10272
	0.00	**0.00000**
Garnier, Ruth Elaine Ailor, Trust[3]		
(Successor to Garnier, Camille A. Deceased, Estate of)[2]	41.70	0.02110
	41.70	**0.02110**

PUMPER	PRESCRIPTIVE PUMPING ACRE-FEET	PUMPER'S SHARE %
Gates, James Richard[3]	**0.00**	**0.00000**
Gifford, Brooks, Jr.[3]		
(Successor to:		
Fruit Street Water Company,	101.29	0.05125
Mission Gardens Mutual Water Company)[2]	96.96	0.04906
(Transferred to City of Whittier)[2]	-198.25	-0.10031
	0.00	**0.00000**
Gilkerson, Frank B.	--	--
(Formerly part of Covell, et al.)		
(Transferred interest in Covell, et al. to Jobe, Darr)[2]		
Glendora Unified High School District	99.00	0.05009
(Transferred to City of Glendora)[2]	-99.00	-0.05009
	0.00	**0.00000**
Goedert, Lillian E.		
(See Covell, et al.)		
(Successor to Covell, et al.)[2]	9.26	0.00468
(Transferred to Covina Irrigating Co.)[2]	-7.00	-0.00354
	2.26	**0.00114**
Goedert, Marion W.	--	--
(See Covell, et al.)		
Golden State Water Company,	**5,773.00**	**2.92105**
San Gabriel Valley District		
(Formerly Southern California Water Company)		
Graham, William	--	--
(Formerly part of Covell, et al.)		
(Transferred interest in Covell et al. to Jobe, Darr)[2]		
Graveline, George Wayne and Alexis June, Trust[3]		
(Successor to:		
South Covina Water Service	203.00	0.10271
Garnier, Camille A., Deceased, Estate of	8.30	0.00420
Garnier, Janus)[2]	5.30	0.00268
(Transferred to California Domestic Water Company)[2]	-216.60	-0.10959
	0.00	**0.00000**
Green, Walter	**71.70**	**0.03628**

PUMPER	PRESCRIPTIVE PUMPING ACRE-FEET	PUMPER'S SHARE %
Grizzle, Lissa B.	184.00	0.09310
(Held in common with Grizzle, Mervin A.;		
Wilson, Harold R.; Wilson, Sarah C.)		
(Transferred to City of Whittier)[2]	-184.00	-0.09310
	0.00	**0.00000**
Grizzle, Mervin A.	--	--
(See Grizzle, Lissa B.)		
Hansen, Alice	**0.75**	**0.00038**
Hanson Aggregates West, Inc. [3]		
(Successor to:		
Livingston-Graham, Inc.	1,824.40	0.92312
Sully-Miller Contracting Company)[2]	489.77	0.24782
	2,314.17	**1.17094**
Hartley, David[3]	**0.00**	**0.00000**
Hauch, Edward	--	--
(See Fisher, Russell)		
Heinrich, Carolyn[3]		
(Successor to Anderson Family Marital Trust)[2]	25.08	0.01269
	25.08	**0.01269**
Hemlock Mutual Water Company	**166.00**	**0.08399**
Hollenbeck Street Water Company	**0.00**	**0.00000**
(Transferred to Suburban Water Systems)[1]		
Hughes Development Corporation[3]		
(Successor to Base Line Water Company)[2]	430.20	0.21767
(Transferred to:		
San Gabriel County Water District	-400.00	-0.20239
San Gabriel County Water District)[2]	-30.20	-0.01528
	0.00	**0.00000**
Hunter, Lloyd F.[3]		
(Successor to Wade, R.)[2]	4.40	0.00223
(Transferred to Covina Irrigating Company)[2]	-4.40	-0.00223
	0.00	**0.00000**
Hydro-Conduit Corporation	**0.00**	**0.00000**

PUMPER	PRESCRIPTIVE PUMPING ACRE-FEET	PUMPER'S SHARE %
Industry Waterworks System, City of[3]		
(Successor to Cross Water Company)[2]	1,103.00	0.55810
	1,103.00	**0.55810**
Industry Properties, Ltd.		
(Successor to A & E Plastik Pak Co., Inc.)[1]	73.50	0.03719
(Transferred to California Domestic Water Co.)[2]	-73.50	-0.03719
	0.00	**0.00000**
Irwindale, City of[3]		
(Successor to United Concrete Pipe Corporation)[2]	376.00	0.19025
	376.00	**0.19025**
J. F. Isbell Estate, Inc.	8.36	0.00423
(Transferred to Andrade, Macario and	-8.36	-0.00423
Consuelo; and Andrade, Robert and Jayne)[2]	**0.00**	**0.00000**
Jerris, Helen[3]	--	--
(See Polopolus, et al.)		
Jobe, Darr[3]	--	--
(Formerly part of Covell, et al.)		
(Successor to:		
Gilkerson, Frank B. interest in Covell et al.		
Graham, William interest in Covell et al.)[2]		
(Transferred interest in Covell et al. to Tate, Phillip G. and Sieglinde A.)[2]		
Kirklen Family Trust[3]	375.00	0.18974
(Formerly Kirklen, Dawn L.)		
(Held in common with Kirklen, William R.)		
(Successor to San Dimas-La Verne	62.50	0.03162
Recreational Facilities Authority)[2]		
(Transferred to		
Maggiore, Valarie; Fox, Crystal; and Kirklen, Jeffery)[2]	-437.50	-0.22136
	0.00	**0.00000**
Kirklen, Dawn L.	--	--
(See Kirklen Family Trust)		
Kirklen, Jeffery[3]	**145.84**	**0.07379**
(Successor to Maggiore, Valarie; Fox, Crystal; and Kirklen, Jeffery)[2]		
Kirklen, William R.	--	--
(See Kirklen, Dawn L.)		

PUMPER	PRESCRIPTIVE PUMPING ACRE-FEET	PUMPER'S SHARE %
Kiyan Farms	30.00	0.01518
(Formerly Kiyan, Hideo)		
(Transferred to West Covina Venture, Ltd.)[2]	-30.00	-0.01518
	0.00	**0.00000**
Kiyan, Hideo	--	--
(See Kiyan Farms)		
(Held in common with Kiyan, Hiro)		
Kiyan, Hiro	--	--
(See Kiyan, Hideo)		
Knight, Kathryn M.[3]		
(Successor to Knight, William)[2]	227.88	0.11530
(Transferred to Knight, William)[2]	-227.88	-0.11530
	0.00	**0.00000**
Knight, William	227.88	0.11530
(Transferred to Knight, Kathryn M.)[2]	-227.88	-0.11530
(Successor to Knight, Kathryn M.)[2]	227.88	0.11530
	227.88	**0.11530**
Lakin, Kelly R.[3]		
(See Covell, et al.)		
(Successor to Covell, et al.)[2]	9.26	0.00468
(Transferred to:		
Covina Irrigating Co.	-6.03	-0.00305
Covina Irrigating Co.)[2]	-3.23	-0.00163
	0.00	**0.00000**
Lakin, Kendall R.[3]	--	--
(See Covell, et al.)		
Landeros, John	**0.75**	**0.00038**
La Grande Source Water Company	**0.00**	**0.00000**
(Transferred to Suburban Water Systems)[1]		
Lang, Frank	**0.00**	**0.00000**
(Transferred to San Dimas-La Verne		
Recreational Facilities Authority)[1]		
La Puente Cooperative Water Co.	**0.00**	**0.00000**
(Transferred to Suburban Water Systems)[1]		

PUMPER	PRESCRIPTIVE PUMPING ACRE-FEET	PUMPER'S SHARE %
La Puente Valley County Water District	1,097.00	0.55507
(Successor to El Encanto Properties)[2]	33.40	0.01690
	1,130.40	**0.57197**
La Verne, City of	250.00	0.12650
(Successor to Fruit Street Water Co.)[2]	105.71	0.05349
(Transferred to Covina Irrigating Co.)[2]	-355.71	-0.17999
	0.00	**0.00000**
Lee, Paul M. and Ruth A.; Nasmyth, Virginia; Nasmyth, John[3]	**0.00**	**0.00000**
Little John Dairy	**0.00**	**0.00000**
Livingston-Graham, Inc.	1,824.40	0.92312
(Transferred to Hanson Aggregates West, Inc.)[2]	-1,824.40	-0.92312
	0.00	**0.00000**
Los Flores Mutual Water Company	26.60	0.01346
(Transferred to City of Monterey Park)[2]	-26.60	-0.01346
	0.00	**0.00000**
Loucks, David	**3.00**	**0.00152**
Lovelady, June G., Trustee[3]		
(Successor to White, June G., Trustee of the June G. White Share of the Garnier Trust)[2]	185.50	0.09386
	185.50	**0.09386**
Loyola Marymount University[3]		
(Successor to George A.V. Dunning Trust)[2]	324.00	0.16394
(Transferred to City of Glendora)[2]	-324.00	-0.16394
	0.00	**0.00000**
Maggiore, Valarie[3] (Successor to Maggiore, Valarie; Fox, Crystal; and Kirklen, Jeffrey)[2]	**145.83**	**0.07379**
Maggiore, Valarie; Fox, Crystal; and Kirklen, Jeffery[3]		
(Successor to Kirklen Family Trust)[2]	437.50	0.22136
(Transferred to:		
(Maggiore, Valarie;	-145.83	-0.07379
Kirklen, Jeffrey;	-145.84	-0.07379
Fox Family Trust, Michael Edward Fox	-145.83	-0.07378
and Crystal Marie Fox, Trustees)[2]	**0.00**	**0.00000**

PUMPER	PRESCRIPTIVE PUMPING ACRE-FEET	PUMPER'S SHARE %
Manning Bros. Rock & Sand Co.	328.00	0.16596
(Transferred to Conrock Company)[2]	-328.00	-0.16596
	0.00	**0.00000**
Maple Water Company	118.50	0.05996
(Transferred to Southwest Water Co.)[2]	-118.50	-0.05996
	0.00	**0.00000**
Martinez, Frances Mercy (Held in common with Martinez, Jaime)	**0.75**	**0.00038**
Martinez, Jaime (See Martinez, Frances Mercy)	--	--
Massey-Ferguson Company	**0.00**	**0.00000**
McIntyre, William[3]		
(Successor to West Covina Venture, Ltd.)[2]	30.00	0.01518
(Transferred to Canyon Water Company)[2]	-1.00	-0.00051
	29.00	**0.01467**
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
South Covina Water Service	300.00	0.15180
Woodland Farms	919.50	0.46526
Woodland, Richard)[2]	840.50	0.42528
(Transferred to Miller Breweries West, L.P.)[2]	-2,372.51	-1.20047
	0.00	**0.00000**
Miller Breweries West, L.P.[3]		
(Successor to Miller Brewing Company)[2]	2,372.51	1.20047
(Transferred to MillerCoors LLC)[2]	-2,372.51	-1.20047
	0.00	**0.00000**
MillerCoors LLC[3] (Successor to Miller Breweries West, L.P.)[2]	**2,372.51**	**1.20047**
Mission Gardens Mutual Water Company	96.96	0.04906
(Transferred to Gifford, Brooks, Jr.)[2]	-96.96	-0.04906
	0.00	**0.00000**

PUMPER	PRESCRIPTIVE PUMPING ACRE-FEET	PUMPER'S SHARE %
Modern Accent Corporation		
(Successor to Crocker National Bank, Executor of the Estate of A. V. Handorf)[1]	256.86	0.12997
(Transferred to California Domestic Water Co.)[2]	-256.86	-0.12997
	0.00	**0.00000**
Monterey Park, City of	6,677.48	3.37870
(Successor to Los Flores Mutual Water Co.)[2]	26.60	0.01346
	6,704.08	**3.39216**
Munoz, Ralph E.[3]	**0.00**	**0.00000**
Murphy Ranch Mutual Water Company	223.23	0.11295
(Transferred to Southwest Suburban Water)[2]	-223.23	-0.11295
	0.00	**0.00000**
Namimatsu Farms	196.00	0.09917
(Transferred to California Cities Water Co.)[2]	-196.00	-0.09917
	0.00	**0.00000**
Nick Tomovich & Sons	**0.02**	**0.00001**
Nicholson Trust[3]		
(Successor to Beverly Acres Mutual Water Users Association)[2]	43.00	0.02176
(Transferred to:		
Nicholson Family Trust	-7.00	-0.00354
Nicholson Trust, Helene S.)[2]	-12.00	-0.00607
	24.00	**0.01215**
Nicholson Family Trust[3]		
(Successor to Nicholson Trust)[2]	7.00	0.00354
	7.00	**0.00354**
Nicholson Trust, Helene S.[3]		
(Successor to Nicholson Trust)[2]	12.00	0.00607
(Transferred to San Gabriel Valley Water Co.)[2]	-12.00	-0.00607
	0.00	**0.00000**
New Owl Rock Products[3]		
(Successor to Owl Rock Products Co.)[2]	715.60	0.36208
(Transferred to Robertson's Ready Mix, Ltd.)[2]	-715.60	-0.36208
	0.00	**0.00000**

PUMPER	PRESCRIPTIVE PUMPING ACRE-FEET	PUMPER'S SHARE %
No. 17 Walnut Place Mutual Water Co.	21.50	0.01088
(Transferred to San Gabriel Valley Water Co.)[2]	-21.50	-0.01088
	0.00	**0.00000**
Orange Production Credit Association[3]	**0.00**	**0.00000**
Owl Rock Products Co.	715.60	0.36208
(Transferred to New Owl Rock Products)[2]	-715.60	-0.36208
	0.00	**0.00000**
Pacific Rock & Gravel Co.	408.00	0.20644
(Transferred to:	-208.00	-0.10524
City of Whittier,	-200.00	-0.10120
Rose Hills Memorial Park Association)[2]	**0.00**	**0.00000**
Park Water Company	184.01	0.09311
(Transferred to Valley County Water District)[2]	-184.01	-0.09311
	0.00	**0.00000**
Parton Family Trust[3]	46.20	0.02338
(Formerly Via, H., Trust of)[2]		
(Transferred to San Gabriel Valley Water Company)[2]	-46.20	-0.02338
	0.00	**0.00000**
Pellissier Irrevocable QTIP Trust, et al, Laurence R., Co-tenancy of[3]		
(Successor to Faix, Ltd)[2]	6,490.00	3.28384
	6,490.00	**3.28384**
Penn, Margaret[3]	--	--
(See Polopolus, et al.)		
Pico County Water District	**0.75**	**0.00038**
Polopolus, John[3]	--	--
(See Polopolus, et al.)		
Polopolus, et al.[3]		
(Successor to Polopolus, Steve)[2]	22.50	0.01138
(Held in common with Chronis, Christine; Jerris, Helen; Penn, Margaret; Polopolus, John)	**22.50**	**0.01138**
Polopolus, Steve	22.50	0.01138
(Transferred to Polopolus, et al.)[2]	-22.50	-0.01138
	0.00	**0.00000**

PUMPER	PRESCRIPTIVE PUMPING ACRE-FEET	PUMPER'S SHARE %
Rados, Alexander	**43.00**	**0.02176**
(Held in common with Rados, Stephen and Rados, Walter)		
Rados, Stephen	--	--
(See Rados, Alexander)		
Rados, Walter	--	--
(See Rados, Alexander)		
Richwood Mutual Water Company	192.60	0.09745
(Transferred to San Gabriel Valley Water Company)[2]	-192.60	-0.09745
	0.00	**0.00000**
Rincon Ditch Company	628.00	0.31776
(Transferred to Workman Mill Investment Company)[2]	-628.00	-0.31776
	0.00	**0.00000**
Rincon Irrigation Company	314.00	0.15888
(Transferred to Workman Mill Investment Company)[2]	-314.00	-0.15888
	0.00	**0.00000**
Rio Hondo Memorial Foundation, The[3]	--	--
(Formerly Rose Hills Foundation, The)		
(See Rose Hills Foundation, The)		
Rittenhouse, Catherine	**0.00**	**0.00000**
(Transferred to Covell, Ralph)[1]		
Rittenhouse, James	**0.00**	**0.00000**
(Transferred to Covell, Ralph)[1]		
Robertson's Ready Mix, Ltd.[3]		
(Successor to New Owl Rock Products)[2]	715.60	0.36208
(Transferred to San Gabriel County Water District)[2]	-715.60	-0.36208
	0.00	**0.00000**
Rose Hills Memorial Park Association	--	--
(See Rose Hills Foundation, The)		

PUMPER	PRESCRIPTIVE PUMPING ACRE-FEET	PUMPER'S SHARE %
Rose Hills Foundation, The[3]		
(Formerly Rose Hills Memorial Park Association)		
(See Rio Hondo Memorial Foundation, The)		
(Formerly Rio Hondo Memorial Foundation, The)	594.00	0.30055
(Successor to Pacific Rock & Gravel Co.)[2]	200.00	0.10120
(Transferred to:		
Workman Mill Investment Co.	-594.00	-0.30055
Workman Mill Investment Co.)[2]	-200.00	-0.10120
	0.00	**0.00000**
Rosemead Development, Ltd.[3]		
(Successor to Thompson, Earl W.)[2]	1.00	0.00051
	1.00	**0.00051**
Rurban Homes Mutual Water Company	**217.76**	**0.11018**
Ruth, Roy	**0.75**	**0.00038**
San Dimas Golf Inc. DBA Via Verde County Club[3]	**0.00**	**0.00000**
San Dimas-La Verne Recreational Facilities Authority		
(Successor to Lang, Frank)[1]	62.50	0.03162
(Transferred to Kirklen, Dawn L. and William R.)[2]	-62.50	-0.03162
	0.00	**0.00000**
San Gabriel Country Club	**286.10**	**0.14476**
San Gabriel County Water District	4,250.00	2.15044
(Successor to:		
Hughes Development Corporation	400.00	0.20239
Hughes Development Corporation	30.20	0.01528
Robertson's Ready Mix, Ltd.)[2]	715.60	0.36208
	5,395.80	**2.73019**
San Gabriel Valley Municipal Water District	**0.00**	**0.00000**
Sawpit Farms, Limited	173.00	0.08754
(Transferred to:		
Eckis, Rolin	-123.00	-0.06224
Doyle and Madruga)[2]	-50.00	-0.02530
	0.00	**0.00000**
Schneiderman, Alan	--	--
(See Birenbaum, Max)		

PUMPER	PRESCRIPTIVE PUMPING ACRE-FEET	PUMPER'S SHARE %
Schneiderman, Lydia	--	--
(See Birenbaum, Max)		
Security Pacific National Bank,	38.70	0.01958
Co-trustee for the Estate of Winston F. Stoody		
(See Stoody, Virginia A.)		
(Transferred to City of Whittier)[2]	-38.70	-0.01958
	0.00	**0.00000**
Sierra La Verne Country Club[3]	**0.00**	**0.00000**
Sierra Madre, City of	**0.00**	**0.00000**
Sloan Ranches	129.60	0.06558
(Transferred to Cadway, Inc.)[2]	-129.60	-0.06558
	0.00	**0.00000**
Smith, Charles[3]	**0.00**	**0.00000**
Snyder, Esther[3]		
(Successor to Covell, et al)[2]	18.51	0.00937
(Transfered to Azusa Associates, LLC)[2]	-18.51	-0.00937
	0.00	**0.00000**
Snyder, Harry	--	--
(See Covell, et al.)		
Sonoco Products Company	**311.60**	**0.15766**
South Covina Water Service	992.30	0.50209
(Transferred to:		
Miller Brewing Company	-300.00	-0.15180
Anton C. and Anita Garnier Family Trust	-203.00	-0.10271
The George Wayne and Alexis June Graveline Trust	-203.00	-0.10271
The Estate of Camille A. Garnier, Deceased	-83.30	-0.04215
Garnier, Janus)[2]	-203.00	-0.10272
	0.00	**0.00000**
Southdown, Inc.[3]	--	--
(Formerly AZ-Two, Inc.)		
(See CEMEX California Aggregates, Inc.)		
Southern California Edison Company	155.25	0.07855
(Successor to Associated		
Southern Investment Company)[2]	16.50	0.00835
	171.75	**0.08690**

PUMPER	PRESCRIPTIVE PUMPING ACRE-FEET	PUMPER'S SHARE %
Southern California Water Company,	--	--
San Gabriel Valley District		
(See Golden State Water Company, San Gabriel Valley District)		
South Pasadena, City of	**3,567.70**	**1.80520**
Southwest Suburban Water	--	--
(See Suburban Water Systems)		
Southwest Water Company [3]		
(Successor to Maple Water Company)[2]	118.50	0.05996
	118.50	**0.05996**
Southwestern Portland Cement Company[3]		
(Successor to Azusa Western, Inc.)[2]	742.00	0.37544
(Transferred to American Sheds, Inc.)[2]	-742.00	-0.37544
	0.00	**0.00000**
Speedway 605, Inc.[3]	**0.00**	**0.00000**
Standard Oil Company of California	--	--
(See Chevron U.S.A.)		
Sterling Mutual Water Company	**120.00**	**0.06072**
Stoody, Virginia A., Co-trustee for the	--	--
Stoody, Winston F., Estate of	--	--
(See Security Pacific National Bank,		
Co-trustee)		
Suburban Water Systems	20,462.47	10.35370
(Formerly Southwest Suburban Water)		
(Successor to:		
Hollenbeck Street Water Company[1]	646.39	0.32706
La Grande Source Water Company[1]	1,078.00	0.54545
La Puente Cooperative Water Co.[1]	1,210.90	0.61270
Valencia Valley Water Company[1]	651.50	0.32965
Victoria Mutual Water Company[1]	469.60	0.23761
Cal Fin[2]	118.10	0.05976
Murphy Ranch Mutual Water Co.[2])	223.23	0.11295
	24,860.19	**12.57888**

PUMPER	PRESCRIPTIVE PUMPING ACRE-FEET	PUMPER'S SHARE %
Sully-Miller Contracting Company[3]		
(Successor to Blue Diamond Concrete	1,399.33	0.70804
Materials Div., The Flintkote Company)[2]		
(Transferred to:		
United Rock Products Corporation	-909.56	-0.46022
Hanson Aggregates West, Inc.)[2]	-489.77	-0.24782
	0.00	**0.00000**
Sunny Slope Water Company	**2,228.72**	**1.12770**
Tate, Phillip G. and Sieglinde A.[3]	**57.83**	**0.02926**
(See Covell,et al.)		
(Successor to Jobe, Darr interest in Covell, et al.)[2]		
(Successor to Covell, et al.)[2]		
Taylor Herb Garden	6.00	0.00304
(Transferred to Covina Irrigating Company)[2]	-6.00	-0.00304
	0.00	**0.00000**
Texaco, Inc. (Chevron U.S.A., Inc.)	50.00	0.02530
(Transferred to Durfee Property, LLC)[2]	-50.00	-0.02530
	0.00	**0.00000**
Thompson, Earl W.	1.00	0.00051
(Held in common with Thompson, Mary)		
(Transferred to Rosemead Development, Ltd.)[2]	-1.00	-0.00051
	0.00	**0.00000**
Thompson, Mary	--	--
(See Thompson, Earl W.)		
Tran, Hieu[3]	**0.00**	**0.00000**
Tyler Nursery	**3.21**	**0.00162**
United Concrete Pipe Corporation	376.00	0.19025
(Transferred to Irwindale, City of)[2]	-376.00	-0.19025
	0.00	**0.00000**
United Rock Products Corporation[3]		
(Successor to:		
Sully Miller Contracting Company)[2]	909.56	0.46022
	909.56	**0.46022**
USA Waste of California, Inc.[3]		
(Successor to American Sheds, Inc.)[2]	742.00	0.37544
(Transferred to Aqua Capital Management LP)[2]	-742.00	-0.37544
	0.00	**0.00000**

PUMPER	PRESCRIPTIVE PUMPING ACRE-FEET	PUMPER'S SHARE %
U.S. Pipe & Foundry Company[3]	--	--
(See United Concrete Pipe Corporation)		
Valencia Heights Water Company	861.00	0.43565
(Successor to Crown City Plating Company)[2]	200.00	0.10120
	1,061.00	**0.53685**
Valencia Valley Water Company	**0.00**	**0.00000**
(Transferred to Suburban Water Systems)[1]		
Vallecito Water Company	2,867.00	1.45066
(Transferred to San Gabriel Valley	-2,867.00	-1.45066
Water Company)[2]	**0.00**	**0.00000**
Valley County Water District	5,775.00	2.92206
(Formerly Baldwin Park County Water District)		
(Successor to Park Water Company)[2]	184.01	0.09311
	5,959.01	**3.01517**
Valley Crating Company	**0.00**	**0.00000**
Valley View Mutual Water Company	**616.00**	**0.31169**
Via, H.	--	--
(See Via, H., Trust of)		
Via, H., Trust of	--	--
(Formerly Via, H.)		
(See Parton Family Trust)		
Victoria Mutual Water Company		
(Transferred to Suburban Water Systems)[1]	**0.00**	**0.00000**
Vietnamese American Buddhist Temple Congregation[3]	**0.00**	**0.00000**
Vulcan Materials Company		
(Formerly CalMat)		
(Successor to Manning Bros. Rock & Sand Co.)[2]	1,793.35	0.90740
	1,793.35	**0.90740**
Wade, R.	4.40	0.00223
(Transferred to Hunter, Lloyd F.)[2]	-4.40	-0.00223
	0.00	**0.00000**
Ward Duck Company	--	--
(See Woodland Farms, Inc.)		

PUMPER	PRESCRIPTIVE PUMPING ACRE-FEET	PUMPER'S SHARE %
Warren, Clyde	--	--
(See Fisher, Russell)		
W. E. Hall Company	0.20	0.00010
(Transferred to City of El Monte)[2]	-0.20	-0.00010
	0.00	**0.00000**
West Covina Venture, Ltd.[3]		
(Successor to Kiyan Farms)[2]	30.00	0.01518
(Transferred to McIntyre, William)[2]	-30.00	-0.01518
	0.00	**0.00000**
White, June G., Trustee of the June G. White Share of the Garnier Trust[3]		
(Successor to Denton, Kathryn W., Trustee for the San Jose Ranch Company)[2]	185.50	0.09386
(Transferred to Lovelady, June G., Trustee)[2]	-185.50	-0.09386
	0.00	**0.00000**
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)[2]	6.00	0.00304
	8,271.38	**4.18519**
Wigodsky, Bernard	--	--
(See Birenbaum, Max)		
Wigodsky, Estera	--	--
(See Birenbaum, Max)		
Wilmott, Erma M.	**0.75**	**0.00038**
(Formerly Comby, Erma M.)		
Wilson, Harold R.	--	--
(See Grizzle, Lissa B.)		
Wilson, Sarah C.	--	--
(See Grizzle, Lissa B.)		

PUMPER	PRESCRIPTIVE PUMPING ACRE-FEET	PUMPER'S SHARE %
Woodland Farms, Inc.	--	--
(See 6W Farms, Inc.)		
(Formerly Ward Duck Company)		
Woodland, Frederick G.[3]	--	--
Woodland, Richard[3]		
(Successor to Bahnsen & Beckman Ind., Inc.)[2]	840.50	0.42528
(Transferred to Miller Brewing Company)[2]	-840.50	-0.42528
(Successor to 6W Farms, Inc.)[2]	297.90	0.15073
(Transferred to Aqua Capital Management LP)[2]	-297.90	-0.15073
	0.00	**0.00000**
Workman Mill Investment Company[3]		
(Successor to:		
Rincon Ditch Company	628.00	0.31776
Rincon Irrigation Company	314.00	0.15888
Rose Hills Memorial Park Association	594.00	0.30055
Rose Hills Foundation, The)[2]	200.00	0.10120
	1,736.00	**0.87839**
Wright, Darrell A., Wright, Merle M. & Carlson, Jeanne W.[3]		
(Successor to Burbank Development Co.)[2]	50.65	0.02563
(Transferred to San Gabriel Valley Water Company)[2]	-50.65	-0.02563
	0.00	**0.00000**
Totals for Exhibit "D"	**129,765.87**	**65.65953**
Totals for Exhibit "E"	**67,868.56**	**34.34047**
GRAND TOTALS	**197,634.43**	**100.00000**

1/ Permanent transfer of rights as recorded at entry of Judgment.
2/ Permanent transfer of rights after entry of Judgment.
3/ Intervenor after Judgment.

EXHIBIT "E"

TABLE SHOWING PRODUCTION RIGHT OF EACH INTEGRATED PRODUCER AS OF JUNE 21, 2012

INTEGRATED PRODUCER	DIVERSION COMPONENT ACRE-FEET	PRESCRIPTIVE PUMPING COMPONENT ACRE-FEET	PUMPING COMPONENT SHARE %
Aqua Capital Management LP[3]			
(Successor to:			
Covell, Ralph	2.12	0.00	0.00000
Covell et al.	0.00	16.19	0.00820
Azusa Associates, LLC	0.00	18.51	0.00937
USA Waste of California, Inc.	0.00	742.00	0.37544
Richard Woodland)[2]	0.00	297.90	0.15073
	2.12	**1,074.60**	**0.54374**
Azusa, City of	0.00	3,655.99	1.84988
(Successor to Monrovia Nursery Company)[2]	363.00	0.00	0.00000
	363.00	**3,655.99**	**1.84988**
Azusa Agricultural Water Company	1,000.00	1,732.20	0.87647
(Transferred to:			
Azusa Valley Water Company	-830.00	-1,437.73	-0.72747
Azusa Valley Water Company)[2]	-170.00	-294.47	-0.14900
	0.00	**0.00**	**0.00000**
Azusa Foot-Hill Citrus Company	718.50	0.00	0.00000
(Transferred to Monrovia Nursery Company)[2]	-718.50		
	0.00	**0.00**	**0.00000**
Azusa Valley Water Company	2,422.00	8,274.00	4.18652
(Successor to:			
Azusa Agricultural Water Company	830.00	1,437.73	0.72747
Azusa Agricultural Water Company)[2]	170.00	294.47	0.14900
	3,422.00	**10,006.20**	**5.06299**
Brierly, Susan K.[3]			
(Successor to Monrovia Nursery Company)[2]	24.00	0.00	0.00000
(Transferred to Miles R. Rosedale)[2]	-8.00		
	16.00	**0.00**	**0.00000**
California-American Water Company (Duarte System)	**1,672.00**	**3,649.00**	**1.84634**

INTEGRATED PRODUCER	DIVERSION COMPONENT ACRE-FEET	PRESCRIPTIVE PUMPING COMPONENT ACRE-FEET	PUMPING COMPONENT SHARE %
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		300.00	0.15179
Taylor Herb Garden		6.00	0.00304
La Verne, City of		355.71	0.17999
Davidson Optronics, Inc.		22.00	0.01113
Goedert, Lillian		7.00	0.00354
Lakin, Kelly R.		6.03	0.00305
Hunter, Lloyd F.		4.40	0.00223
Lakin, Kelly R.)[2]		3.23	0.00163
	2,514.00	**6,578.37**	**3.32855**
CV Glendora 3 Site, LLC)[3]			
(Successor to:			
Rosedale, Miles R.	184.00	0.00	0.00000
Monrovia Nursery Company)[2]	10.00	0.00	0.00000
	194.00	**0.00**	**0.00000**
DeFalco, John and Carole[3]			
(Successor to Nickowitz, at al.)[2]	1.49	0.00	0.00000
	1.49	**0.00**	**0.00000**
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	18.34		
Glendora Unified High School District		99.00	0.05009
Loyola Marymount University		324.00	0.16394
Clayton Manufacturing Company)[2]		511.80	0.25896
	35.34	**9,392.80**	**4.75261**
Golden State Water Company, San Dimas District[3]	500.00	3,242.53	1.64067
(Formerly California Cities Water Company)			
(Successor to Namimatsu Farms)[2]		196.00	0.09917
	500.00	**3,438.53**	**1.73984**

INTEGRATED PRODUCER	DIVERSION COMPONENT ACRE-FEET	PRESCRIPTIVE PUMPING COMPONENT ACRE-FEET	PUMPING COMPONENT SHARE %
JUH#1[3]			
(Successor to Monrovia Nursery Company)[2]	48.00	0.00	0.00000
(Transferred to Miles R. Rosedale)[2]	-16.00		
	32.00	**0.00**	**0.00000**
Los Angeles, County of	**310.00**	**3,721.30**	**1.88292**
Maechtlen, Estate of J. J., Trustee for the Estate of P.A. Maechtlen	0.00	301.50	0.15256
(Transferred to:			
City of Glendora		-150.00	-0.07590
Miller Brewing Company)[2]		-151.50	-0.07666
	0.00	**0.00**	**0.00000**
Maechtlen, Trust of J. J.[3]	1.49	0.00	0.00000
(Transferred to Otting, David;	-1.49	0.00	0.00000
Otting, Larry; and Webster, Scott)[2]			
(Successor to Otting, David;	1.49	0.00	0.00000
Otting, Larry; and Webster, Scott)[2]			
(Transferred to Nikowitz, et al)[2]	-1.49	0.00	0.00000
	0.00	**0.00**	**0.00000**
Maechtlen, Trust of P. A.[3]	0.50	100.50	0.05085
(Transferred to:			
City of Glendora		-50.00	-0.02530
Alice B. Phillips, et al.)[2]	-0.50	-50.50	-0.02555
	0.00	**0.00**	**0.00000**
The Metropolitan Water District of of Southern California	**9.59**	**165.00**	**0.08349**
Monrovia, City of	1,098.00	5,042.22	2.55129
(Successor to:			
Eckis, Rollin		123.00	0.06224
City of Arcadia)[2]		951.00	0.48119
	1,098.00	**6,116.22**	**3.09472**

INTEGRATED PRODUCER	DIVERSION COMPONENT ACRE-FEET	PRESCRIPTIVE PUMPING COMPONENT ACRE-FEET	PUMPING COMPONENT SHARE %
Monrovia Nursery Company	239.50	0.00	0.00000
(Successor to Azusa Foothill	718.50	0.00	0.00000
Citrus Company)[2]			
(Transferred:			
City of Azusa	-363.00	0.00	0.00000
Brierly, Susan K.	-24.00	0.00	0.00000
Rosedale, Miles R.	-191.00	0.00	0.00000
VanLandingham, Richard	-21.00	0.00	0.00000
JUH#1	-48.00	0.00	0.00000
Rosedale, Lance	-32.00	0.00	0.00000
CV Glendora 3 Site, LLC)[2]	-10.00	0.00	0.00000
	269.00	**0.00**	**0.00000**
Nikowitz, et al[3]			
(Successor to Maechtlen, Trust of J. J.)[2]	1.49	0.00	0.00000
(Held in common with Nikowitz, Sheryl M. and Walter P.; Pellegrino, Mark and Roxanne; Verdegem, Thomas and Sandra B.)			
(Transferred to DeFalco, John and Carole)[2]	-1.49	0.00	0.00000
	0.00	**0.00**	**0.00000**
Otting, David; Otting, Larry; and Webster, Scott[3]			
(Successor to Maechtlen, Trust of J. J.)[2]	1.49	0.00	0.00000
(Transferred to Maechtlen, Trust of J. J.)[2]	-1.49	0.00	0.00000
	0.00	**0.00**	**0.00000**
Phillips, Alice B., et al.[3]			
(Successor to Maechtlen, Trust of P. A.)[2]	0.50	50.50	0.02555
(Transferred to Miller Brewing Co.)[2]		-50.00	-0.02530
	0.50	**0.50**	**0.00025**
Rosedale, Lance[3]			
(Successor to Monrovia Nursery Company)[2]	**32.00**	**0.00**	**0.00000**
Rosedale, Miles R.[3]			
(Successor to Monrovia Nursery Company)[2]	191.00	0.00	0.00000
(Transferred to CV Glendora 3 Site, LLC)[2]	-184.00	0.00	0.00000
(Successor to:			
Susan K. Brierly	8.00	0.00	0.00000
JUH#1)[2]	16.00	0.00	0.00000
	31.00	**0.00**	**0.00000**

INTEGRATED PRODUCER	DIVERSION COMPONENT ACRE-FEET	PRESCRIPTIVE PUMPING COMPONENT ACRE-FEET	PUMPING COMPONENT SHARE %
San Gabriel Valley Water Company	0.00	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
Cedar Avenue Mutual Water Company		121.10	0.06127
Beverly Acres Mutual Water Users Association		50.00	0.02530
Richwood Mutual Water Company		192.60	0.09745
Nicholson Trust, Helene S.		12.00	0.00607
Durfee Property, LLC		50.00	0.02530
Wright, Darrell A., Wright, Merle M. and Carlson, Jeanne W.		50.65	0.02563
Parton Family Trust		46.20	0.02338
Maddock, A.G.)[2]	3.40		
	3.40	**20,070.05**	**10.15514**
VanLandingham, Richard[3]			
(Successor to Monrovia Nursery Company)[2]	**21.00**	**0.00**	**0.00000**
TOTAL	**10,526.44**	**67,868.56**	**34.34047**

1/ Permanent transfer of rights as recorded at entry of Judgment.
2/ Permanent transfer of rights after entry of Judgment.
3/ Intervenor after Judgment.

EXHIBIT "F"

TABLE SHOWING SPECIAL CATEGORY RIGHTS

PARTY	NATURE OF RIGHT
*The Metropolitan Water District of Southern California *Transferred to the San Gabriel Valley Protective Association 05/07/1996.	Morris Reservoir Storage and Withdrawal (a) A right to divert, store and use San Gabriel River Water, pursuant to Permit No. 7174. (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 incidental Morris Dam facilities.
Los Angeles County Flood Control District (now Los Angeles County Department of Public Works)	Puddingstone Reservoir 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.

EXHIBIT "G"

TABLE SHOWING NON-CONSUMPTIVE USERS

PARTY	NATURE OF RIGHT
Covina Irrigating Company Azusa Valley Water Company Azusa Agricultural Water Co. Azusa Foot-Hill Citrus Co. Monrovia Nursery	"Committee-of-Nine" Spreading Right 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 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 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 To continue to spread San Gabriel River water pursuant to License Nos. 9991 and 12,209, without the right to recapture said water.
Golden State Water Company (formerly *California Cities Water Company*)	Spreading Right 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; Spreading and conservation for general benefit in streambeds, reservoirs and spreading grounds without the right to recapture said water. 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. **Operating Safe Yield and Spreading.** 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 and subject to Section 47 of the Judgment (Amended 6/21/12):

(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.

(d) **Purchased Water Plan.** On or before November 1 of each year, Watermaster shall prepare and distribute to the Responsible Agencies a three-year projection of its Supplemental Water purchases from each agency. Watermaster shall, to the extent feasible, coordinate the tentative schedule for delivery and payment of those purchases with each agency. (Amended 6/21/12)

4. **Replacement Assessment Rates.** The Replacement Assessment rates may be in an amount calculated to allow Watermaster to purchase more than one acre-foot of Supplemental Water for each acre-foot of excess Production to which such Assessment applies, when such purchases are prudent in order to secure necessary Supplemental Water supplies for the benefit of the Basin and parties. In accordance with Rules and Regulations adopted by Watermaster, to the extent Watermaster purchases more than one acre-foot of Supplemental Water for each acre-foot of excess Production to which such Assessment applies, a credit shall be issued to the affected Producers at the time such excess water is purchased. (Amended 6/21/12)

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.

Exhibit "J"

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 _____
EDMUND 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

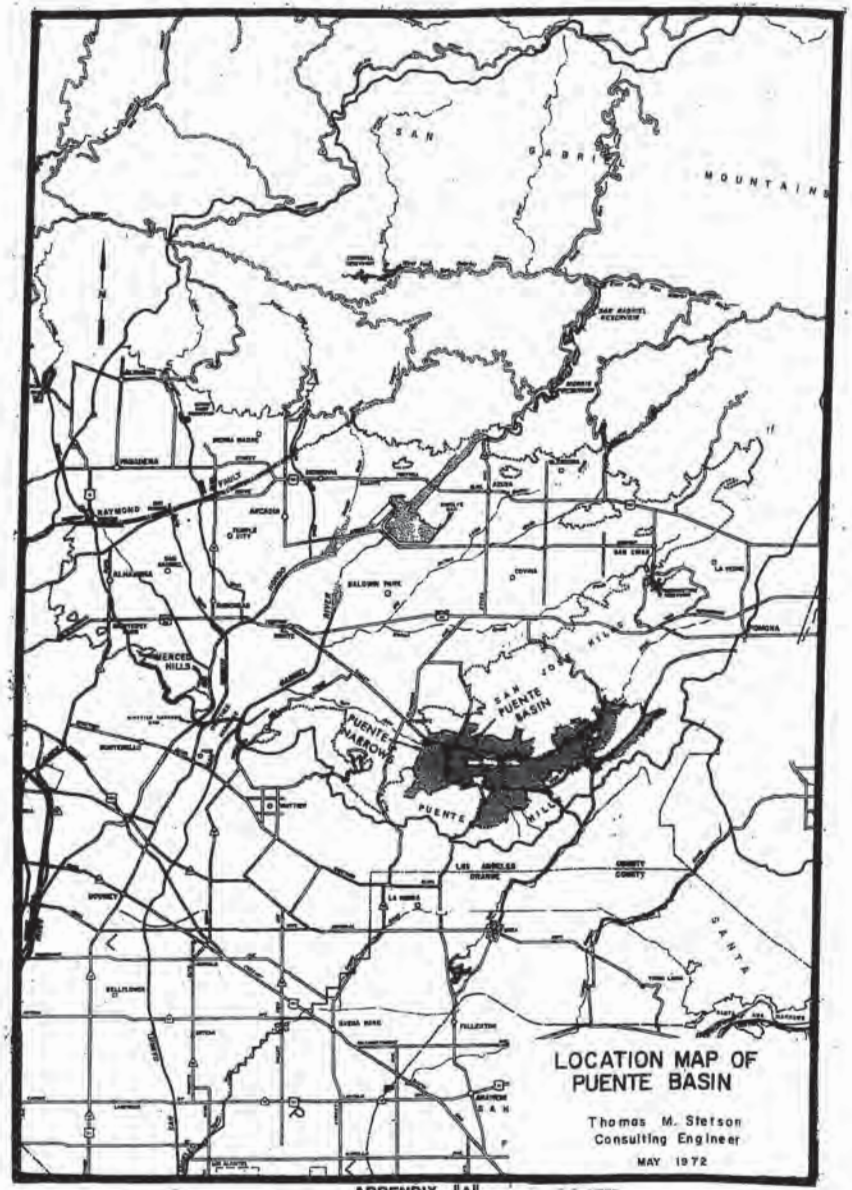
Approved as to form:

_____
Attorneys for Rowland District

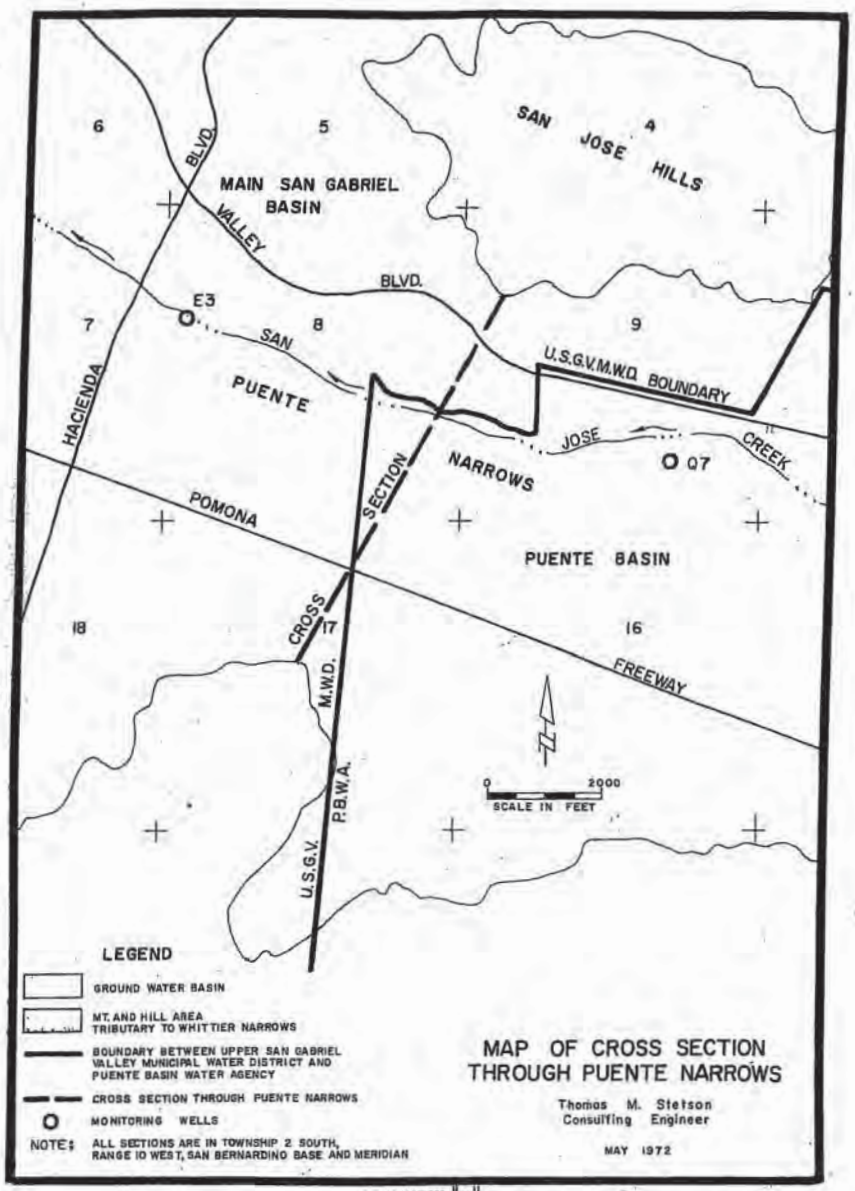
ROWLAND AREA COUNTY WATER DISTRICT

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.

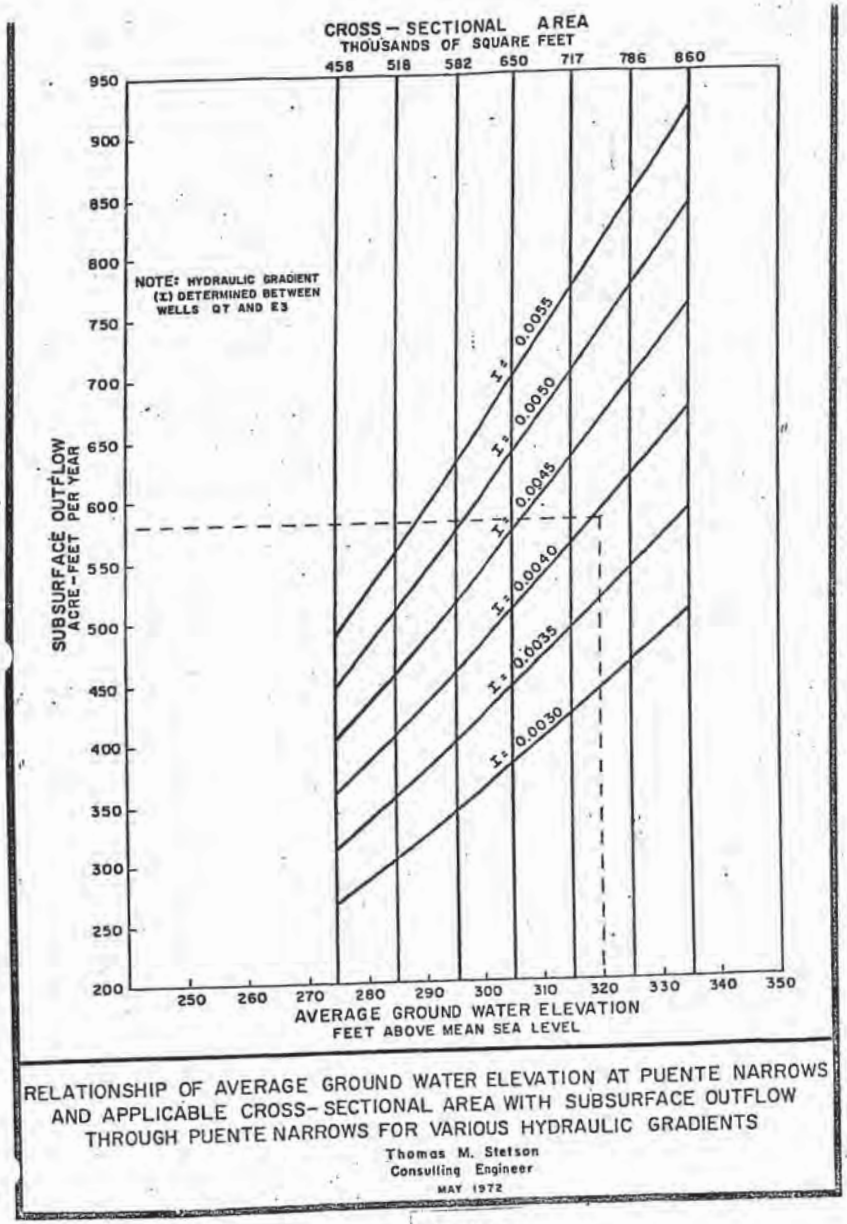
2. Measurement. Each monitoring well shall be measured and the ground water elevation determined semi-annually on or about April 1 and October 1 of each year. Prior to each measurement, the pump shall be turned off for a sufficient period to insure that the water table has recovered to a static or near 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 "J"

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. BROOKS GIFFORD, JR. PAUL MNOIAN JOHN MGRDICHIAN J. EARL GARRETT	3.5 acre-feet per year
Present User: 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: 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 "K"

CONSUMPTIVE USE PORTIONS OF PRODUCERS WITH OVERLYING RIGHTS AS OF JUNE 30, 2013

OVERLYING PRODUCER	CONSUMPTIVE USE PORTION (ACRE-FEET)
1. Mnoian-Gifford Interests	
Owner Producers	
Paul Mnoian[3]	
Brooks Gifford, Sr.[3]	
Brooks Gifford, Jr.[3]	
John Mgrdichian[3]	
J. Earl Garrett[3]	
Present User: Nu-Way Industries	3.5
Producers Under License	
William C. Thomas[3]	
Evelyn F. Thomas[3]	
Malcolm K. Gatherer[3]	
Jacqueline Gatherer[3]	
Present User: B & B Red-I-Mix Concrete, Inc.	45.6
Pre-Stress Crane Rigging and Truck, Co., Inc.[3]	1.0
	50.1
2. Attalla, Phillip Y. and Mary L.[3]	29.9
3. Citrus Valley Medical Center, Queen of the Valley Campus.[3] (Formerly Queen of the Valley Hospital.[3])	4.5
4. S.L.S & N. Inc.[3]	—
TOTAL	84.5

1/ Permanent transfer of rights as recorded within Exhibits "C", "D", and "E" of Judgment.
2/ Permanent transfer of rights after entry of Judgment.
3/ Intervenor after Judgment.

EXHIBIT "L"

LIST OF PRODUCERS AND THEIR DESIGNEES
June 21, 2012

PRODUCER	DESIGNEE
Adams Ranch Mutual Water Company	Domenic T. Cimarusti
Alhambra, City of	Mary Chavez
Amarillo Mutual Water Company	John Holzinger
Anderson Family Marital Trust	Carolyn Heinrich
Andrade, Susan	Susan Andrade
Aqua Capital Management LP	David L. Penrice
Arcadia, City of	Tom Tait
Azusa, City of	Chet Anderson
Azusa Agricultural Water Company	Chet Anderson
Azusa Valley Water Company	Chet Anderson
Bandel Family Trust	Candace Garnier Bandel
Banks, Gale C. and Vicki L.	Gale and Vicki Banks
Brezina Trust 2001, Raymond W. and Susan W.	Raymond W. Brezina
Brierly, Susan K.	Reiner Kruger
Brondino, Jeanne	Jeanne Brondino
Cadway, Inc.	James M. Byerrum
California-American Water Company (Duarte System)	Todd Brown
California-American Water Company (San Marino System)	Todd Brown
California Domestic Water Company	James M. Byerrum
Canyon Water Company	William McIntyre
Canyon Water & Development Corporation	Chet Anderson
Champion Mutual Water Company	Bryan P. Hellein
Chevron U.S.A.	Leon F. Drozd, Esq.
Citrus Valley Medical Center, Queen of the Valley Campus	Gregory J. Landers
Coiner, James W., dba Coiner Nursery	James W. Coiner
County Sanitation District No. 18	Raymond Tremblay
Covina, City of	Daryl Parrish
Covina Irrigating Company	David D. De Jesus
Crevolin, A. J.	A. J. Crevolin
CV Glendora 3 Site, LLC	Bill McReynolds
Dawes, Mary Kay	Mary Kay Partridge
DeFalco, John and Carole	John and Carole DeFalco
Del Rio Mutual Water Company	Dario Herrera
Driftwood Dairy	David Trenkenschuh

PRODUCER	DESIGNEE
East Pasadena Water Company	Lawrence M. Morales
El Monte, City of	Rene Bobadilla
El Monte Cemetery Association	Todd Brown
Fox Family Trust Michael Edward Fox and Crystal Marie Fox, Trustees	Michael and Crystal Fox
Garnier Family Trust, Anton C. and Anita	Anton C. and Anita Garnier
Garnier, Ruth Elaine Ailor Trust	Renee Garnier Poivre
Gates, James Richard	James Richard Gates
Glendora, City of	Steve Patton
Golden State Water Company - San Dimas District	Patrick Scanlon
Golden State Water Company - San Gabriel Valley District	Benjamin Lewis, Jr.
Green, Walter	Dr. Walter Green
Hanson Aggregates West, Inc.	Michael Rogers
Heinrich, Carolyn	Carolyn Heinrich
Hemlock Mutual Water Company	Robert McClung
Industry Waterworks Systems, City of	Gregory B. Galindo
Irwindale, City of	Sol Benudiz
JUH #1	Reiner Kruger
Kirklen, Jeffery B.	Jeffery B. Kirklen
Knight, William J.	William J. Knight
Landeros, John	John Landeros
La Puente Valley County Water District	Gregory B. Galindo
Lovelady, June G., Trustee	June G. Lovelady
Los Angeles, County of	Robert Maycumber
Loucks, David	David Loucks
Maddock, A.G.	S. Joellen Maddock
Maggiore, Valarie	Valarie Maggiore
McIntyre, William	William McIntyre
Metropolitan Water District of Southern California	Lorraine Aoys
Miller Coors LLC	Jeffrey D. Arbour
Monrovia, City of	Ron Bow
Monrovia Nursery	Reiner Kruger
Monterey Park, City of	Elias Saykali
Munoz, Ralph	Ralph Munoz
Nicholson Trust, The	M. L. Whitehead
Nicholson Family Trust, The	M. L. Whitehead

PRODUCER	DESIGNEE
Parton Family Trust	Vernal O. and Marverna Parton
Pellissier Irrevocable QTIP Trust, et al, Laurence R., Co-tenancy of	James M. Byerrum
Pico County Water District	Mark Grajeda
Polopolus, et. Al	Helen Gaskins
Rados Brothers	Alexander S. Rados
Rosedale, Lance	Reiner Kruger
Rosedale, Miles R.	Reiner Kruger
Rosemead Development LTD.	John W. Lloyd
Rurban Homes Mutual Water Company	George W. Bucey
Ruth, Roy	Roy Ruth
San Gabriel Country Club	Eddie Villanueva
San Gabriel County Water District	Barbara A. Carrera
San Gabriel Valley Municipal Water District	Darin Kasamoto
San Gabriel Valley Water Company	Michael L. Whitehead
Sierra La Verne Country Club	Donald Johnson
Sierra Madre, City of	Bruce Inman
Sonoco Products Company	Khaleda Hamid
South Pasadena, City of	Marcelino Aguilar
Southern California Edison Company	Jorge A. Rosa, Jr.
Southwest Water Company	Richard J. Rich
Sterling Mutual Water Company	Joy Ann Burt
Suburban Water Systems	Michael Quinn
Sunny Slope Water Company	Ken Tcheng
Tate, Phillip G. and Sieglinde A.	Phillip Tate
Three Valleys Municipal Water District	Richard W. Hansen
Tomovich, Nick and Sons	Nick Tomovich
Hieu Tran	Hieu Tran
Tyler Nursery	Fumiko Kishi
USA Waste of California, Inc.	Joseph J. Cassin
United Rock Products Corporation	Russ Caruso
Upper San Gabriel Valley Municipal Water District	Steven P. O'Neill
Valencia Heights Water Company	P. David Michalko
Valley County Water District	Lynda A. Noriega
Valley View Mutual Water Company	Sukie Madrid
VanLandingham, Richard	Reiner Kruger
Vietnamese American Buddhist Temple Congregation	Thich Viên Ly
Vulcan Materials Company	Robert W. Bowcock

PRODUCER	DESIGNEE
Whittier, City of	Daniel Wall
Wilmott, Erma M.	Erma M. Wilmott
Woodland, Richard	Richard J. Woodland
Workman Mill Investment Company	Bruce A. Lazenby

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

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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
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R.H. NICHOLSON, JR. (Producer Member)
WILLIAM M. WHITESIDE (Public Member)

STAFF

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FOR CALENDAR YEAR 1979

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)
D.J. LAUGHLIN (Producer Member)**
TRAVIS L. MANNING (Public Member)
L.E. MOELLER (Producer Member)

STAFF

Jane M. Bray, Assistant Secretary-Assistant Treasurer
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Thomas M. Stetson, Engineer

* Elected March 1979 to replace D.J. Laughlin, following his resignation.
** Resigned from Watermaster in February 1979.

FOR CALENDAR YEAR 1980

LINN E. MAGOFFIN (Producer Member), Chairman
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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
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L.E. MOELLER (Producer Member)
REGINALD A. STONE (Producer Member)
ALFRED F. 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 F. 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 F. WITTIG (Public Member), Treasurer
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Thomas M. Stetson, Engineer

FOR CALENDAR YEAR 1989

LINN E. MAGOFFIN (Producer Member), Chairman
REGINALD A. STONE (Producer Member), Vice Chairman
GERALD J. BLACK (Producer Member), Secretary
ALFRED F. 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. SHOLLENBERGER (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.

FOR CALENDAR YEAR 1990

LINN E. MAGOFFIN (Producer Member), Chairman
REGINALD A. STONE (Producer Member), Vice Chairman
GERALD J. BLACK (Producer Member), Secretary
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STAFF

Robert G. Berlien, Assistant Secretary-Assistant Treasurer
Ralph B. Helm, Attorney
Thomas M. Stetson, Engineer

FOR CALENDAR YEAR 1991

LINN E. MAGOFFIN (Producer Member), Chairman
REGINALD A. STONE (Producer Member), Vice Chairman
GERALD J. BLACK (Producer Member), Secretary
NELS PALM (Producer Member), Treasurer
ROYALL K. BROWN (Public Member)
MARVIN JOE CICHY (Public Member)
EDWARD R. HECK (Producer Member)
C. ROBER KEISER (Public Member)
ANDREW A. KRUEGER (Producer Member)

STAFF

John E. Maulding, Executive Officer
Ralph B. Helm, Attorney
Thomas M. Stetson, Engineer

FOR CALENDAR YEAR 1992

LINN E. MAGOFFIN (Producer Member), Chairman
REGINALD A. STONE (Producer Member), Vice Chairman
GERALD J. BLACK (Producer Member), Secretary
NELS PALM (Producer Member), Treasurer
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STAFF

John E. Maulding, Executive Officer
Ralph B. Helm, Attorney
Thomas M. Stetson, Engineer

FOR CALENDAR YEAR 1993

LINN E. MAGOFFIN (Producer Member), Chairman
REGINALD A. STONE (Producer Member), Vice Chairman
GERALD J. BLACK (Producer Member), Secretary
NELS PALM (Producer Member), Treasurer
RICHARD W. CANTWELL (Producer Member)
MARVIN JOE CICHY (Public Member)
FRANK F. FORBES (Public Member)
ANDREW A. KRUEGER (Producer Member)
LEROY E. MOELLER (Public Member)

STAFF

John E. Maulding, Executive Officer
Frederic A. Fudacz, Attorney (Effective February 1993)
Ralph B. Helm, Attorney (Retired January 1993)
Thomas M. Stetson, Engineer

FOR CALENDAR YEAR 1994

LINN E. MAGOFFIN (Producer Member), Chairman******
REGINALD A. STONE (Producer Member), Vice Chairman
RICHARD W. CANTWELL (Producer Member), Secretary***
STANLEY D. YARBROUGH (Producer Member), Treasurer
GERALD J. BLACK (Producer Member)*
MARVIN JOE CICHY (Public Member)
FRANK F. FORBES (Public Member)
MANNY J. MAGANA (Producer Member)
P. GEOFFREY NUNN (Producer Member)*******
LEROY E. MOELLER (Public Member)
MICHAEL L. WHITEHEAD (Producer Member)**

STAFF

John E. Maulding, Executive Officer****
Carol Williams, Executive Officer*****
Frederic A. Fudacz, Attorney
Thomas M. Stetson, Engineer

* Mr. Black resigned from Watermaster on February 4, 1994
** Mr. Whitehead was nominated to Watermaster on March 2, 1994
*** Mr. Cantwell was elected as Watermaster Secretary on May 4, 1994
**** Mr. Maulding passed away on March 13, 1994
***** Ms. Williams was appointed Executive Officer on August 3, 1994
****** Mr. Magoffin resigned from Watermaster on August 3, 1994
******* Mr. Nunn was nominated to Watermaster on August 8, 1994

FOR CALENDAR YEAR 1995

REGINALD A. STONE (Producer Member), Chairman
RICHARD W. CANTWELL (Producer Member), Vice Chairman
MANNY J. MAGANA (Producer Member), Secretary
MICHAEL L. WHITEHEAD (Producer Member), Treasurer
JUDITH L. ALMOND (Producer Member)
ROBERT W. BOWCOCK (Producer Member)
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FRANK F. FORBES (Public Member)
LEROY E. MOELLER (Public Member)

STAFF

Carol Williams, Executive Officer
Frederic A. Fudacz, Attorney
Thomas M. Stetson, Engineer

FOR CALENDAR YEAR 1996

REGINALD A. STONE (Producer Member), Chairman
RICHARD W. CANTWELL (Producer Member), Vice Chairman
MANNY J. MAGANA (Producer Member), Secretary
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STAFF

Carol Williams, Executive Officer
Frederic A. Fudacz, Attorney
Thomas M. Stetson, Engineer

FOR CALENDAR YEAR 1997

REGINALD A. STONE (Producer Member), Chairman
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Carol Williams, Executive Officer
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Thomas M. Stetson, Engineer

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REGINALD A. STONE (Producer Member), Chairman
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STAFF

Carol Williams, Executive Officer
Frederic A. Fudacz, Attorney
Thomas M. Stetson, Engineer

FOR CALENDAR YEAR 1999

REGINALD A. STONE (Producer Member), Chairman
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FRANK F. FORBES (Public Member)
JAMES B. GALLAGHER (Producer Member)
LEROY E. MOELLER (Public Member)

STAFF

Carol Williams, Executive Officer
Frederic A. Fudacz, Attorney
Thomas M. Stetson, Engineer

FOR CALENDAR YEAR 2000

REGINALD A. STONE (Producer Member), Chairman
RICHARD W. CANTWELL (Producer Member), Vice Chairman
MANNY J. MAGANA (Producer Member), Secretary
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JAMES B. GALLAGHER (Producer Member)
LEROY E. MOELLER (Public Member)

STAFF

Carol Williams, Executive Officer
Frederic A. Fudacz, Attorney
Thomas M. Stetson, Engineer

FOR CALENDAR YEAR 2001

REGINALD A. STONE (Producer Member), Chairman
RICHARD W. CANTWELL (Producer Member), Vice Chairman
MANNY J. MAGANA (Producer Member), Secretary
MICHAEL L. WHITEHEAD (Producer Member), Treasurer
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FRANK F. FORBES (Public Member)
JAMES B. GALLAGHER (Producer Member)
LEROY E. MOELLER (Public Member)

STAFF

Carol Williams, Executive Officer
Frederic A. Fudacz, Attorney
Thomas M. Stetson, Engineer

FOR CALENDAR YEAR 2002

REGINALD A. STONE (Producer Member), Chairman
RICHARD W. CANTWELL (Producer Member), Vice Chairman
MANNY J. MAGANA (Producer Member), Secretary
MICHAEL L. WHITEHEAD (Producer Member), Treasurer
ROBERT W. BOWCOCK (Producer Member)
MARVIN JOE CICHY (Public Member)
FRANK F. FORBES (Public Member)
JAMES B. GALLAGHER (Producer Member)
CAROL A. MONTANO (Public Member)

STAFF

Carol Williams, Executive Officer
Frederic A. Fudacz, Attorney
Thomas M. Stetson, Engineer

FOR CALENDAR YEAR 2003

REGINALD A. STONE (Producer Member), Chairman
RICHARD W. CANTWELL (Producer Member), Vice Chairman
JAMES B. GALLAGHER (Producer Member), Secretary
ROBERT W. NICHOLSON (Producer Member), Treasurer
ROBERT W. BOWCOCK (Producer Member)
ALFONSO CONTRERAS (Public Member)
FRANK F. FORBES (Public Member)
THOMAS LOVE (Public Member)
CHARLES SHAW (Producer Member)

STAFF

Carol Williams, Executive Officer
Frederic A. Fudacz, Attorney
Thomas M. Stetson, Engineer

FOR CALENDAR YEAR 2004

PAUL S. CARVER (Producer Member), Chairman
JAMES B. GALLAGHER (Producer Member), Vice Chairman
ROBERT W. BOWCOCK (Producer Member), Secretary
ROBERT W. NICHOLSON (Producer Member), Treasurer
RICHARD W. CANTWELL (Producer Member)
ALFONSO CONTRERAS (Public Member)
FRANK F. FORBES (Public Member)
THOMAS LOVE (Public Member)
CHARLES E. SHAW (Producer Member)

STAFF

Carol Williams, Executive Officer
Frederic A. Fudacz, Attorney
Thomas M. Stetson, Engineer

FOR CALENDAR YEAR 2005

PAUL S. CARVER (Producer Member), Chairman
JAMES B. GALLAGHER (Producer Member), Vice Chairman
ROBERT W. BOWCOCK (Producer Member), Secretary
ROBERT W. NICHOLSON (Producer Member), Treasurer
RICHARD W. CANTWELL (Producer Member)
ALFONSO CONTRERAS (Public Member)
LEON M.N. GARCIA (Public Member)
THOMAS LOVE (Public Member)
CHARLES E. SHAW (Producer Member)

STAFF

Carol Williams, Executive Officer
Frederic A. Fudacz, Attorney
Thomas M. Stetson, Engineer

FOR CALENDAR YEAR 2006

PAUL S. CARVER (Producer Member), Chairman
JAMES B. GALLAGHER (Producer Member), Vice Chairman
ROBERT W. BOWCOCK (Producer Member), Secretary
ROBERT W. NICHOLSON (Producer Member), Treasurer
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THOMAS LOVE (Public Member)
CHARLES E. SHAW (Producer Member)

STAFF

Carol Williams, Executive Officer
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FOR CALENDAR YEAR 2009

JAMES M. BYERRUM (Producer Member), Chairman
PAT MALLOY (Producer Member), Vice Chairman
DAN ARRIGHI (Producer Member), Secretary
CHARLES E. SHAW (Producer Member), Treasurer
ROBERT W. BOWCOCK (Producer Member)
ED CHAVEZ (Public Member)
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THOMAS LOVE (Public Member)
MICHAEL O. QUINN (Producer Member)

STAFF

Carol Thomas Williams, Executive Officer
Frederic A. Fudacz, Attorney
Thomas M. Stetson, Engineer

FOR CALENDAR YEAR 2010

JAMES M. BYERRUM (Producer Member), Chairman
PAT MALLOY (Producer Member), Vice Chairman
DAN ARRIGHI (Producer Member), Secretary
CHARLES E. SHAW (Producer Member), Treasurer
ROBERT W. BOWCOCK (Producer Member)
ED CHAVEZ (Public Member)
ALFONSO CONTRERAS (Public Member)
THOMAS LOVE (Public Member)
MICHAEL O. QUINN (Producer Member)

STAFF

Carol Thomas Williams, Executive Officer
Frederic A. Fudacz, Attorney
Thomas M. Stetson, Engineer

FOR CALENDAR YEAR 2011

JAMES M. BYERRUM (Producer Member), Chairman
PAT MALLOY (Producer Member), Vice Chairman
DAN ARRIGHI (Producer Member), Secretary
CHARLES E. SHAW (Producer Member), Treasurer
CHET ANDERSON (Producer Member)
ED CHAVEZ (Public Member)
THOMAS LOVE (Public Member)
MICHAEL O. QUINN (Producer Member)
CHARLES TREVINO (Public Member)

STAFF

Carol Thomas Williams, Executive Officer
Frederic A. Fudacz, Attorney
Thomas M. Stetson, Engineer*
Stephen B. Johnson, Engineer**

* Thomas M. Stetson passed away 4/14/2011
** Stephen B. Johnson replaced Mr. Stetson

FOR CALENDAR YEAR 2012

JAMES M. BYERRUM (Producer Member), Chairman
PAT MALLOY (Producer Member), Vice Chairman
DAN ARRIGHI (Producer Member), Secretary
DAVID MICHALKO (Producer Member), Treasurer
CHET ANDERSON (Producer Member)
ED CHAVEZ (Public Member)
THOMAS LOVE (Public Member)
MICHAEL O. QUINN (Producer Member)
CHARLES TREVINO (Public Member)

STAFF

Carol Thomas Williams, Executive Officer *
Anthony C. Zampiello, Executive Officer**
Frederic A. Fudacz, Attorney
Stephen B. Johnson, Engineer

* Carol Thomas Williams resigned on 5/12/12
** Anthony C. Zampiello appointed to Executive Officer 9/26/12

FOR CALENDAR YEAR 2013

JAMES M. BYERRUM (Producer Member), Chairman
DAVID MICHALKO (Producer Member), Vice Chairman
DAN ARRIGHI (Producer Member), Secretary
RICHARD RICH (Producer Member), Treasurer
CHET ANDERSON (Producer Member)
ANTHONY R. FELLOW (Public Member)
GARRY HOFER (Producer Member)
THOMAS LOVE (Public Member)
CHARLES TREVINO (Public Member)

STAFF

Anthony C. Zampiello, Executive Officer
Frederic A. Fudacz, Attorney
Stephen B. Johnson, Engineer

APPENDIX I

MAIN SAN GABRIEL BASIN WATERMASTER RULES AND REGULATIONS

MainSanGabrielBasin
WATERMASTER

Rules and Regulations

Upper San Gabriel Valley Municipal Water District v. City of Alhambra, et. al.
Case No. 924128 – Superior Court of Los Angeles County

As amended December 7, 2005, June 6, 2007, and June 21, 2012
Resolutions 12-05-201, 06-07-213, and 03-13-251

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RULES AND REGULATIONS OF

MAIN SAN GABRIEL BASIN WATERMASTER

(As Revised, Amended, and Readopted by Resolution No. 12-05-201, adopted December 7, 2005, and Resolution No. 6-07-213, adopted June 6, 2007, and Resolution No. 03-13-251, adopted March 6, 2013)

The definitions set forth in the Judgment in Los Angeles County Superior Court Civil Action No. 924128, entitled, "Upper San Gabriel Valley Municipal Water District v. City Alhambra, et al." as amended (Judgment herein), as well as additional definitions relating specifically to Section 28 of these Rules and Regulations, are used herein with the same meanings and are listed in Appendix "A" hereof.

1. Offices and Records. Watermaster's records shall be maintained at its offices, currently located at:

725 North Azusa Avenue
Azusa, California 91702
Telephone (626) 815-1300
Fax (626) 815-1303
Watermaster.org

Said records shall be available for inspection by any party during regular business hours. Copies of said records may be had upon payment of the costs of the duplication thereof and of any preparation costs pertaining thereto.

2. Watermaster Meetings and Holidays. Regular meetings of Watermaster shall be held at 2:30 p.m. on the first Wednesday of each and every month in the conference room of the City of Azusa Light and Water Administration Facility, 729 North Azusa Avenue, Azusa, California 91072, or at such time and place as otherwise determined by Watermaster.

(a) Holidays. The following holidays shall be observed by Watermaster:

- January 1 (New Year's Day);
- The third Monday in January (Martin Luther King's Birthday);
- The third Monday in February (Presidents' Day);
- The last Monday in May (Memorial Day);
- July 4 (Independence Day);
- The first Monday in September (Labor Day);
- The second Monday in October (Columbus Day);
- November 11 (Veterans' Day);
- The fourth Thursday and the following Friday in November (Thanksgiving);
- December 25 (Christmas Day);

(1) If January 1, July 4, November 11, or December 25 falls on a Sunday, the Monday following shall be that holiday and if any of said dates fall on a Saturday, the preceding Friday shall be that holiday.

(2) When any regular meeting of Watermaster shall fall on a hereinabove designated Watermaster holiday, said regular meeting shall be held on the next succeeding regular business day at the same time and at the same place as the said regularly scheduled meeting, unless otherwise determined by Watermaster.

(b) Meeting Changes. Any changes in the time or place of said regular meeting shall be in compliance with the Judgment.

(c) Special Meetings. Special meetings of Watermaster may be called at any time by the Chair or Vice-Chair or by any three (3) members of Watermaster, by written notice in compliance with the Judgment. The calling notice shall specify the time and place of the special meeting and the business to be transacted. No other business shall be considered at such meetings.

(d) Adjournment. Any meeting of Watermaster may be adjourned to a time and place specified in the Order of Adjournment. Less than a quorum of Watermaster, Watermaster's Secretary, or the Executive Officer 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 or to be held, within twenty-four (24) hours after the adoption of the Order of Adjournment.

3. Quorum of Watermaster, Necessary Votes for Action and Roll Call of Votes. Five (5) members of Watermaster shall constitute a quorum for the transaction of its affairs. Action by the affirmative vote of five (5) members shall constitute action by the Watermaster, except that the affirmative vote of six (6) members shall be required: (a) to enter into any Cyclic Storage Agreement; or (b) to approve the purchase, spreading or injection of Supplemental Water for Ground Water recharge.

Any member of Watermaster may request a roll call vote on any question or motion considered and the ayes and noes thereon shall be recorded in the minutes of the meeting.

4. Agenda of Watermaster Meetings. Any person requesting that a matter be considered by Watermaster for action thereon shall request the same in writing directed to Watermaster's Executive Officer for inclusion on the Agenda of the next scheduled meeting to be held at least ten (10) days after receipt of said request.

5. Conduct of Meetings – Robert's Rules of Order. For the conduct of Watermaster meetings, Roberts' Rules of Order shall be followed and, without consent of Watermaster, the priorities of Watermaster business shall be that stated in the Agenda for a particular meeting.

6. Organization of Watermaster. At its first meeting each year, Watermaster shall elect a Chair and Vice Chair from its membership. It shall also select a Secretary and a Treasurer and may select such assistants as may be appropriate, any of whom may, but need not be, members of Watermaster.

7. Minutes. Minutes of all Watermaster meetings shall be kept, which shall reflect all actions taken. 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 and failure of a party herein to request copies thereof shall constitute his waiver of notice.

8. Designee to Receive Future Notices. 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) Service Upon and Delivery to Parties of Various Papers. 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 any substitute designation filed with the Court.

(b) Substitute Designee. 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.

(c) Delivery Method. 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. In lieu of mailing any item required to be

served under the Judgment, Watermaster may serve such item by electronic service, which may include posting the document to Watermaster's website, sending an e-mail of the document to that party, or sending notice of availability to that party indicating the document's availability for viewing on the Watermaster website. If a party does not have a valid e-mail address or internet access, that party shall identify an alternative method of service to be approved by Watermaster in its sole discretion. Any further reference to "mail" or "mailing" shall constitute "delivery to" or "service upon", pursuant to this Section 8(c).

(d) Party Removal. Any party desiring to be relieved of receiving notices of Watermaster activity may file a waiver of notice on a form to be provided by Watermaster. Thereafter such party shall be removed from the active party service list and not receive any notices required under the Judgment. The parties have a duty to keep Watermaster informed of their current e-mail and mailing addresses. If mail or e-mail is returned undeliverable to Watermaster for an incorrect address, Watermaster in its sole discretion may remove that party from the active party service list.

(e) List of Designees. Watermaster shall maintain a current list of party designees to receive notices under the Judgment.

9. Election of Producer Representatives.

(a) Notice of Nomination Election. Watermaster shall annually give ten (10) days notice to all parties that an election shall be held at Watermaster's regularly scheduled meeting in November of each year, for the purpose of nominating Producer representatives to Watermaster.

(b) Voting. Nominations of 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, owned by him, of Base Annual Diversion Right, Prescriptive Pumping Right or Integrated Production Right, as defined in the Judgment. When the names placed in

nomination exceed the number of representatives to be elected, votes shall be cast by ballot using official ballot forms provided by Watermaster. Each ballot form must list the Producer and designee or proxy holder casting the vote, the Producer's voting entitlement, the names of the nominees for whom the votes have been cast, and the number of votes cast for each nominee.

(c) Conduct of Elections. Prior to the nomination of Producer representatives, the Chair shall appoint tellers to conduct the election. Such tellers may include any member of Watermaster staff to monitor the canvassing and counting of votes. The tellers shall distribute the ballots, and, at the conclusion of the balloting, collect the ballots, retire to tabulate the votes, and promptly report the results of the election to the parties present at the election.

(1) In the event there is a challenge to the declared election results, the Chair shall appoint three (3) Producer parties as election inspectors who shall recount the election ballots and immediately certify the results of such election to Watermaster and others present at the election.

(2) All ballots shall be considered confidential, and no ballot or information thereon shall be disclosed except to the appointed tellers and election inspectors, without the express permission of the Producer casting the ballot.

(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. Notwithstanding Section 27 of the Judgment, Watermaster nominations may be promptly certified by the Court upon ten (10) calendar days' notice thereof, plus the time prescribed by statute for service by mail, e-mail or other electronic means.

10. Vacancy on Watermaster and Replacement. In the event of a vacancy on Watermaster, a successor shall be nominated at a special meeting of Watermaster and Producers to be called by Watermaster within ninety (90) days in the case of a Producer representative or by the action of the appropriate District Board of Directors in the case of a Public Representative. Subject to approval and appointment by the Court, such successor Watermaster shall fill the unexpired term of the Watermaster member replaced.

11. Watermaster Action Subject to Court Review. Any action, decision, rule or procedure of Watermaster shall be subject to review by the Court on its own motion or on timely petition or 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 delivered. Delivery of draft copies of Watermaster minutes which contain such order, decision, action, or contemplated action, to the parties requesting the same shall constitute such notice to all parties, as of the date of such delivery.

(b) Notice of Motion. Any party may, by a regularly noticed motion, petition the Court for a review of any Watermaster action or decision. Notice of such motion shall be delivered to Watermaster and to the designees of all parties. Unless ordered by the Court, such petition shall not operate to stay the effect of such Watermaster action.

(c) Time for Motion. Within thirty (30) days of delivery of Notice of Watermaster Determination of Operating Safe Yield together with a statement of each Producer's entitlement thereunder, any affected party may, by a regularly

noticed motion, Petition the Court for an Order to Show Cause for review of said Watermaster findings, determination or entitlement and thereupon the Court shall hear objections thereto and settle such dispute.

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

(d) *De Novo* Nature of Proceedings. Upon filing of such motion for hearing, the Court shall notify the parties of the 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 proceedings.

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

12. Water Measuring Devices and Meter Test Program. Parties producing in excess of five (5) acre-feet per year shall, pursuant to these uniform rules, install and maintain in good operating condition, at the cost of each such party, such necessary water measuring devices or meters as may be appropriate. Any such measuring device is subject to such inspection and testing as Watermaster may, from time to time, deem necessary. Upon testing, the meters shall be sealed by Watermaster and remain so sealed. Watermaster will conduct a formal meter-testing program to help the parties accurately report their Production. Watermaster intends to test every meter under its jurisdiction at least once every two (2) years.

(a) Tests of Meters Which Supply Watermaster. At least once every two (2) years, Watermaster shall request certified meter tests of all meters of Responsible Agencies through which Supplemental Water is furnished to Watermaster and of the meters which measure all Cyclic Storage deliveries authorized by Watermaster.

(b) Wells. Water wells shall be equipped with a positive displacement, velocity impeller, venturi, orifice-type or electromagnetic flow meter with a totalizer. The totalizer on positive displacement, velocity impeller, venturi and orifice-type meters shall be correctable only by changing mechanical gear equipment. Producers using electromagnetic flow meters shall ensure that electronic access to meter data is user-defined and password-protected to prevent unauthorized resetting of the totalizer. Additionally, all wells equipped with electromagnetic flow meters shall also have a run-hour meter installed to provide verification of production in the event the totalizer is inappropriately or accidentally reset or its accuracy is otherwise disputed. The meter shall be accessible and installed according to good design practices. Watermaster personnel shall assist any party having any question as to installation requirements.

(c) Calibrated Test Equipment. Watermaster or its approved meter tester will maintain a complete line of carefully calibrated test equipment. This equipment is the standard with which all water meters must be compared. The tolerance for each meter is plus (+) or minus (-) five percent (5%) of the standard. Watermaster may require any Producer with multiple wells and meters to maintain an aggregate accuracy of plus (+) or minus (-) two percent (2%).

(d) Repair or Replacement of Inaccurate Meters. Defective or inaccurate meters must be repaired within thirty (30) days of receipt of notice thereof from Watermaster.

(e) Surface Diversions. Surface Water Diversions shall be measured with a weir and recorder or meter capable of accurately measuring and recording such Diversions.

(f) Interim Meter Tests. Should a Producer discover that the meter which measures the water Production from his well is measuring inaccurately, he shall first notify Watermaster thereof, have the meter retested and, if measuring

inaccurately, then have the same repaired at the earliest practical and reasonable time. Upon the completion of such repair, such Producer shall immediately have such meter tested and sealed by Watermaster and it shall remain so sealed. Such testing and sealing will be accomplished by Watermaster upon request therefor by said Producer or said repaired meter may be tested and sealed by any meter tester authorized by Watermaster, as provided in Subsection (g) of this Section 12. Results of such meter tests shall be furnished to Watermaster within ten (10) days of testing, on forms provided by Watermaster.

(g) Watermaster Approved Meter Testers. Persons, firms or corporations in the business of repairing and/or testing water measuring devices may be approved by Watermaster to test and seal meters on behalf of Watermaster by submitting their qualifications therefor to Watermaster and obtaining Watermaster's approval to perform meter tests and seal such meters as agents of Watermaster. The name, address and telephone number of all such Watermaster approved meter testers shall be maintained at and be available from the office of Watermaster.

(h) Meter Seal by Watermaster and Notification of Meter Maintenance. At the completion of all meter tests Watermaster's seal shall be placed on the meter, if the meter test demonstrates that the meter is within the accuracy standard of five percent (5%).

Such sealing then requires that Watermaster be notified in writing within seven (7) days if Watermaster's seal has been broken or if any of the following events occur: (a) the meter is to be repaired or recalibrated; (b) there is any other interference affecting the meter or Watermaster's seal; (c) the meter is to be relocated even if Watermaster's seal is still intact; or (d) a new meter is to be installed.

(i) Estimation of Production Due to Meter Maintenance. When aProducer must estimate Production due to meter maintenance, he shall consult

with Watermaster or its engineer for approval of the method of estimation. A copy of the estimate calculations shall be supplied to Watermaster with the corresponding Quarterly Production Report.

13. Reports of Producers to Watermaster. Each Producer with an adjudicated right in excess of five (5) acre-feet per year and each Producer with an Overlying Right in any amount shall file with Watermaster a quarterly report of water Produced from the Basin or Relevant Watershed, on forms provided by Watermaster. Producers using electromagnetic flow meters shall report run hours in addition to totalizer readings. Quarterly Production Reports shall be so filed no later than the last day of the month next succeeding the end of the relevant quarter, i.e. April 30, July 31, October 31 and January 31.

Each party 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.

Minimal Producers who initiated production on or before June 21, 2012, are exempted from the operation of this Physical Solution, so long as such party's annual Production does not exceed five (5) acre-feet. 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. As of June 21, 2012, there shall be no new Minimal Producers, and any new Producer shall be subject to all provisions of the Judgment.

(a) Adjudicated Right in Excess of Five (5) Acre-Feet Not to be Reduced to Minimal Producer by Transfer. Any portion of: (1) the Base Annual Diversion Right of a Diverter; (2) the Prescriptive Pumping Right of a Pumper; or (3) the Diversion Component and Prescriptive Pumping Component of an Integrated Producer, adjudicated in any amount in excess of five (5) acre-feet per year [at the time that Judgment herein was entered, January 4, 1973], that is or

may be reduced to five (5) acre-feet or less by assignment or transfer of rights, as permitted by Section 55 of the Judgment, shall not enjoy the status of a Minimal Producer as defined in Section 10 (o) of the Judgment.

(b) Notice to Watermaster of Transfers of Water Rights. Within fifteen (15) days thereof all parties shall notify Watermaster of any transfer, assignment, license or lease of any water right, or portion thereof, not shown in the Judgment or previously filed with Watermaster and such transferee must be or become a party to the action (as provided in Section 57 of the Judgment). All parties are required to notify Watermaster of any subsequent assignment, transfer, license or lease of water rights granted or acquired by them and they shall file a duly acknowledged copy of the document(s) therefor with Watermaster, within fifteen (15) days after execution and acknowledgement of such document(s).

For such assignment, transfer, license or lease of water rights to be effective for, or be deemed by Watermaster to apply to, Production in a particular Fiscal Year (July 1 - June 30), the document(s) therefor shall be executed and acknowledged prior to the end of said Fiscal Year (June 30) and copies thereof showing such acknowledgement must be received by Watermaster prior to July 15, following the end of said particular Fiscal Year. The transferee must be, or petition to become, a party to the action within ninety (90) days following such assignment, transfer, license or lease of water rights.

When the term of a temporary assignment, transfer, license or lease of water rights extends beyond the end of the current Fiscal Year, it shall be the obligation of the transferee thereof to annually, during the month of July of each Fiscal Year during said term, notify Watermaster of said transferee's intention to exercise said water right during the then current applicable Fiscal Year.

(c) Conveyance of Water Right with Conveyance of Property. Parties are advised that when a water right owner conveys the property where a water right was developed, the said water right shall not be conveyed with such property unless and until the appropriate notice procedures established by Watermaster have been complied with. When it is intended to transfer or acquire adjudicated water rights in the Basin or Relevant Watershed, the parties thereto are advised to use the appropriate forms contained in exhibits to these Rules and Regulations and to notify Watermaster of such transfers by furnishing a copy of such transfer documents(s) within fifteen (15) days of execution and acknowledgement thereof.

(d) Conveyance of Water Right without Conveyance of Property. Parties are also advised that the owner of an adjudicated water right herein (except an Overlying Right) may transfer the same (temporarily or permanently) without conveyance of the property where the water right was developed.

(e) Transfer of Overlying Right. The transfer and use of Overlying Rights shall be limited (as provided in Section 21 of the Judgment) as exercisable only on specifically defined Overlying Lands and they cannot be separately conveyed or transferred apart therefrom.

(f) Intervention Stipulation Required. No conveyance of water rights to a person who is not a party to the subject action shall be recognized by Watermaster unless the transferee thereof files with Watermaster a Stipulation in Intervention to the subject action (Exhibit "E") agreeing to be bound by the Judgment herein, and until the Court approves said Stipulation and Intervention.

(g) Notice Required. Any transfer of water rights shall be effective only when the requirements of this Section 13 are met and when the parties file with Watermaster, within fifteen (15) days of such transfer, a copy of the transfer document(s) which:

(1) Identifies both the transferee(s) and the transferor(s);

(2) Accurately recites the total quantity (in acre-feet) of water rights transferred;

(3) Is executed by both the transferee(s) and the transferor(s);

(4) Is acknowledged by both transferee(s) and transferor(s) in a form sufficient for recordation;

(5) Lists the designee(s) of both the transferor(s) and transferee(s) to receive future service and notice of papers and process; and

(6) Is accompanied by a map of the service area where the water was used by transferor(s) (assignors) and a map of the service area where the water is intended to be used by the transferee(s) (assignees), if requested by Watermaster.

(h) Approved Forms of Transfer Documents and Other Forms. Approved forms of such transfer documents and other approved Watermaster forms are attached hereto, marked and identified as follows:

Exhibit "A"	Permanent Transfer of Water Rights – Prescriptive Pumping Rights
Exhibit "B"	Permanent Transfer of Water Rights--Base Annual Diversion Right
Exhibit "C"	Permanent Transfer of Water Rights--Integrated Production Right
Exhibit "D"	Temporary Assignment or Lease of Water Right
Exhibit "E"	Stipulation Re Intervention After Judgment
Exhibit "F"	Designee to Receive Future Notices for and on Behalf of Defendant(s)

Exhibit "G"	Notice of Transfer of Overlying Rights With Property to Which They are Appurtenant
Exhibit "H"	Application To Drill Water Well
Exhibit "I"	Application To Modify Existing Water Well
Exhibit "J"	Application To Destroy Water Well
Exhibit "K"	Application For Water Treatment Facility

(i) Presumption as to Unexercised Rights. Unless otherwise noted on the above mentioned transfer documents(s), it will be presumed by Watermaster that the permanent transfer of water rights will include all unexercised rights thereunder, including authorized carry-over of unused rights.

14. Operating Safe Yield. 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. Said determination shall be made at the close of the hearing thereon, which shall be commenced at Watermaster's regular meeting in May of each year. Watermaster shall notify each Pumper and Integrated Producer of his share thereof, stated in acre-feet per Fiscal Year. Thereafter, no party may produce in any Fiscal Year any Consumptive Use Portion of any Overlying Right, or 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. The rate of such Assessment shall be established at the same meeting at which the Operating Safe Yield is established, and it may be estimated for the years for which Operating Safe Yield is estimated. In establishing the Operating Safe Yield, the Watermaster shall follow all physical, economic, and other relevant parameters provided in the Judgment herein. Said determination shall be made in accordance with the following:

(a) Preliminary Determination. At Watermaster's regular 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 (5) Fiscal Years. Said determination shall be made in the form of a report containing a summary statement of the considerations, calculations and factors utilized by Watermaster in arriving at the said Operating Safe Yield.

(b) Notice of Hearing. A copy of said Preliminary Determination Report shall be delivered to all parties at least ten (10) days prior to a hearing thereon to be commenced at Watermaster's regular meeting in May of each year, at which time objections or suggested corrections or modifications of said determination shall be considered.

(c) Watermaster Final Determination and Review Thereof. Within thirty (30) days after completion of said hearing, Watermaster shall deliver to each Pumper, Diverter, Overlying User 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 delivery of notice of said Watermaster determination, may petition the Court for an Order to Show Cause for Review of said determination in accordance with Section 11 hereof.

15. Carry-over Rights.

(a) Pumping. Any Pumper's Share of Operating Safe Yield, and the Production right of any Integrated Producer which is not Produced in a given year may be carried over and accumulated for one (1) year.

(b) Diversions. Diverters shall be entitled to Divert for direct use up to two hundred percent (200%) of their Base Annual Diversion Right in any 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.

(c) Overlying Rights. By definition, there is no carry-over of Overlying Rights.

(d) Presumption as to Carry-over Rights. The first water Produced in the succeeding Fiscal Year shall be deemed Produced pursuant to such Producer's Carry-over Rights.

16. Special Hearings. Watermaster shall conduct such special hearings as deemed appropriate upon thirty (30) days notice to the parties hereto.

17. Policy Decisions. No policy decision shall be made by Watermaster until its next regular meeting after the question involved has been raised for discussion at a Watermaster meeting and noted in the draft of minutes thereof.

18. Assessments. Watermaster shall have the power to levy and collect Assessments from the parties (other than non-consumptive users, or Production under Special Category Rights or Cyclic Storage Agreements) based upon Production during the preceding Fiscal Year. Assessments on Minimal Producers will apply only to (1) existing parties who become Minimal Producers in the future; and (2) Minimal Producers who intervene after June 21, 2012. Said Assessments may be for one or more of the following purposes:

(a) Administration Costs. At its regular May meeting Watermaster shall adopt a proposed budget for the succeeding Fiscal Year and within fifteen (15) days shall deliver a copy thereof to each party, together with a statement of the level of Administration Assessment levied by Watermaster and which will be collected for purposes of raising funds for said budget. Said Assessments shall be uniformly applicable to each acre-foot of Production.

(b) Replacement Water Costs. Replacement Water Assessments shall be collected from each Producer 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 rates established by Watermaster, consistent with Watermaster's Operating Criteria (Exhibit "H" to the Judgment) – and other relevant factors, including the projected cost and availability of Supplemental Water supplies.

Watermaster Replacement Water Assessment rates may be in an amount calculated to allow Watermaster to purchase more than one acre-foot of Supplemental Water for each acre-foot of excess Production to which such Assessment applies, when such purchases are necessary to secure Supplemental Water supplies for the benefit of the Basin and parties. Such assessment shall be in accordance with the "Policy/Criteria for Replacement Water Assessment" as appended hereto.

(c) Make-up Obligation. An Assessment shall be levied and collected equally on account of each acre-foot of Production, which does not bear a Replacement Water 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 of an Overlying Right.

(d) In-Lieu Water Cost. An Assessment may be levied against all Pumping to pay reimbursement for In-Lieu Water Cost except that such Assessments shall not be applicable to the non-consumptive use portion of Overlying Rights.

(e) Water Resource Development Costs. Watermaster may levy an Assessment on all Pumping to support the purchase, financing, and/or development of new or additional Supplemental Water sources, in cooperation with one or more Responsible Agencies as appropriate. Such assessment shall be in accordance with the "Policy/Criteria for Water Resource Development Assessment" as appended hereto.

(f) Waivers Possible for Water Quality Improvement or Protection. In accordance with Section 45 (e) of the Judgment, a Producer of water from the Basin for the purpose of testing, protecting, or improving water quality, may apply in writing by verified petition or application (hereinafter "Application") to Watermaster, for approval of such water Production free of all or any part of Watermaster Assessments thereon, and for waiver of one or more of the

provisions of Sections 25, 26, and 57 of said Judgment, where appropriate, upon terms and conditions to be established by Watermaster after a noticed hearing on such Application.

A waiver of Assessment shall not be granted for the purpose of removal of contamination or improvement of the quality of Basin water which has, or could have, resulted from the activity of the Applicant for such waiver.

In the event cleanup or Treatment Facilities are installed in the Basin by or for the benefit of a Producer, and the Basin water receiving treatment from said Treatment Facilities is subsequently delivered by or used for beneficial purposes of such Producer, the Production of such water shall not be entitled to waiver or modification of Watermaster Assessments thereon.

Notwithstanding the above, if Basin water is treated and immediately percolated or reintroduced to the Basin by way of spreading, injection, or otherwise, for purposes of this Section 18 (f), its Production may, upon Watermaster's approval of an Application to waive or modify its Assessments on the same, be entitled thereto. In any event, such water shall only be percolated or reintroduced to the Basin with the consent of Watermaster and said water shall be of a quality acceptable to Watermaster.

Although all Production from the Basin must be reported to Watermaster on a timely basis in accordance with these Rules and Regulations, Production which is granted a waiver of Assessment hereunder may, by reason of certain circumstances as specifically determined by Watermaster, be deemed an unused right and entitled to carry-over, in accordance with Section 49 of the Judgment.

(g) Application for Waiver of Assessment. An Application for Waiver of Assessment, as above set forth, shall contain all relevant information relied upon by Applicant which he believes justifies the granting of said Application. All such Applications shall explain the special needs and circumstances for such

Production and specify the approximate amounts to be Produced, the time frame of such Production, the specific location(s) of the points(s) of extraction(s), and the place of intended disposal of such water, as well as any supplemental or additional information requested by Watermaster. All such extractions shall be metered and reported quarterly to Watermaster, along with all other Basin Production, in accordance with these Rules and Regulations.

Should an Application contain incomplete information or should Watermaster desire additional, other, or further information in relation thereto, the same shall also be furnished and verified by Applicant.

(h) Hearing and Effective Date. Within thirty (30) days of the filing of any such Watermaster accepted Application, Watermaster shall give at least thirty (30) days notice to the designees of all parties that it will hold a hearing on said Application. Watermaster may, after the conclusion of said hearing, under then existing conditions, waive all or any part of its Assessments on such Production, such waiver shall not be effective prior to the date of the filing of said accepted Application, and may also waive the provisions of Sections 25, 26, and 57 of the Judgment herein.

The effective date for the granting of an Application to waive or modify Watermaster Assessments shall be no later than ten (10) days after approval thereof by Watermaster and it shall continue for the period of time specified therein, unless sooner terminated or extended by Watermaster. Nothing herein is intended to allow an increase in any Producer's annual entitlement under the Judgment.

(i) Borrowing. Upon approval by the Watermaster at its regularly scheduled public meeting, when necessary to secure Supplemental Water, Watermaster may borrow funds in excess of the annual amount of Assessments levied but uncollected. Prior to borrowing funds, Watermaster shall meet and confer with Responsible Agencies and

seek their input. Borrowing shall be in accordance with the "Policy/Criteria for Borrowing" as appended hereto.

19. Levy and Notice of Assessments. 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, and at such other time [s] of the year as determined by Watermaster, Watermaster shall levy applicable Administration Assessments, Replacement Water Assessments, Make-Up Water Assessments, In-Lieu Water Assessments, and Water Resource Development Assessments, if any. Watermaster shall give written notice of all applicable Assessments to each party on or before August 15, of each year, and at such other time [s] as determined by Watermaster. To provide flexibility and maximize the opportunity to secure Replacement Water supplies when available, Watermaster may levy supplemental assessments as necessary to create sufficient funds to purchase and pre-purchase such Replacement Water supplies for the benefit of the Basin and parties.

(a) Payment. All Watermaster Assessments shall be due and payable on or before September 20, or at such other times as determined by Watermaster, following such Assessment levy or Assessment rate fixing, subject to the rights reserved in Section 37 of the Judgment, and such Assessment shall be paid or become delinquent after September 20.

(b) Delinquency. Any Assessment payment which becomes delinquent shall bear interest at the annual prime interest rate in effect on the first business day of August of each year, plus one percent (1 %). Said prime interest rates shall be that fixed by the Bank of America NT&SA for its preferred borrowing on said date. Said prime interest rate plus one percent (1%) shall be applicable to any said delinquent Assessment payment 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 said interest thereon may be collected in a Show Cause

proceeding in the subject action or in 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.

(c) Adjustments. By reason of Watermaster's inability to control the direct costs and other charges incurred for Supplemental Water obtained from Responsible Agencies, it may be necessary from time to time for Watermaster to adjust the foregoing Assessments. Such Assessments may only be adjusted after giving at least 15 days Notice to all Parties of the meeting at which such adjustments will be considered by Watermaster.

20. Responsibility for Watermaster Assessments. Parties Producing water from the Relevant Watershed shall be responsible for Watermaster Assessments levied upon all Production.

21. Over and/or Under Reporting.

(a) Over Reporting. Watermaster shall make refunds, in whole or in part, of Assessments theretofore paid, to any Producer who has erroneously overstated his Production in any sworn statement for a quarterly period required hereunder and who has overpaid any Assessment for that quarter, but only upon compliance by the Producer with the procedure hereinafter set forth and within the time hereinafter provided.

Any such Producer, within one (1) year of the last day for filing of the said sworn statement for the quarterly period in question, may file a verified application with Watermaster requesting a refund of that portion of any Assessment claimed to have been paid by reason of that Producer's erroneous overstatement of Production. If incomplete information is contained in said application, or if Watermaster desires other, further, or additional information than that set forth in said application, the same shall also be furnished by a verified statement mailed to Watermaster on behalf of Applicant within thirty (30) days of the mailing of the written notice or request therefor from Watermaster to the

Producer's designee, at his address as shown by Watermaster records, or the application shall be deemed abandoned. Such request by Watermaster shall not cause any application otherwise timely filed to be considered as not filed within said one (1) year period. The Watermaster may pay any refund claimed without a hearing thereon, but no application shall be denied, in whole or in part, without a hearing being accorded to the Applicant, in which said hearing the Applicant shall have the burden of proof. Any determination by Watermaster on any matter in connection with said application shall be final and conclusive upon the said Producer.

Any refund authorized to be paid under the provisions of this Section may be paid only out of moneys realized from the appropriate Watermaster Assessment levied or thereafter raised. Under election of the Producer, any refund determined by Watermaster to be owing may be credited to the Producer against any subsequent Assessments which might become due and owing from him to Watermaster. No refunds shall be made except as authorized by this section and this section may not apply to over reporting unless there has been compliance with the provisions of Section 12 hereof.

(b) Under Reporting. If Watermaster shall have probable cause to believe that the Production of water from any water Producing facility is in excess of that disclosed by the sworn statements covering such water Producing facility, Watermaster may cause an investigation and report to be made concerning the same. Watermaster may fix the amount of water Production from such facility at an amount not to exceed the maximum Production capacity thereof, provided, however, where a Watermaster tested water measuring device is permanently attached to such facility, the record of Production as so disclosed by such measuring device shall be presumed to be accurate and the burden of proof shall be upon Watermaster to establish the contrary.

A determination by Watermaster that a Producer has under reported Production shall require Watermaster to give written notice thereof to such Producer by mailing such notice to his designee, at the address shown by Watermaster records. A determination of under reporting made by Watermaster shall be conclusive on any Producer who has Produced water from the facility in question and the Watermaster Assessments based thereon, together with interest as set forth in Section 19 (b) hereof, shall be payable forthwith, unless such Producer shall file with Watermaster within ten (10) days after the mailing of such notice, a written protest setting forth the ground or grounds for protesting the amount of Production so fixed or the Assessments and interest thereon.

Upon the filing of such protest, Watermaster shall hold a hearing at which time the total amount of water Production and the Assessments and interest thereon shall be determined, which action shall be conclusive if based upon substantial evidence. A notice of such hearing shall be mailed to protestant at least ten (10) days before the date fixed for the hearing. Notice of the determination by the Watermaster at the close of such hearing shall be mailed to the protestant. The Producer shall have twenty (20) days from the date of mailing of such notice to pay the Assessments fixed by Watermaster and interest thereon, as fixed herein, before the same becomes delinquent.

(c) Delinquent Assessments; Interest; Costs; and Attorney's Fees. Watermaster may bring suit in the Court having jurisdiction against any Producer of water from the Basin or Relevant Watershed for the collection of any delinquent Assessment and interest thereon. The Court having jurisdiction of the suit may, in addition to any delinquent Assessment, award interest and reasonable costs, including attorney's fees.

22. Information Concerning Offers to Purchase, Sell or Lease Water Rights. Watermaster shall maintain a record of any offer to purchase, sell or lease water rights reported to Watermaster, for the purpose of encouraging the orderly transfer of such

rights by acting as a clearing house for such information. Any person desiring to purchase, sell, or lease such rights may examine such Watermaster records.

23. Watermaster Control of Spreading and Ground Water Storage. Except for the exercise of non-consumptive uses, no party shall spread water within the Basin or Relevant Watershed for subsequent recovery or Watermaster credit without prior Watermaster written permission to do so because Watermaster has sole custody and control of all Ground Water storage rights in the Basin.

(a) Replacement Water and Cyclic Storage Deliveries. Deliveries of water for replenishment or cyclic storage shall be made either pursuant to Watermaster's duly authorized order for Replacement Water or in accordance with terms and conditions of a valid Cyclic Storage Agreement with Watermaster. All such water deliveries shall be subject to the conditions and priorities set forth in Section 26 herein.

(b) Storage of Water for Export. As provided in Section 34(r) of the Judgment, any party may enter into an agreement with Watermaster to store Supplemental Water and export said stored Supplemental Water under specific terms and conditions approved by Watermaster. Such storage and export shall be subject to (1) a determination by Watermaster that no material injury to the Basin or parties will result therefrom; (2) execution of an agreement with Watermaster setting forth the terms and conditions upon which water may be stored in or exported from the Basin; and (3) compliance with Watermaster Rules and Regulations respecting Basin storage and export. In accordance with Section 45(b)(6) of the Judgment; Watermaster shall levy an assessment to account for costs, burdens or losses incurred in connection with such exported or stored water, including a fee for storage administration. Such storage or export shall be subject to the "Policy/Criteria for Agreement for Storage and Export of Supplemental Water" as appended hereto.

(c) Supplemental Water Quality. In an effort to prevent degradation of Basin groundwater quality, and in accordance with Section 40 of the Judgment, Watermaster may establish criteria for the quality of Supplemental Water delivered for Basin replenishment or Cyclic Storage. Such criteria shall consider applicable Basin Plan objectives as set forth by the California Regional Water Quality Control Board - Los Angeles Region, but shall also balance the need to maintain adequate water supplies with the need to preserve Basin water quality.

Watermaster may review and update its Criteria for Supplemental Water Quality as needed to address changes in regulations or hydrologic conditions. Watermaster shall provide the Responsible Agencies with at least 30 days notice of its intent to adopt or modify such criteria, along with the proposed draft or changes, and shall consider comments from those agencies prior to adoption. Watermaster shall also provide the Responsible Agencies with the final, adopted Criteria for Supplemental Water Quality.

24. Watermaster Annual Report. Watermaster shall annually file with the Court and deliver to the parties a report of all Watermaster activities during the preceding Fiscal Year, including an audited statement of all accounts and financial activities of Watermaster, summaries of Diversions and Pumping, and all other pertinent information. To the extent practical, said report shall be delivered to all parties and filed with the Court on or before November 1 of each Year.

25. Watermaster Stipulation Re Intervention After Judgment. Attached hereto and marked "Exhibit E" is a form of Stipulation for Intervention After Judgment which Watermaster will execute, file with the Court if accompanied by the necessary filing fee, obtain a Court hearing date thereon, give Notice thereof and attempt to obtain an approving Court Order thereon.

26. Uniform Rules and Conditions of Cyclic Storage Agreements.

(a) Application for Cyclic Storage Agreements. Any person or entity, private or public, desiring to spread and store Supplemental Water within the

Basin for subsequent recovery and use or for Watermaster credit shall make application to Watermaster for a Cyclic Storage Agreement pursuant to these Uniform Rules and Conditions. Watermaster shall have first call on Supplemental Water for Replacement Water, Make-up Water and for the "Alhambra Exchange" before such water is made available for Cyclic Storage Agreements.

(b) Purpose of Cyclic Storage Agreements. All Cyclic Storage Agreements shall be for the utilization of Ground Water storage capacity of the Basin and for cyclic or regulatory storage of Supplemental Water.

(c) Available Storage Capacity. In considering the available Ground Water storage capacity of the Basin for such Agreements, Watermaster shall take into account the operation of the Basin under the Physical Solution provisions of the Judgment.

(d) Provisions of Cyclic Storage Agreements. Any such Agreement shall include provisions for:

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

a) The time, place, and amount of said spreading shall be approved in advance by Watermaster.

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

(3) Priorities for Cyclic Storage Agreements in the following order:

a) Responsible Agencies on the basis of their relative requirements for Replacement Water within their respective corporate boundaries,

b) Other parties on the basis of priority of application to Watermaster for such Agreements, and

c) Non-parties;

(4) Determinations 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. Such losses of stored water shall be assigned by Watermaster as follows:

a) First losses by non-parties in the reverse priority of the earliest original dates of their respective Cyclic Storage Agreements, to the whole of such non-parties' stored water,

b) The next losses by parties who are not Responsible Agencies in reverse priority of the earliest original dates of their respective Cyclic Storage Agreements, to the whole of their stored water, and

c) The last losses by Responsible Agencies to be shared on the basis of water actually in storage in the Basin at the time of the loss of such stored water;

(5) The priorities for spreading of Supplemental Water are hereby established as follows, in the order of their priority:

First: Supplemental Water ordered by Watermaster from Responsible Agencies for direct delivery to the Basin as Replacement Water,

Second: Supplemental Water for delivery to the Basin for storage under Cyclic Storage Agreements between Watermaster and Responsible Agencies whereby such Supplemental Water will not be exported from the Basin. In the event that more than one Responsible

Agency wishes to deliver water to Cyclic Storage simultaneously and there is inadequate spreading capacity available, deliveries by each Responsible Agency so desiring to deliver Supplemental Water shall be scheduled so that the total quantity of water in Cyclic Storage of those Agencies can be increased proportionately in percent of their maximum allowed Cyclic Storage, Third: Supplemental Water for delivery to Individual Cyclic Storage accounts of parties to the Judgment whereby such Supplemental Water will not be exported from the Basin. In the event that more than one party wishes to deliver water to such Cyclic Storage accounts simultaneously and there is inadequate spreading capacity available, deliveries for each such party shall be scheduled so that the total quantity of water in such parties' Individual Cyclic Storage accounts can be increased proportionately in percent of their maximum allowed Cyclic Storage, and Fourth: Supplemental Water for delivery to the Basin for storage under Cyclic Storage Agreements between

Watermaster and Responsible Agencies, whereby Supplemental Water may be exported from the Basin.

Fifth: Supplemental Water for delivery to Individual Cyclic Storage Accounts of parties to the Judgment whereby such Supplemental Water may be exported from the Basin.

Sixth: Non-parties as established by Watermaster at the time; and

(6) Payment to Watermaster for the benefit of parties in said action of all special costs, damages or burdens incurred (without any charge, rent, assessment or expense as to parties to said action by reason of the adjudicated proprietary character of said storage rights, nor credit for offset for benefits resulting from such storage); provided, 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. Watermaster has sole custody and control of all Ground Water storage rights in the Basin pursuant to the Physical Solution in the Judgment and all said Agreements are subject to review and approval of the Court.

(e) Terms of Cyclic Storage Agreements and Extensions. The term of such Agreements shall not exceed five (5) years but may be extended for additional terms, not to exceed five (5) years each, provided Watermaster shall report its intention to consider an extension of any such Agreement in minutes of its meeting held prior to its meeting when any such extension request shall be acted upon.

(f) Maximum Storage. Such Agreements shall fix the maximum amount of Supplemental Water to be stored in the Basin at any point in time by a particular storing entity.

(g) Watermaster to be Held Harmless. The storing entity of such Agreement shall save and hold harmless Watermaster, its officers, agents and employees from any and all costs, damages or liability resulting from said Agreement and shall provide Watermaster with the defense or costs of the defense of any action brought against Watermaster, its officers, agents or employees arising or alleged to arise by reason of such Agreement for storage of Supplemental Water in the Basin.

(h) Reports of Stored Water. The storing entity, if not a Producer, shall quarterly report to Watermaster the amount of Supplemental Water which it spreads and withdraws each quarter under such Agreement. Such reports shall be due on the last day of the month next succeeding the end of the relevant quarter, i.e. April 30, July 31, October 31, and January 31. Such reports shall be cumulative and shall indicate the credit balance of the relevant quarter. If the storing entity is a Producer storing water pursuant to an Individual Producer Cyclic Storage Account whereby Watermaster has purchased the stored water on the Producer's behalf and credited the Producer's account, then Watermaster shall provide the Producer with a quarterly accounting of storage credit in the regular quarterly production report form. The Producer shall be responsible for verifying the credit and notifying Watermaster of any dispute or discrepancy.

(i) Court Approval of Cyclic Storage Agreements. Upon its approval of a Cyclic Storage Agreement, Watermaster shall Petition the Court for approval thereof and said Agreement shall become effective only upon such Court approval.

27. Responsible Agency from Whom Watermaster Shall Purchase Replacement Water.

(a) Responsible Agencies. There are three Responsible Agencies within or partially within the Basin. Two of such Agencies, Upper San Gabriel Valley Municipal Water District (Upper District) and Three Valleys Municipal Water District (Three Valleys District) are member agencies of The Metropolitan Water District of Southern California (Metropolitan) and supply Watermaster with Replacement Water purchased from Metropolitan. The third Responsible Agency is San Gabriel Valley Municipal Water District (San Gabriel District) which has contracted with the State of California and has constructed facilities to deliver water from the State Water Project and, thus, can directly supply Watermaster with Replacement Water.

(1) Availability of Supplemental Water from Responsible Agencies. If any Responsible Agency shall, for any reason, be unable to deliver Supplemental Water to Watermaster in a timely fashion when needed, Watermaster may (1) collect funds at an appropriate level and hold them in trust, together with interest accrued thereon, for purchase of such water when available; (2) purchase water from the remaining Responsible Agencies which are the most beneficial and appropriate sources observing all legal and contractual constraints on the availability of such water; or (3) purchase Supplemental Water from any other available source. Watermaster shall consult with the Responsible Agencies involved and in good faith shall determine the appropriate source of Supplemental Water under such circumstances. Should Watermaster arrange to purchase Supplemental Water from a source not involving a Responsible Agency, Watermaster shall provide the Responsible Agencies an opportunity to provide said Supplemental Water or comparable water supplies on comparable terms.

(b) Water Used Within the Basin. For water used within the Basin, the Responsible Agency within whose boundaries is located the place of use of water Produced from the Basin will determine the Responsible Agency from whom Watermaster shall purchase Replacement Water.

(c) Water Exported from the Basin. Except for water Produced from the Basin and used within the City of Sierra Madre (for which San Gabriel District shall be the Responsible Agency), the place of such Production of water exported from the Basin shall determine the Responsible Agency from whom Watermaster shall purchase Replacement Water.

(d) Computations of the Amount of Replacement Water to be Purchased from Responsible Agencies. In computing the amount of Replacement Water to be provided by a Responsible Agency, Watermaster shall:

(1) Determine the Replacement Water requirement of each party to the Judgment and apportion such Replacement Water requirement as required in (b) and (c) above;

(2) Calculate the total Replacement Water requirement for each Responsible Agency as determined in (1) above;

(3) Tabulate Interagency Transfers of water rights as described in (e) (1) below;

(4) Calculate the Net Interagency Transfer adjustment as described in (e) (2) below;

(5) Determine the adjusted Replacement Water requirements, calculated for each Responsible Agency as required in (e) below; and

(6) Determine the effect of deferred Replacement Water requirements as calculated in (h) below.

(e) Net Interagency Transfer Adjustment and Replacement Water Requirement. Replacement Water requirements as heretofore calculated shall be modified by a "Net Interagency Transfer Adjustment." "Interagency Transfer"

shall mean the aggregate amount of Production Right resulting from the temporary transfer of all or a portion of a Pumper's Share of Operating Safe Yield, or a Base Annual Diversion Right, or the Diversion Component or Pumping Component of an Integrated Production Right for use within the boundaries of a Responsible Agency other than the Responsible Agency within which such water rights were developed and adjudicated.

The annual Replacement Water requirement resulting from Net Interagency Transfers for each Responsible Agency shall be calculated as follows:

(1) Net Interagency Transfers shall be calculated for each Responsible Agency as the difference between such rights transferred for use outside or partially outside that Responsible Agency and such rights transferred for use within or partially within that Responsible Agency.

(2) Tabulate the total Interagency Transfers of water rights, calculated for each of the Responsible Agencies in (1) above. The sum of said total Interagency Transfers for each of the three Responsible Agencies is that Responsible Agency's Net Interagency Transfer Adjustment. The total of such adjustments for all Responsible Agencies shall equal zero. The Responsible Agency(s) having a positive amount shall have this Net Interagency Transfer Adjustment added to the Replacement Water requirement computed for it in (d) (2) above. The Responsible Agency(s) having a negative amount shall have this Net Interagency Transfer Adjustment subtracted from the Replacement Water requirement calculated for it in (d) (2) above.

(f) Special Provisions.

(1) The Replacement Water requirement calculated for each of the Responsible Agencies in (e) (2) above cannot exceed the total quantity

of Replacement Water obligation calculated for all Responsible Agencies, and/or;

(2) If the Replacement Water requirement calculated in (e) (2) above results in a negative value, that negative value shall be adjusted to zero, as described in (h) below.

(g) Special Provisions Re Alhambra Exchange. An adjustment shall be made to San Gabriel District's calculated Replacement Water requirement, if necessary, to allow Upper District to deliver an amount of Replacement Water to the City of Alhambra equal to the quantity delivered through connection USG-5 for the previous year, the year in which the Replacement Water requirement was incurred.

(h) Adjustments to Calculated Replacement Water Requirements. Adjustments to Replacement Water requirements resulting from the calculations in (f) (2) or (g) above shall be apportioned as follows:

(1) As between Upper District and Three Valleys District, the district with a negative value shall have added to it an amount sufficient to equal zero, that amount shall be subtracted from the Replacement Water requirement of the other Responsible Agency, but it shall not be reduced to less than zero. If a negative balance still exists, then it shall be subtracted from San Gabriel District.

(2) If San Gabriel District's Replacement Water requirement is less than zero, it shall be adjusted to zero by deducting equal amounts of San Gabriel District's adjustment from both Upper District and Three Valleys District.

(3) All adjustments shall be accumulated in a Deferred Replacement Water Requirement Account for each of the Responsible Agencies. In future years when deliveries of Replacement Water may be made by a Responsible Agency, up to the amount, or any portion of the

amount, in the Deferred Replacement Water Requirement Account, such deliveries will be equally subtracted from the Replacement Water requirement of the Responsible Agency(s) from which it was derived in (1) and/or (2) above for that year so long as such deliveries shall not cause total deliveries of all Responsible Agencies to exceed the amounts provided for in paragraph (f) (1) and/or paragraph (f) (2) above. At the time that deliveries are made by a Responsible Agency from its Deferred Replacement Water Requirement Account, Watermaster shall pay to that Responsible Agency its price prevailing at that time for Replacement Water.

(i) Advanced Delivery Account. Whenever the total quantity calculated in (e) (1) above, is less than that delivered to the City of Alhambra through USG-5 for the previous year, an accounting of the difference shall be maintained in an "Advanced Delivery Account" and such difference, or as much as possible thereof, shall be subtracted from the Replacement Water Requirement of Upper District in the next year when an obligation to deliver Replacement Water exists for Upper District.

28. Ground Water Quality Management. The Watermaster, Upper District, San Gabriel District, and San Gabriel Valley Water Association, through a Joint Resolution dated February-March 1989, affirmed their commitment to participate in a coordinated federal, state and local response to contamination of Ground Water supplies of the Basin for both the purpose of preventing additional contamination and the purpose of cleaning up and limiting the spread of existing contamination. The entities adopting that Joint Resolution designated and accepted Watermaster as the entity to coordinate local involvement in the efforts to preserve and restore the quality of Ground Water within the Basin. Watermaster sought and received additional powers from the Court to regulate extractions of water from the Basin for water quality control purposes, and this Section 28 is to implement the same. These efforts shall be that any

New or Increased Extraction to meet water needs from the Basin shall include planned treatment in existing areas of High Level Degradation or Contamination. An important part of exercising these additional powers and coordinating federal, state and local responses to contamination of the Basin's water supplies is the collection and compilation of essential data from Producers and the expeditious distribution of such data to the proper state and federal regulatory agencies involved in water quality matters in the Basin

(a) Watermaster Approvals. Each Producer shall, after the effective date of this amendment to these Rules and Regulations (June 28, 1991), apply to Watermaster, on forms provided by Watermaster, for a permit to do any of the following:

-- Construct any well;

-- Deepen any existing well;

-- Modify the perforations of the casing of any existing well;

-- Notwithstanding natural fluctuations in Basin water levels, physically increase or decrease the Effective Extraction Capacity of any existing well, including that which may occur due to installation or modification of pipelines, booster pumps or other distribution system components, as of said effective date of these Rules and Regulations;

-- Abandon any existing well; or

-- Construct, relocate or abandon Ground Water Treatment Facilities.

Such application will be acted upon by Watermaster no later than at its first regular meeting following sixty (60) days after receipt of the complete application. If an emergency exists, Watermaster shall expedite its actions to the maximum extent practicable.

(b) Watermaster Directed Change in Water Production.

(1) Based on available data, Watermaster's Five-Year Plan, and/or Ground Water modeling, Watermaster will, for water quality protection

purposes, direct any Producer to increase, decrease or cease Production from existing wells, initiate new well Production or deliver water to or accept water from another water system or direct a Producer to obtain water from another source in-lieu of Pumping from its own wells, or take other appropriate actions in compliance with an approved Watermaster plan by giving such Producer advanced written notice thereof, specifying a time certain for compliance.

(2) The increase in cost to a Producer resulting from a Watermaster directed change in water Production shall not be borne by the Producer, but will be reimbursed to the Producer by Watermaster through In-Lieu Water Assessments levied by Watermaster, unless such funding is made available from other sources such as federal, state or local governmental entities or by those found to be responsible for the contamination in the Basin which caused Watermaster to direct the change in Production by the Producer.

(c) Producer Data, Initial Submittal. After June 28, 1991, Producers shall submit, within sixty (60) days of Watermaster's request, initial data in a form acceptable to Watermaster, to update and ensure the accuracy of the existing Basin database. The data shall include:

(1) Identification and location of all Active, Inactive or Abandoned Wells;

(2) Water quality data concerning organic compounds, nitrates and any other water quality parameters as specified by Watermaster, including all data from other sampling Producers may conduct in addition to governmental requirements;

(3) Available construction details of each well owned or operated by Producer, as well as all logs (driller's, electric, etc.);

(4) Depths or zones from which water is extracted from each well, if available; and

(5) A current map of the main water transmission system of Producer's distribution system showing the location and sizes of transmission mains and storage reservoirs, all interconnections with other systems and their sizes and capacities, and any other data pertinent to the transmission (but not distribution to customers) of water through the Producer's system.

(d) Quarterly Reports. After the initial submittal of data per subparagraph (c) above, the following data shall be submitted by all Producers to Watermaster quarterly, on or before the last day of January, April, July and October:

(1) Chemical water quality data collected during the quarter and provided to any state, federal or local public agency;

(2) Data described under Section 28 (c) (3), (4) and (5) hereof which supplement, amend or change the data previously submitted by a Producer; and

(3) All data from other sampling which Producers may conduct in addition to governmental requirements.

(e) Operating Principles. Any New or Increased Extraction by a Producer in the Basin to meet water supply needs shall have prior Watermaster approval, shall not contribute to contaminant migration, and shall include planned treatment in existing areas of High-level Degradation and Contamination. In giving such approval, Watermaster shall consider the cumulative effects of multiple actions by all Producers in the area of concern by using available information, the Five-Year Plan, and Ground Water modeling. If Watermaster determines that a proposed new well is a Replacement Well and is not a New or Increased Extraction, the requirement for Planned Treatment in existing areas of High-level Degradation and Contamination may be waived.

(f) Emergency Exemptions. Where a Producer's water supply or water quality problem is so urgent that the viable option for maintaining an adequate short-term supply that meets drinking water standards involves an action in conflict with the operating principles outlined in Section 28 (e) hereof, Watermaster may approve a short-term action contingent upon the Applicant Producer concurrently submitting an acceptable long-term action plan with acceptable deadlines for implementation. In general, the long-term action plan must be approved prior to or concurrently with the short-term action.

(g) Water Quality and Supply Plans. To assure that Pumping does not lead to further degradation of water quality in the Basin, a Five-Year Water Quality and Supply Plan must be prepared and updated annually by Watermaster, projecting water supply requirements and water quality conditions for each period of five (5) calendar years beginning November 1, 1991, and each November 1 thereafter. This Plan will also include a water quality monitoring element to obtain supplemental information as needed to assist in projecting contamination levels. Watermaster will supply the Producers with projections of contaminant migration by June 1 of each year for the preparation of these Water Quality and Supply Plans.

Each purveyor of potable water produced from the Basin shall submit the following information to Watermaster by July 31 of each year:

(1) Projected quarterly water supply requirements for each of the following five calendar years and the proposed pumping rates, in gallons per minute, for each well;

(2) Identification of each Production well known to contain contaminants and the contaminant levels;

(3) Proposed methods for meeting the water supply requirements of the system if contaminant levels are, or are projected by Watermaster to become, greater than drinking water standards; and

(4) Any intended treatment facility.

Watermaster shall analyze the information submitted by Producers and develop an overall draft Basin Water Quality and Supply Plan. A draft Plan will be submitted by Watermaster to the Los Angeles Regional Water Quality Control Board, and for public review and comment per Section 28 (i) hereof, by November 1. Appropriate modifications resulting from comments received will be reflected in the final draft, and a staff report providing an explanation of decisions will be made available.

(h) Ground Water Treatment Facilities.

(1) Producers in the Basin shall notify Watermaster in advance at the initial stages of planning of their intent to construct any Facility to remove volatile organic compounds (VOCs), nitrates, or other contaminants from water Produced from the Basin. Such notice shall include the following information:

- the intended location and a description of the Treatment Facility;
- the water production capacity;
- the rate of contaminant removal capacity;
- the expected concentration of all identified contaminants in the water to be treated;
- the expected concentration of all identified contaminants in the water after treatment;
- the intended disposition of all water to be treated;
- the expected initiation date and period of time over which the Treatment Facility will operate; and
- the expected capital and operating costs of the Treatment Facility.

(2) In addition, the Producer shall describe all necessary permits and/or all permits for which it has applied or has received from all

regulatory agencies with regard to such Treatment Facility and shall supply to Watermaster copies of all environmental documents required under the California Environmental Quality Act and/or the National Environmental Protection Act. No construction of such Treatment Facilities shall be initiated without the prior written approval of Watermaster. Watermaster shall promptly examine each submittal for compatibility with available information, the Five-Year Plan and the operating principles, and notify the Applicant of its findings and decision regarding such proposed Treatment Facility no later than at its first regular meeting following sixty (60) days after receipt of a complete submittal by the Producer. Watermaster will also report its determination to the Los Angeles Regional Water Quality Control Board.

(3) All operators of Treatment Facilities shall report quarterly to Watermaster at least the following information:

- name or other designation of the Treatment Facility;
- quantity of water treated during quarter;
- quantity of each contaminant removed;
- quality of water before treatment, at beginning and end of each quarter;
- quality of water after treatment, at beginning and end of each quarter; and
- operation and maintenance costs for each quarter.

(i) Decision Making Process. Hearings and Appeals.

(1) All Watermaster determinations relating to the control of Pumping for water quality purposes shall be based upon a staff recommendation and information and recommendations received from or furnished by affected Producers. Staff's recommendation shall result from staff's analysis of information presented by interested parties, all available

water quality data, Watermaster's Five-Year Plan, Ground Water modeling and other water quality trend analysis reports, and will be based on the operating principles set forth in these rules. Staff shall provide supporting data to document each recommendation that it makes to Watermaster. After consideration of the staff recommendation and public comment provided at the Watermaster meeting, Watermaster shall make a final decision.

(2) Public hearings on Watermaster's draft annual Five-Year Water Quality and Supply Plan will be held following a thirty (30) day public review and comment period. A notice of the availability of such draft will be sent to all parties to the Judgment as well as to all other interested parties following the regular Watermaster meeting in November of each year, along with a notice of the date, time and place of the public hearing, to be scheduled not less than thirty (30) days after the mailing date of the notice of availability of the draft Plan. A notice of public hearing will also be published in the San Gabriel Valley's key local newspaper(s) at the beginning of the public review period. Consideration of comments received is described in Section 28 (g) hereof.

(3) Appeal of a Watermaster decision may be made to the Watermaster who shall notice and consider the same at a public hearing. Actions by the Watermaster are subject to review by the Court. Any party may, by a regularly noticed motion, petition the Court for review of Watermaster's action or decision. Notice of such motion shall be served and filed within ninety (90) days after such Watermaster action or decision.

29. Watermaster-directed Groundwater Management Programs. Upon written request by any party, or on recommendation of Watermaster staff, Watermaster may initiate an investigation of existing or proposed pumping activities, groundwater levels, recharge potential and other factors that influence groundwater supply in any specific

area of the Basin. Based on the findings of the investigation, and in accordance with Section 40(a) of the Judgment, Watermaster may determine that a groundwater management program is needed to assure equitable water supply availability to all affected parties in the investigation area. Such a program may require that Producers reduce pumping from one or more wells, take water from another source in lieu of pumping groundwater, or a combination of those and/or other measures; however, no program adopted by Watermaster pursuant to this section shall effect a modification or amendment of the quantities specified in the declared rights of any party under the Judgment.

If Watermaster determines such a management program is needed within a specific area of the Basin, Watermaster will develop the program with review and comment by affected parties, and will first attempt to facilitate its implementation through voluntary agreements among the various affected parties. Watermaster may also participate in such agreements as appropriate, subject to court approval.

If any affected party refuses voluntary participation in the groundwater management program, or if the affected Parties cannot reach agreement within a reasonable time not to exceed 12 months from the date that Watermaster receives the draft program at a regular meeting, Watermaster will consider adoption of the program at a duly noticed public hearing and, if the program is adopted, will seek court approval of the program as part of the Watermaster Operating Criteria set forth in the Judgment. Watermaster will implement the program upon court approval and may use funds collected through the In-lieu Assessment to reimburse a Producer for costs incurred beyond normal operating costs to comply with the Watermaster-directed groundwater management program.

30. Purchase Water Plan. On or before November 1 of each year, Watermaster shall prepare and distribute to the Responsible Agencies a three-year projection of its supplemental water purchases from each agency. Watermaster shall, to the extent feasible, coordinate the tentative schedule for delivery and payment of those

purchases with each Responsible Agency. Such three-year projection shall be in accordance with the "Policy/Criteria for Three-year Purchased Water Plan" as appended hereto.

31. Export Agreements. Any party may enter into an agreement with Watermaster to store Supplemental Water and export said stored Supplemental Water under specific terms and conditions approved by Watermaster. Such export shall be in accordance with the "Policy/Criteria for Agreement for Storage and Export of Supplemental Water".

APPENDIX "A"

DEFINITIONS

(a) Active Party – Section 54 of the Judgment refers to specific language regarding electronic service and removal from service list. An active party list will be maintained by Watermaster.

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

(c) Deliver – Pursuant to Section 54 of the Judgment, in lieu of mailing any item required to be served under the Judgment, Watermaster may serve such item by electronic service which may include posting the document to Watermaster's website, sending documents to a party by e-mail, or sending notice to the party of the documents availability and viewing location.

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

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

(f) Diverter -- Any party who Diverts.

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

(h) Fiscal Year -- The period July 1 through June 30, following.

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

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

(k) 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 the Amended Judgment.

(l) In-Lieu Water Cost -- 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.

(m) Judgment -- Judgment entered in Los Angeles Superior Court Civil Action No. 924128, entitled "Upper San Gabriel Valley Municipal Water District v. City of Alhambra, et al.," as amended.

(n) Key Well -- Baldwin Park Key Well, being elsewhere designated as State Well No. 1S/10W-7R2, or Los Angeles County, Department of Public Works, Well No. 3030-F. Said well has a ground surface elevation of 386.7.

(o) Long Beach Case -- Los Angeles Superior Court Case No. 722647, entitled "The Board of Water Commissioners of the City of Long Beach, et al. v. San Gabriel Valley Water Company, et al."

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

(q) 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.

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

(s) Natural Safe Yield -- The quantity of natural water supply which can be extracted annually from the Basin under conditions of the 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.

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

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

(v) Overlying Rights -- 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.

(w) Physical Solution -- 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 declared in the Judgment.

(x) Prescriptive Pumping Right -- The highest continuous extraction 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 the 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 filing of said action.

(y) Produce or Producing -- To Pump or Divert water from the Basin.

(z) Producer -- A party who Produces water from the Basin.

(aa) Production -- The annual quantity of water Produced from the Basin, stated in acre-feet.

(bb) Pump or Pumping -- To extract ground water from the Basin by Pumping or by any other method.

(cc) Pumper -- A party who Pumps water.

(dd) Pumper's Share -- A Pumper's right to a percentage of the entire Natural Safe Yield, Operating Safe Yield and appurtenant Ground Water storage of the Basin.

(ee) Reclaimed Water -- Water which, as a result of treatment of waste, is suitable for a direct beneficial use or a controlled use that would not otherwise occur.

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

(gg) Replacement Water -- 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.

(hh) Responsible Agency -- 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 of the Judgment, 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, a member public agency of MWD.

(ii) Service -- Synonymous with the definition for Deliver.

(jj) Stored Water -- Supplemental Water stored in the Basin pursuant to a Cyclic Storage Agreement with Watermaster as authorized by Section 34(n) of the Judgment herein.

(kk) Supplemental Water -- Non-tributary water imported through a Responsible Agency and reclaimed water or water obtained from other available sources when water is not available in a timely fashion from a Responsible Agency.

(ll) Transporting Parties -- Any party who has transported water from the Relevant Watershed or Basin to an area outside thereof within the Year immediately preceding the entry of Judgment, 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.

(mm) Water Level -- 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.

(nn) Year -- A calendar year, unless the context clearly indicates a contrary meaning.

The following are supplemental definitions relating to Section 28 of these rules and regulations.

(oo) New Extraction -- Any extraction from the Main San Gabriel Basin using a well or other Ground Water extraction facility that becomes active for the first time for water supply purposes on ,or after June 28, 1991.

(pp) Increased Extraction (Decreased) -- Any modification to an existing well or extraction facility that physically increases (or decreases) the Effective Extraction Capacity of that well or extraction facility. Such modifications may include: (1) changing the well depth, (2) modifying the perforation intervals, (3) modifying the pump and/or motor, (4) installing or modifying distribution pipelines, (5) installing or modifying booster pumps, and (6) installing or modifying other distribution system components. Normal maintenance work would be excluded.

(qq) Effective Extraction Capacity -- The actual capacity of a well or extraction facility to extract Ground Water from the Basin using the pumping equipment and system appurtenances in good working order as they existed on June 28, 1991.

(rr) Treatment Facility -- Any facility that provides treatment for contaminated Ground Water in order to meet drinking water standards.

(ss) Planned Treatment -- A specific Treatment Facility with a designated source of Ground Water supply and schedule for development.

(tt) Active Well -- Any well used or that could be used without modifications to extract Ground Water.

(uu) Inactive Well -- Any well that is not in service at the time of filing of an application hereinunder.

(vv) Abandoned Well -- A well that has been abandoned in accordance with the provisions of state, county or local laws and regulations.

(ww) High-level Degradation and Contamination -- Ground Water containing contaminants in excess of the federal or state maximum contaminant level. Some areas of the Basin contain higher contaminant concentrations than others and Treatment Facilities shall be planned to extract Ground Water from the higher level areas of contamination in the Basin.

(xx) Replacement Well -- A new well that will replace an existing well due to structural or mechanical failure, which is located in the same general vicinity and which has the same physical characteristics (size, depth, perforation intervals) and design extraction capacity as the well it is replacing.

APPENDIX "B"

SUMMARY OF CRITICAL DATES AND ACTIONS FOR WATERMASTER

This summary of critical dates and actions for Watermaster is presented for the convenience of Watermaster members, the Parties and others in carrying out the provisions of the Court Judgment. It does not necessarily include all critical dates and actions under the Judgment.

SUMMARY OF CRITICAL DATES AND ACTIONS FOR WATERMASTER

1. Watermaster members' terms of office.

January 1 – December 31.

2. Watermaster's first meeting in January.

(a) Election of Watermaster Chair and Vice-Chair (from Watermaster membership) and selection of Secretary, Treasurer and assistants (who may, but need not, be Watermaster members). Watermaster Rules and Regulations, Section 6 (R/R 6)

(b) Order Engineering Report for Preliminary Determination of Operating Safe Yield. (R/R 14(a))

3. January 31 - Quarterly Reports, as required by the Rules and Regulations, of Production (R/R 13), Cyclic Storage (R/R 26(h)) and data required by Section 28 (d), due to Watermaster.

4. March - Receive San Gabriel River Watermaster Report.

5. Watermaster's first meeting in April.

Watermaster shall make a Preliminary Determination of the Operating Safe Yield of the Basin for the next five Fiscal Years and deliver a copy thereof to all Parties at least ten (10) days prior to a hearing thereon and which said hearing shall commence at Watermaster's first meeting in May. (R/R 14(a))

6. April 30 - Quarterly Reports, as required by the Rules and Regulations, of Production (R/R 13), Cyclic Storage (R/R 26(h)) and data required by Section 28 (d), due to Watermaster.

7. Watermaster's first meeting in May.

(a) Hearing on Preliminary Determination for Watermaster to make Final Determination of Operating Safe Yield. (R/R 14(b)) Within thirty (30) days of the Final Determination of the Operating Safe Yield a copy of the Final Report and Determination must be delivered to each Pumper and

Integrated Producer, including a statement of their entitlements under such Determination. (R/R 14(c))

(b) Budget.

Adopt a proposed Administration Budget for the succeeding Fiscal Year and within fifteen (15) days deliver a copy thereof together with a statement of the level of the Administration Assessment levied by Watermaster which will be collected for purposes of raising the necessary funds for said budget. (R/R 18(a))

(c) Assessments.

In addition to the Administration Assessment, Watermaster shall levy the Replacement Water Assessment, Make-up Obligation Assessment and the In-lieu Water Assessments, if any. (R/R 19)

8. June 1 - Watermaster to supply Producers with projections of contaminant migration by June 1. (R/R 28(g))

9. July - Authorize preparation of Annual Watermaster Report. Receive tentative budget from San Gabriel River Watermaster.

10. July 31 - Quarterly Reports, as required by the Rules and Regulations, of Production (R/R 13), Cyclic Storage (R/R 26(h)) and data required by Section 28 (d), due to Watermaster. Producers of potable water from the Basin must submit to Watermaster the data required by Section 28(g).

11. August 15 - On or before this date Watermaster must give written notice of all applicable Assessments to all Parties. (R/R 19)

12. September 20 - All Assessments payable to Watermaster. (R/R 19(a))

13. September 30 - Must pay Upper Area share of San Gabriel River Watermaster budget by this date.

14. October 1 - Deliver Notice of Nomination Election of Producer representatives to be held at Watermaster's November meeting. (R/R 19(a))

15. October 31 - Quarterly Reports, as required by the Rules and Regulations, of Production (R/R 13), Cyclic Storage (R/R 26(h)) and data required by Section 28 (d), due to Watermaster.

16. November

(a) Watermaster Annual Report filed with the Court and copies delivered to each party by November 1. (R/R 24)

(b) Draft Annual Five-Year Water Quality and Supply Plan under Section 28 (g) to be filed with the Los Angeles Regional Quality Control Board and circulated for public review and comment by November 1.

(c) Prior to Watermaster's meeting in November, nomination of Public Representatives to Watermaster by Upper District and San Gabriel District.

(d) Watermaster's meeting in November--election of six Producer Representatives for nomination to Watermaster. (R/R 9(b)) Petition Court for confirmation of nominees and give notice of hearing on Petition to all Parties. Within ninety (90) days of a vacancy on Watermaster, it shall be filled by nomination by Upper District or San Gabriel District if for a Public Representative and by a special election at a Watermaster meeting for a Producer Representative, after notice thereof to all Parties, and Watermaster Petition (and notice thereof to all parties) for Court confirmation of nominee. (R/R 10)

PERMANENT TRANSFER OF WATER RIGHTS - PRESCRIPTIVE PUMPING RIGHT

For a valuable consideration, receipt of which is hereby acknowledged, _____ _____ ("Seller") does hereby assign and transfer in perpetuity to _____, ("Buyer") all rights to the quantity of _____ acre-feet of the "Prescriptive Pumping Right" and the appropriate % of "Pumper's Share" adjudicated to Seller or his predecessor in the Judgment in the case of Upper San Gabriel Valley Municipal Water District, v. City of Alhambra, et al, Los Angeles Superior Court No. 924128, together with all the attendant rights, powers and privileges pertaining thereto.

(Check appropriate provision)

This transfer does ☐ does not ☐ include_____acre-feet of "carry-over of unused rights" associated with said transferred rights and in existence on the date hereof.

DATED: _____

BUYER	SELLER
_____	_____
_____	_____
_____	_____
_____ (Signature)	_____ (Signature)
Name of Designee (of Buyer) to receive service of Processes and Notices:	Name of Designee (of Seller) to receive service of Processes and Notices:
_____	_____
_____	_____
_____ Address	_____ Address
Telephone No.:_____	Telephone No.:_____
E-mail Address:_____	**E-mail Address:**_____

To be executed by both Buyer and Seller and, if separately requested by Watermaster, be accompanied by a map of the service area where the water was used by Seller and a map of the service area where the water is intended to be used by the Buyer.

(Have the appropriate individual(s) or corporate attached acknowledgments completed by both Buyer and Seller as part of the transfer.)

A TRUE COPY HEREOF MUST BE FILED WITH WATERMASTER WITHIN 15 DAYS OF EXECUTION.

(To be accompanied by completed "Stipulation Re Intervention After Judgment" if Buyer is not a party to the Judgment)

EXHIBIT A-1

CORPORATE ACKNOWLEDGMENT

STATE OF CALIFORNIA)§
COUNTY OF LOS ANGELES)

On this _____ day of _____, 20___, before me, the undersigned Notary Public, personally appeared _____

_____ personally known to me

_____ or, proved to me on the basis of satisfactory evidence to be the person(s) who executed the within Instrument as

_____,

or on behalf of the Corporation therein named, and acknowledged to me that the Corporation executed it.

WITNESS my hand and official seal.

Signature _____

_____
Name (Typed or Printed)
Notary Public in and for said
County and State

(SEAL)

INDIVIDUAL(S) ACKNOWLEDGMENT

STATE OF CALIFORNIA)§
COUNTY OF LOS ANGELES)

On this _____ day of _____, 20___, before me, the undersigned Notary Public, personally appeared _____,

_____ personally known to me

_____ or, proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) _____ subscribed to the within instrument and acknowledged to me that executed the same.

WITNESS my hand and official seal.

Signature _____

_____
Name (Typed or Printed)
Notary Public in and for said
County and State

(SEAL)

EXHIBIT A-2

PERMANENT TRANSFER OF WATER RIGHTS – BASE ANNUAL DIVERSION RIGHT

For a valuable consideration, receipt of which is hereby acknowledged, _____ _____ ("Seller") does hereby assign and transfer in perpetuity to _____, ("Buyer") all rights to the quantity of _____ acre-feet of the "Base Annual Diversion Right" adjudicated to Seller or his predecessor in the Judgment in the case of Upper San Gabriel Valley Municipal Water District, v. City of Alhambra, et al, Los Angeles Superior Court No. 924128, together with all the attendant rights, powers and privileges pertaining thereto.

DATED: _____

BUYER	SELLER
_____	_____
_____	_____
_____	_____
_____ (Signature)	_____ (Signature)
Name of Designee (of Buyer) to receive service of Processes and Notices:	Name of Designee (of Seller) to receive service of Processes and Notices:
_____	_____
_____	_____
_____ Address	_____ Address
Telephone No.: _____	Telephone No.: _____
E-mail Address: _____	**E-mail Address:** _____

To be executed by both Buyer and Seller and, if separately requested by Watermaster, be accompanied by a map of the service area where the water was used by Seller and a map of the service area where the water is intended to be used by the Buyer.

(Have the appropriate individual(s) or corporate attached acknowledgments completed by both Buyer and Seller as part of the transfer.)

A TRUE COPY HEREOF MUST BE FILED WITH WATERMASTER WITHIN 15 DAYS OF EXECUTION.

(To be accompanied by completed "Stipulation Re Intervention After Judgment" if Buyer is not a party to the Judgment)

EXHIBIT B-1

CORPORATE ACKNOWLEDGMENT

STATE OF CALIFORNIA)§
COUNTY OF LOS ANGELES)

On this _____ day of _____, 20___, before me, the undersigned Notary Public, personally appeared _____
_____ personally known to me
_____ or, proved to me on the basis of satisfactory evidence to be the person(s) who executed the within Instrument as
_____,
or on behalf of the Corporation therein named, and acknowledged to me that the Corporation executed it.

WITNESS my hand and official seal.

Signature _____

_____
Name (Typed or Printed)
Notary Public in and for said
County and State

(SEAL)

INDIVIDUAL(S) ACKNOWLEDGMENT

STATE OF CALIFORNIA)§
COUNTY OF LOS ANGELES)

On this _____ day of _____, 20___, before me, the undersigned Notary Public, personally appeared _____,
_____ personally known to me
_____ or, proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) _____ subscribed to the within instrument and acknowledged to me that executed the same.

WITNESS my hand and official seal.

Signature _____

_____
Name (Typed or Printed)
Notary Public in and for said
County and State

(SEAL)

PERMANENT TRANSFER OF WATER RIGHTS – INTEGRATED PRODUCTION RIGHT

For a valuable consideration, receipt of which is hereby acknowledged, _____ _____ ("Seller") does hereby assign and transfer in perpetuity to _____, ("Buyer") all rights to the quantity of _____ acre-feet of the "Diversion Component" adjudicated to Seller or his predecessor in the Judgment in the case of Upper San Gabriel Valley Municipal Water District, v. City of Alhambra, et al, Los Angeles Superior Court No. 924128, together with all the attendant rights, powers and privileges pertaining thereto.

(Check appropriate provision)

This transfer does ☐ does not ☐ include_____acre-feet of "carry-over of unused rights" associated with said transferred rights and in existence on the date hereof.

DATED: _____

BUYER	SELLER
_____	_____
_____	_____
_____	_____
_____ (Signature)	_____ (Signature)
Name of Designee (of Buyer) to receive service of Processes and Notices:	Name of Designee (of Seller) to receive service of Processes and Notices:
_____	_____
_____	_____
_____ Address	_____ Address
Telephone No.:_____	Telephone No.: _____
E-mail Address:_____	**E-mail Address:**_____

To be executed by both Buyer and Seller and, if separately requested by Watermaster, be accompanied by a map of the service area where the water was used by Seller and a map of the service area where the water is intended to be used by the Buyer.

(Have the appropriate individual(s) or corporate attached acknowledgments completed by both Buyer and Seller as part of the transfer.)

A TRUE COPY HEREOF MUST BE FILED WITH WATERMASTER WITHIN 15 DAYS OF EXECUTION.

(To be accompanied by completed "Stipulation Re Intervention After Judgment" if Buyer is not a party to the Judgment)

CORPORATE ACKNOWLEDGMENT

STATE OF CALIFORNIA)§
COUNTY OF LOS ANGELES)

On this _____ day of _____, 20___, before me, the undersigned Notary Public, personally appeared _____

_____ personally known to me

_____ or, proved to me on the basis of satisfactory evidence to be the person(s) who executed the within Instrument as

_____,

or on behalf of the Corporation therein named, and acknowledged to me that the Corporation executed it.

WITNESS my hand and official seal.

Signature _____

_____

Name (Typed or Printed)
Notary Public in and for said
County and State

(SEAL)

INDIVIDUAL(S) ACKNOWLEDGMENT

STATE OF CALIFORNIA)§
COUNTY OF LOS ANGELES)

On this _____ day of _____, 20___, before me, the undersigned Notary Public, personally appeared _____,

_____ personally known to me

_____ or, proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) _____ subscribed to the within instrument and acknowledged to me that executed the same.

WITNESS my hand and official seal.

Signature _____

_____

Name (Typed or Printed)
Notary Public in and for said
County and State

(SEAL)

TEMPORARY ASSIGNMENT OR LEASE OF WATER RIGHT

For a valuable consideration, receipt of which is hereby acknowledged, _____ ("Assignor") does hereby assign and transfer to _____, ("Assignee") commencing on _____ and terminating _____, on the following water right(s):

(Check following appropriate category)

☐ Production Right _____AF

☐ Prescriptive Pumping Right _____AF

☐ Base Annual Diversion Right _____AF

☐ Integrated Production Right (consisting of _____AF of "Prescriptive Pumping Component" and _____AF of "Diversion Component")

☐ Carryover Right_____AF

adjudicated to Assignor or his predecessor in the Judgment in the case of "Upper San Gabriel Valley Municipal Water District, v. City of Alhambra, et al," Los Angeles Superior Court No. 924128.

Said assignment is made upon condition that:

(1) Assignee shall exercise said right on behalf of Assignor for the period described hereinabove and the first water produced by Assignee from the Relevant Watershed of the Main San Gabriel Basin after the date hereof shall be that produced hereunder;
(2) Assignee shall put all waters utilized pursuant to said transfer to reasonable beneficial use; and
(3) Assignee shall pay all Watermaster assessments on account of the water production hereby assigned or leased.

DATED: _____

ASSIGNEE	ASSIGNOR
_____	_____
_____	_____
_____	_____
Signature	Signature
Name of Designee (of Assignee) to receive service of Processes and Notices:	Name of Designee (of Assignor) to receive service of Processes and Notices:
_____	_____
_____	_____
_____	_____
Address	Address
Tel. No.: _____	Tel. No.: _____
E-mail Address: _____	**E-mail Address:** _____

To be executed by both Assignee and Assignor and, if separately requested by Watermaster, be accompanied by a map of the service area where the water was used by Assignor and a map of the service area where the water is intended to be used by the Assignee.

(Have the appropriate individual(s) or corporate attached acknowledgments completed as part of the temporary transfer.)

A TRUE COPY HEREOF MUST BE FILED WITH WATERMASTER WITHIN 15 DAYS OF EXECUTION

(To be accompanied by completed "Stipulation Re Intervention After Judgment" if Assignee is not a party to the Judgment)

CORPORATE ACKNOWLEDGMENT

STATE OF CALIFORNIA)§
COUNTY OF LOS ANGELES)

On this _____ day of _____, 20___, before me, the undersigned Notary Public, personally appeared _____

_____ personally known to me

_____ or, proved to me on the basis of satisfactory evidence to be the person(s) who executed the within Instrument as

_____,

or on behalf of the Corporation therein named, and acknowledged to me that the Corporation executed it.

WITNESS my hand and official seal.

Signature _____

_____

Name (Typed or Printed)
Notary Public in and for said
County and State

(SEAL)

INDIVIDUAL(S) ACKNOWLEDGMENT

STATE OF CALIFORNIA)§
COUNTY OF LOS ANGELES)

On this _____ day of _____, 20___, before me, the undersigned Notary Public, personally appeared _____,

_____ personally known to me

_____ or, proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) _____ subscribed to the within instrument and acknowledged to me that executed the same.

WITNESS my hand and official seal.

Signature _____

_____

Name (Typed or Printed)
Notary Public in and for said
County and State

(SEAL)

EXHIBIT D-2

Frederic A. Fudacz, State Bar #050546
Alfred E. Smith, State Bar #186257
Nossaman LLP
777 South Figueroa Street, 34th Floor
Los Angeles, CA 90017
(213) 612-7800 Office
(213) 612-7801

Attorney for Main San Gabriel Basin Watermaster

EXEMPT FROM FILING FEES
GOVERNMENT CODE 6103

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	CASE NO.: C 924128 STIPULATION RE INTERVENTION AFTER JUDGMENT OF _____

IT IS HEREBY STIPULATED by and between the Main San Gabriel Basin Watermaster for and on behalf of all parties to the instant action (pursuant to Section 57 of the amended Judgment) and _____, the proposed Intervenor(s) herein, that said proposed Intervenor(s) may intervene in the instant action and become entitled to all of the benefits bound by all of the burdens of the Judgment herein.

The Court will consider the attached proposed Order confirming said Intervention at _____ o'clock _____on_____ 20___, in Department 38, located at 111 North Hill Street, Los Angeles, CA 90012.

Watermaster shall give at least 30 days notice to the parties herein of said hearing.

EXHIBIT E-1

DATED:_____

WATERMASTER

By _____

Chairman

Attest:

_____

Secretary

DATED:_____

INTERVENOR(S)

_____

By_____

By_____

Name of Intervenor's Designee:

_____

Address of Designee:

_____

_____

Telephone Number of Designee:

_____

E-mail for Designee:

_____

EXHIBIT E-2

Frederic A. Fudacz, State Bar #050546
Alfred E. Smith, State Bar #186257
Nossaman LLP
777 South Figueroa Street, 34th Floor
Los Angeles, CA 90017
(213) 612-7800 Office
(213) 612-7801

Attorney for Main San Gabriel Basin Watermaster

EXEMPT FROM FILING FEES
GOVERNMENT CODE 6103

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	CASE NO.: C 924128 DESIGNEE TO RECEIVE FUTURE NOTICES FOR AND ON BEHALF OF DEFENDANT(S)

Defendant(s) _____ hereby designates: _____, whose address is _____, and whose telephone number is _____, and whose **e-mail address is** _____as said Defendant's Designee to receive service of all future notices, determinations, requests, demands, objections, reports and other papers and processes to be served upon said defendant(s) or delivered to said defendant(s) herein.

A copy hereof has been served upon the Watermaster herein, by mail, on _____, 20___.

EXHIBIT F-1

Executed under penalties of perjury at _____, California, this _____ day of _____, 20___.

_____

Printed Name of Designee

_____

Signature of Designee

EXHIBIT F-2

NOTICE OF TRANSFER OF OVERLYING RIGHTS
WITH PROPERTY TO WHICH THEY ARE APPURTENANT

On _____, 20___, the undersigned (or his predecessor), adjudged Overlying Rights on the property described in Exhibit 1 attached hereto and by this inference incorporated herein, in the case of "UPPER SAN GABRIEL VALLEY MUNICIPAL WATER DISTRICT, v. CITY OF ALHAMBRA, ET AL," Los Angeles Superior Court No. 924128, transferred said property and said Overlying Rights appurtenant thereto to _____, whose address is _____, whose **e-mail address is** _____ and whose telephone number is _____.

That said transferee hereby names _____ Whose address is _____, whose telephone number is _____, and whose e-mail address is _____ as his/her Designee to receive all future notices and processes in said action.

DATED: _____

BUYER	SELLER
_____	_____
_____	_____
_____	_____
_____	_____
(Signature)	(Signature)

To be executed by both Buyer and Seller and, if separately requested by Watermaster, be accompanied by a map of the service area where the water was used by Seller and a map of the service area where the water is intended to be used by the Buyer.

(Have the appropriate individual(s) or corporate attached acknowledgments completed as part of the transfer, and include Exhibit 1)

A TRUE COPY HEREOF MUST BE FILED WITH WATERMASTER WITHIN 15 DAYS OF EXECUTION.

(To be accompanied by completed "Exhibit E" if Buyer is not a party to the Judgment)

EXHIBIT G-1

CORPORATE ACKNOWLEDGMENT

STATE OF CALIFORNIA)§
COUNTY OF LOS ANGELES)

On this _____ day of _____, 20___, before me, the undersigned Notary Public, personally appeared _____

_____ personally known to me

_____ or, proved to me on the basis of satisfactory evidence to be the person(s) who executed the within Instrument as

_____,

or on behalf of the Corporation therein named, and acknowledged to me that the Corporation executed it.

WITNESS my hand and official seal.

Signature _____

_____

Name (Typed or Printed)
Notary Public in and for said
County and State

(SEAL)

INDIVIDUAL(S) ACKNOWLEDGMENT

STATE OF CALIFORNIA)§
COUNTY OF LOS ANGELES)

On this _____ day of _____, 20___, before me, the undersigned Notary Public, personally appeared _____,

_____ personally known to me

_____ or, proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) _____ subscribed to the within instrument and acknowledged to me that executed the same.

WITNESS my hand and official seal.

Signature _____

_____

Name (Typed or Printed)
Notary Public in and for said
County and State

(SEAL)

EXHIBIT G-2

Mailing Address:
725 North Azusa Ave.
Azusa, CA 91702

MAIN SAN GABRIEL BASIN WATERMASTER

SUPERIOR COURT CASE NO. 924128-LOS ANGELES COUNTY

_____ (State Well Number)

_____ (Recordation Number)

_____ (Owner's Designation)

APPLICATION TO DRILL WATER WELL

(To Be Completed by Watermaster)

(1) APPLICANT:
Name_____
Address_____
_____
E-mail Address_____
(2) LOCATION OF PROPOSED WELL:
*Well Address:*_____
Township, Range, and Section_____
Thomas Brothers Guide *(Please indicate year, page number and coordinates.)*_____
_____
Assessor's Parcel No._____
(Please attach copy of a map or sketch showing well location relative to streets or other major landmarks.)
(3) NAME OF WELL DRILLING CONTRACTOR:_____
_____
(4) PROPOSED USE:
Municipal ( ) Irrigation ( )
Domestic ( ) Industrial ( )
Water Quality Cleanup ( )
Other ( )_____
(5) DRILLING EQUIPMENT:
Rotary ( )
Cable ( )
Other ( )_____
(6) PROPOSED WELL CHARACTERISTICS:
A. Casing Installed:
STEEL ( ) PLASTIC ( )
OTHER ( )
Gravel Packed:
Yes ( ) No ( ) Size_____

From ft.	To ft.	Diam.	Gage or Wall	Diameter of Bore	Packed From ft.	Packed To ft.

Size of shoe or well ring:_____
Describe joint_____
B. Perforations or Screen:
Type of perforation or size of screen

From ft.	To ft.	Perf. per row	Rows per ft.	Slot Size

C. Construction:
Will a surface sanitary seal be provided? Yes ( ) No ( )
To what depth?_____ft.
Is any strata anticipated to be sealed against pollution?
Yes ( ) No ( )
If yes, note anticipated depth of strata
from _____ft. to _____ft.
from _____ft. to _____ft.
Proposed method sealing_____
_____
(7) WELL TESTS:
Will a pump test be made? Yes ( ) No ( ) If yes by whom?
_____
Anticipated Well Yield_____
Will a chemical analysis be made? Yes ( ) No ( )
Will an electric log be made of well? Yes ( ) No ( ) (If yes, file Copy with Watermaster upon well completion)

(8) PROPOSED PUMPING EQUIPMENT:
(A) Pump
Electric ( ) Natural Gas ( )
Propane ( ) Diesel ( )
Other ( )_____
(B) Make_____
(C) Pump Size (hp)_____(gpm)_____
(D) Design Efficiency_____
(9) PROXIMITY TO POTENTIAL SOURCES OF CONTAMINATION:
(A) Distance to nearest sewer line or septic tank_____(ft.)
(B) Wells (Please provide distance, direction and name of nearest upgradient well(s) with volatile organic chemical or nitrate levels above a maximum contaminant level, if known.)
_____
_____
_____
(10) Please provide copy of County of Los Angeles permits and State Department of Water Resources Water Well Driller Reports and any other permits for construction of a new well upon completion of proposed well.
(11) Please provide Watermaster with copies of all feasibility studies, alternative water supply sources, water quality studies or other reports which validate the Applicant's need to drill a new well. Applicant must provide supporting data to show compliance with the requirements of Section 28 with particular reference to Section 28(e) of Watermaster's Rules and Regulations.

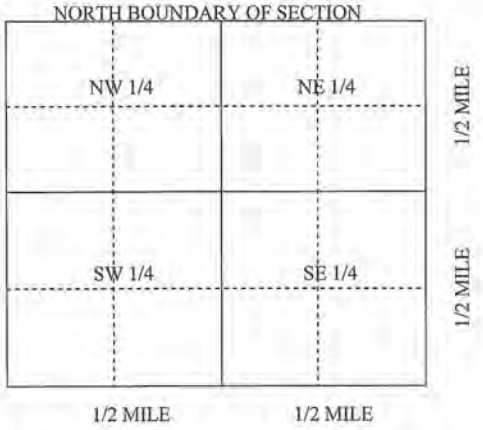
I hereby agree to comply with all regulations of the Main San Gabriel Basin Watermaster pertaining to well construction, repair, modification, destruction and inactivation. The applicant will furnish the Watermaster a complete well log upon completion of well construction.

Submitted for Applicant by:_____
_____
Signature:_____
Title:_____
Date:_____
Date Received by Watermaster:_____
Watermaster Action: Approved ( ) Denied ( )
Date of Action:_____
Permit Number:_____
By:_____
(Name)
_____
(Title)

EXHIBIT H-1

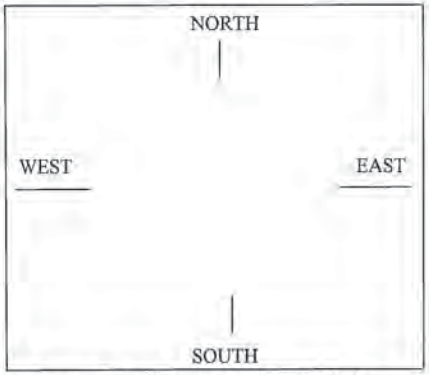
Form No. RR 28-03 – 08/00

WELL LOCATION SKETCH



Township _____ **N/S**
Range _____ **E/W**
Section No. _____

A. Location of well in sectionized areas. Sketch roads, railroads, streams, or other features as necessary.



B. Location of well in areas not sectionized. Sketch roads, railroads, streams, or other features as necessary. Indicate distances.

Mailing Address:
725 North Azusa Ave.
Azusa, CA 91702

MAIN SAN GABRIEL BASIN WATERMASTER

SUPERIOR COURT CASE NO. 924128-LOS ANGELES COUNTY

APPLICATION TO MODIFY EXISTING WATER WELL

(State Well Number)
(Recordation Number)
(Owner's Designation)

(1) APPLICANT:
Name_____
Address_____
_____
E-mail Address_____
(2) LOCATION OF PROPOSED WELL:
*Well Address:*_____
*Township, Range, and Section*_____
*Thomas Brothers Guide (Please indicate year, page number and coordinates.)*_____
_____
*Assessor's Parcel No.*_____
(Please attach copy of a map or sketch showing well location relative to streets or other major landmarks.)
(3) NAME OF WELL DRILLING CONTRACTOR:_____
_____
(4) TYPE OF WORK:
Deepening ( ) Modify Perforations ( ) Increase Yield ( )
Reconditioning ( ) Other ( )_____
(5) PROPOSED USE:
Municipal ( ) Irrigation ( )
Domestic ( ) Industrial ( )
Water Quality Cleanup ( )
Other ( )_____
(6) DRILLING EQUIPMENT:
Rotary ( )
Cable ( )
Other ( )
(7A) CASING INSTALLED (existing):
STEEL ( ) PLASTIC ( )
OTHER ( )
Gravel Packed:
Yes ( ) No ( ) Size_____

From ft.	To ft.	Diam.	Gage or Wall	Diameter of Bore	Packed From ft.	Packed To ft.

Size of shoe or well ring:_____
Describe joint_____
(7B) CASING INSTALLED (proposed):
STEEL ( ) PLASTIC ( )
OTHER ( )
Gravel Packed:
Yes ( ) No ( ) Size_____

From ft.	To ft.	Diam.	Gage or Wall	Diameter of Bore	Packed From ft.	Packed To ft.

Size of shoe or well ring:_____
Describe joint_____
(8A) PERFORATIONS OR SCREEN (existing):
Type of perforation or size of screen

From ft.	To ft.	Perf. per row	Rows per ft.	Slot Size

(8B) PERFORATIONS OR SCREEN (proposed):
Type of perforation or size of screen

From ft.	To ft.	Perf. per row	Rows per ft.	Slot Size

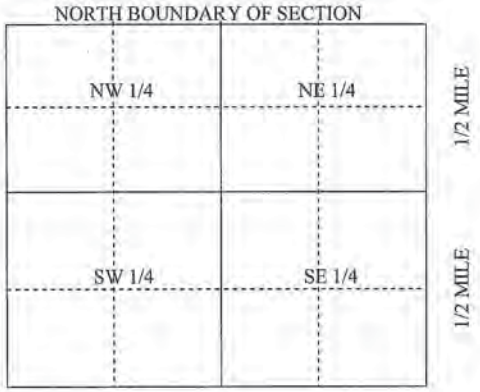
(9A) EXISTING CONSTRUCTION:
Was a surface sanitary seal provided? Yes ( ) No ( )
To what depth?_____ft.
Were any strata sealed against pollution? Yes ( ) No ( )
If yes, note depth of strata
from _____ft. to _____ft.
from _____ft. to _____ft.
Method of sealing _____

(9B) PROPOSED CONSTRUCTION:
Will a surface sanitary seal be provided? Yes ( ) No ( )
To what depth? _____ft.
Is any strata anticipated to be sealed against pollution? Yes ( ) No ( )
If yes, note depth of strata
from _____ft. to _____ft.
from _____ft. to _____ft.
Method of sealing _____
(10) WELL TESTS:
Was a pump test made? Yes ( ) No ( ) (If yes, attach most recent copy)
_____gal. min. with _____ft. drawdown after _____hrs.
Temperature of water_____
Was a chemical analysis made? Yes ( ) No ( )
Was electric log made of well? Yes ( ) No ( ) (If yes, attach most recent copy)
(11) WELL LOG:
Total depth_____ft. Depth of completed well_____ft.
Formation: Describe by color, character, size of material and structure_____ft. to_____ft.
(Please attach copy of existing well log. If well log is not available, describe well lithology in space provided or on attached page.)
_____
_____
(12) HISTORIC WELL MODIFICATIONS:
(On an attached page, please provide a chronology of all historic well modifications which may have affected well yield or water quality.)
(13A) EXISTING WELL PUMP DATA:
A. Pump Type:
Electric ( ) Natural Gas ( ) Other ( )
Propane ( ) Diesel ( )
B. Pump Performance:
Horsepower_____(GPM)_____
Design Efficiency_____
(13B) PROPOSED WELL PUMP DATA:
A. Pump Type:
Electric ( ) Natural Gas ( ) Other ( )
Propane ( ) Diesel ( )
B. Pump Performance:
Horsepower_____(GPM)_____
Design Efficiency_____
(14) Please provide copy of County of Los Angeles permits and State Department of Water Resources Water Well Driller Reports and any other permits for modification of an existing well upon completion of modification of well.
(15) Please provide Watermaster with copies of all feasibility studies, alternative water supply sources, water quality studies or other reports which validate the Applicant's need to modify this well. Applicant must provide supporting data to show compliance with the requirements of Section 28 with particular reference to Section 28(e) of Watermaster's Rules and Regulations.

I hereby agree to comply with all regulations of the Main San Gabriel Basin Watermaster pertaining to well construction, operation, repair, modification, destruction and inactivation. The Applicant will furnish the Watermaster a complete well log upon completion of well modification.

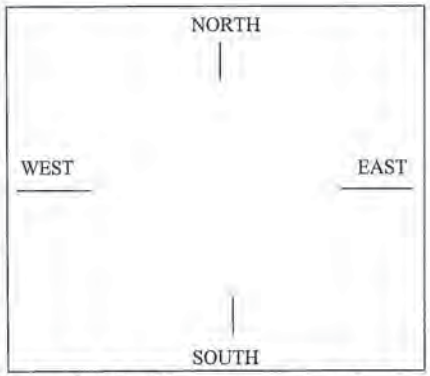
Submitted for Applicant by:_____
Signature:_____
Title:_____
Date:_____
Date Received by Watermaster:_____
Watermaster Action:
Approved ( ) Denied ( )
Date of Action:_____
Permit Number:_____
By:_____
(Name)
_____
(Title)

WELL LOCATION SKETCH



Township _____ **N/S**
Range _____ **E/W**
Section No. _____

A. Location of well in sectionized areas. Sketch roads, railroads, streams, or other features as necessary.



B. Location of well in areas not sectionized. Sketch roads, railroads, streams, or other features as necessary. Indicate distances.

EXHIBIT I-2

Mailing Address:
725 North Azusa Ave.
Azusa, CA 91702

MAIN SAN GABRIEL BASIN WATERMASTER

SUPERIOR COURT CASE NO. 924128-LOS ANGELES COUNTY

(State Well Number)
(Recordation Number)
(Owner's Designation)

APPLICATION TO DESTROY WELL

(1) APPLICANT:
Name_____
Address_____

E-mail Address_____
(2) LOCATION OF WELL:
*Well Address:*_____
*Township, Range, and Section*_____
*Thomas Brothers Guide (Please indicate year, page number and coordinates.)*_____

*Assessor's Parcel No.*_____
(Please attach copy of a map or sketch showing well location relative to streets or other major landmarks.)
(3) NAME OF WELL DRILLING CONTRACTOR:_____

(4) PURPOSE FOR DESTROYING WELL
Water Quality ( ) Physical ( )
Other ( )_____
(5) CURRENT USE:
Municipal ( ) Irrigation ( )
Domestic ( ) Industrial ( )
Water Quality Cleanup ( )
Other ( )_____
(6) EXISTING CASING INSTALLED:
STEEL ( ) PLASTIC ( )
OTHER ( )
Gravel Packed:
Yes ( ) No ( ) Size_____

From ft.	To ft.	Diam.	Gage or Wall	Diameter of Bore	Packed From ft.	Packed To ft.

Size of shoe or well ring:_____
Describe joint_____
(7) EXISTING PERFORATIONS OR SCREEN:
Type of perforation or size of screen

From ft.	To ft.	Perf. per row	Rows per ft.	Slot Size

(8) CONSTRUCTION:
Was a surface sanitary seal provided? Yes ( ) No ( )
To what depth? _____ ft.
Were any strata sealed against pollution? Yes ( ) No ( )
If yes, note depth of strata
from _____ ft. to _____ ft.
from _____ ft. to _____ ft.
Method of sealing_____

(9) WELL LOG: (Please provide a copy of well log.)
Total depth _____ ft. Depth of completed well _____ ft.
Formation: *Describe by color, character, size of material and structure if well log cannot be provided.*
_____ ft. to _____ ft._____

(10) METHOD OF DESTROYING: (Please provide an explanation of how the well is to be destroyed including drawings showing the proposed method of destroying. Please provide copy of County of Los Angeles permits and State Department of Water Resources Water Well Drillers reports and any other permits for destruction of well following destruction of the well.)

I hereby agree to comply with all regulations of the Main San Gabriel Basin Watermaster pertaining to well construction, operation, repair, modification, destruction and inactivation. The Applicant will notify the Watermaster upon completion of well destruction.

Submitted for Applicant by:_____

Signature:_____

Title:_____

Date:_____

Date Received by Watermaster:_____

Watermaster Action:
Approved ( ) **Denied ( )**

Date of Action:_____

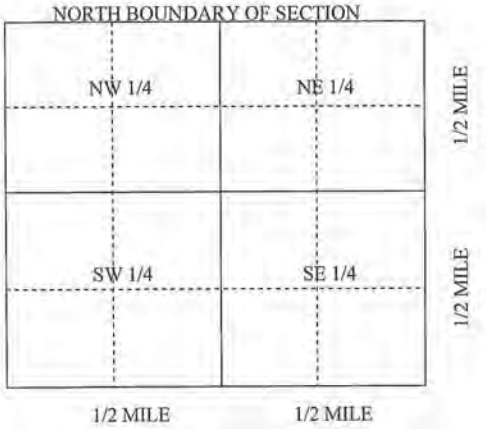
Permit Number:_____

By:_____
(Name)

_____
(Title)

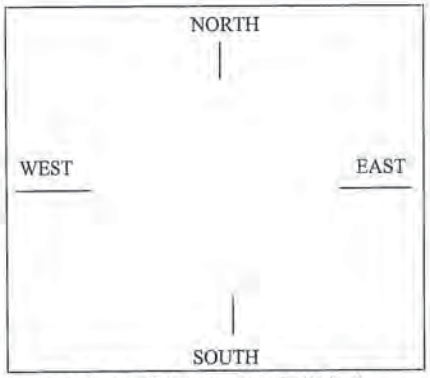
EXHIBIT J-1

WELL LOCATION SKETCH



Township _____ **N/S**
Range _____ **E/W**
Section No. _____

A. Location of well in sectionized areas. Sketch roads, railroads, streams, or other features as necessary.



B. Location of well in areas not sectionized. Sketch roads, railroads, streams, or other features as necessary. Indicate distances.

EXHIBIT J-2

Mailing Address:
725 North Azusa Ave.
Azusa, CA 91702

MAIN SAN GABRIEL BASIN WATERMASTER

SUPERIOR COURT CASE NO. 924128-LOS ANGELES COUNTY

APPLICATION FOR WATER TREATMENT FACILITY

(1) APPLICANT:
Name_____
Address_____
_____
E-mail Address_____

(2) LOCATION OF TREATMENT FACILITY:
Address_____
Thomas Brothers Guide (Please indicate year, page number and coordinates.)_____
_____
(Please include a map showing the location of the treatment facility relative to streets, buildings, water system facilities and other points of reference.)

(3) (A) NAME OF WATER TREATMENT FACILITY CONTRACTOR:_____
(B) NAME OF DESIGN ENGINEER AND STATE REGISTRATION NUMBER:_____

(4) PROPOSED ACTION AT TREATMENT FACILITY
Construction ( ) Modification ( ) Removal ( )
Destruction ( ) Other ( )

(5) DESCRIPTION OF FACILITY:
(A) Type of treatment:
Volatile Organic Chemical ( ) Nitrate ( ) Other ( )
(B) Please describe the treatment process to be used at the proposed treatment plant.
_____
_____
_____

(C) Please list, by Owner Designation, all wells to be treated:
_____
_____
_____

(6) ANTICIPATED TREATMENT FACILITY CAPACITY:
_____ Gallons Per Minute
_____ Acre-feet Per Year

(7) EXPECTED CONCENTRATION OF CONTAMINANTS:

Contaminant	Influent Concentration (Parts per Billion)	Effluent Concentration (Parts per Billion)	Contaminant Removal Rate (Percent)
Trichloroethylene (TCE)			
Tetrachloroethylene (PCE)			
1,1,1-Trichloroethane (1,1,1-TCA)			
Carbon Tetrachloride (CTC)			
1,1-Dichloroethylene (1,1-DCE)			
1,1-Dichloroethane (1,1-DCA)			
1,2-Dichloroethane (1,2-DCA)			
Others:			

(8) DISPOSITION OF ALL TREATED WATER:
(Please describe disposition of all treated water, and the corresponding annual amount of discharge.)
_____
_____
_____

(9) INITAIL START-UP DATE:
_____

(10) EXPECTED OPERATING SCHEDULE:
(A) Daily schedule_____
(B) Number of days each month *(Please specify if operating schedule varies month-to-month)*
_____
_____

(11) EXPECTED COSTS
(A) Capital cost:$_____
(B) Operation and maintenance:$_____/AF.

(12) REGULATORY PERMITS: Please describe all necessary permits and/or all permits for which you have applied or have received from all regulatory agencies with regard to the proposed treatment facility. Please supply to Watermaster, copies of all environmental documents required under the California Environmental Quality Act and/or the National Environmental Protection Act.

(13) Applicant acknowledges it will comply with all portions of Section 28 of Watermaster's Rules and Regulations pertaining to quarterly data submittal, for treatment plant operation, to Watermaster. Specifically, at least the following data shall be provided on a quarterly basis:

- Name or other designation of treatment facility;
- Quantity of water treated during quarter;
- Quantity of each contaminant removed;
- Quality of water before treatment, at beginning and end of each quarter;
- Quality of water after treatment, at beginning and end of each quarter; and
- Operation and maintenance costs for each quarter.

(14) Please provide Watermaster with copies of all feasibility studies, alternative water supply sources, water quality studies or other reports which validate the Applicant's need to install a water treatment facility.

Applicant must provide supporting data to show compliance with the requirements of Section 28 with particular reference to Section 28(h) of Watermaster's Rules and Regulations.

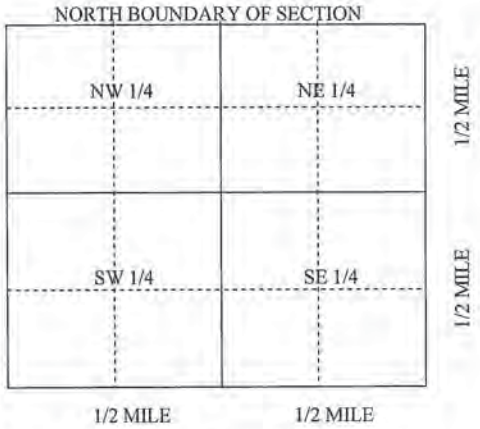
I hereby agree to comply with all regulations of the Main San Gabriel Basin Watermaster pertaining to treatment plant construction, operation, repair, modification, destruction and inactivation.

Submitted for Applicant by:_____
Signature:_____
Title:_____
Date:_____

Date Received by Watermaster:_____
Watermaster Action:
Approved ( ) Denied ( )
Date of Action:_____
Permit Number:_____
By:_____
(Name)
_____
(Title)

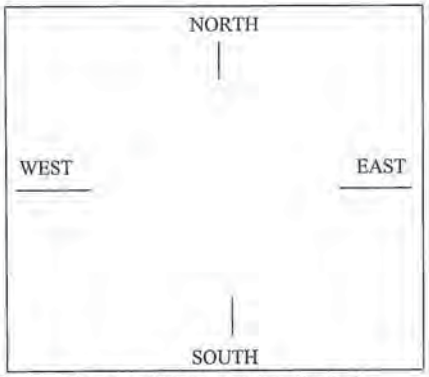
EXHIBIT K-1

WELL LOCATION SKETCH



Township _____ **N/S**
Range _____ **E/W**
Section No. _____

A. Location of well in sectionized areas. Sketch roads, railroads, streams, or other features as necessary.



B. Location of well in areas not sectionized. Sketch roads, railroads, streams, or other features as necessary. Indicate distances.

POLICY/CRITERIA FOR BORROWING
Section 18 (i)

A. Watermaster may borrow money from any available fund maintained by it for purposes other than Replacement Water purchases, or use accrued funds, to purchase Supplemental Water. "Any available fund" shall mean the Administration Fund, the In-Lieu Fund, the Make-up Obligation Fund or any fund other than the Replacement Water Fund. The following criteria shall be followed when borrowing from any available fund. **(Note: The provisions for levying assessments, including repayment of borrowed funds, should be added to Sections 18 (Assessments) and 19 (Levy and Notice of Assessments).)**

1. The first priority for using borrowed funds is for the pre-purchase of Replacement Water based upon unique water supply availability conditions. In this case, borrowed funds shall be repaid by the subsequent over-producers as normal Replacement Water purchases. The Watermaster may also use borrowed funds to purchase Supplemental Water for the general benefit of the Basin.
2. Watermaster shall maintain sufficient amounts in the fund(s) it borrows from to reliably manage those funds.
    a. The Replacement Water fund has accumulated amounts which reflect interest income. The surplus amounts in the Replacement Water fund may be used for the purchase of Replacement Water.
    b. The Make-up Obligation fund has been established through Make-up Obligation assessments to fund the purchase of Make-up Water to satisfy a Make-up Obligation of the Upper Area to the Lower Area pursuant to the Long Beach Judgment.

i. The Upper Area shall have an Accrued Credit of no less than 50,000 acre-feet in order to consider any borrowing for the purchase of Supplement Water.

ii. If, at any time, amounts are borrowed from the Make-up Obligation fund, and the Upper Area accrued credit falls below 50,000 acre-feet, the amount borrowed shall be repaid, with accrued interest, within one-year of the date of the San Gabriel River Watermaster Annual Report identifying the accrued credit is below 50,000 acre-feet.

B. Borrowing from Financial Institutions

1. When necessary to secure Supplemental Water, upon approval by Watermaster at its regularly scheduled public meeting, Watermaster may borrow funds in excess of the annual amount of assessments levied but uncollected.
2. Prior to borrowing funds, Watermaster shall conduct the following:
    a. Meet and confer with Responsible Agencies and seek their input and;
    b. Obtain prior approval of the Court before incurring debt that exceeds the total of one year's levied Assessments.
    c. Identify the terms and conditions for Court approval.
3. Debt repayment will be allocated among the Parties subject to the beneficial use of the Supplemental Water
    a. Supplemental Water used as a pre-delivery of a Replacement Water obligation shall be allocated amongst the Parties which incur a Replacement Water obligation.
    b. Supplemental Water used as a delivery for the general benefit of the Basin shall be allocated based upon total

Prescriptive Pumping Rights and Surface Diversion Rights (or total Production).

4. Watermaster may establish a line of financial credit with a financial institution. Watermaster shall maintain a record of all fees, principal and interest associated with any loan or withdrawal on its line of credit until such funds are repaid. Watermaster shall establish an applicable assessment rate for repayment in full, including fees and interest.
    a. Upon receipt of assessment funds each year, Watermaster shall make a repayment to the lending institution, in part or in whole, to complete repayment.

POLICY/CRITERIA FOR
THREE-YEAR PURCHASED WATER PLAN
Section 30

A. By August 1 of each year, Watermaster staff will prepare a draft Three-year Purchased Water Plan estimating the Supplemental Water purchases for each of the three subsequent years.
    1. Estimated Supplemental Water purchases shall be provided to correspond to water supply allocations made by other agencies (currently calendar year).
        a. Allocations of State Water Project water entitlement are provided on a calendar year basis.
        b. The Metropolitan Water District of Southern California allocations are provided on a calendar year basis.
    2. The Supplemental Water requirement from the end of Watermaster's fiscal year (ends June 30) is assumed to be delivered by the end of the respective calendar year (i.e. June 30, 2013 delivered by December 31, 2013).
    3. The estimated Supplemental Water requirements to be included in the draft Three-year Purchased Water Plan may be based on the following:
        a. The first year of the Three-year Purchased Water Plan shall be, at a minimum, the total Replacement Water requirement for the three Responsible Agencies for the immediately preceding fiscal year's Operating Safe Yield and Production, and any Supplemental Water, at the discretion of Watermaster.
        b. The second and third years of the Three-year Purchased Water Plan may be estimated as follows:

            i. The Operating Safe Yield established by Watermaster for the current fiscal year and the preliminary Operating Safe Yield for the next succeeding years.
            ii. Alternative projections of the Operating Safe Yield that may be set by Watermaster.
            iii. An evaluation of potential wet, average, and dry hydrologic conditions.
            iv. Future groundwater Production provided by, or estimated for, each Producer pursuant to Section 28(g) (1) of these Rules and Regulations and preparation of Watermaster's Five-year Water Supply and Water Quality Plan.
            v. Depending upon Basin conditions, Watermaster may consider additional factors as necessary.

B. Prior to October 1 of each year, the draft Three-year Purchased Water Plan shall be provided to the appropriate Watermaster Committee(s) for review.
C. At its October meeting, the Watermaster Board shall be presented with the draft Three-year Purchased Water Plan.
D. On or before November 1 of each year, Watermaster shall prepare and distribute to the Responsible Agencies a three-year projection of its supplemental water purchases from each agency.
E. Watermaster shall, to the extent feasible, coordinate the tentative schedule for delivery and payment of those Supplemental Water purchases with each agency.

POLICY/CRITERIA FOR
REPLACEMENT WATER ASSESSMENT
Section 18 (b)

Section 18(b) – Watermaster Replacement Water rates may be in an amount calculated to allow Watermaster to purchase more than one acre-foot of Supplemental Water for each acre-foot of excess Production (Production which exceeds annual Production rights) to which such Assessment applies, when such purchases are prudent in order to secure necessary supplies for the benefit of the Basin and parties, subject to the following conditions:

1. To the extent Watermaster purchases more than one acre-foot of Supplemental Water for each acre-foot of excess Production to which such assessment applies, a credit shall be issued to the affected Producers at such time excess water is purchased.
2. Watermaster shall maintain a record of the Producers which were assessed and the quantity of Supplemental Water that was purchased for the current year's Replacement Water obligation and the incremental additional amount of Supplemental Water that was purchased for which a credit will be issued.
3. Producers that have been assessed an amount to purchase more than one acre-foot of Supplemental Water and have received a credit shall have the option of:
    a. Retaining the additional Supplemental Water in an individual Producer cyclic storage account for use by the Producer to off-set a future Replacement Water obligation – (requires cyclic storage agreement).
    b. Transferring the additionally purchased Supplemental Water credit to the appropriate Responsible Agency, and placed in the Responsible Agency's cyclic storage account.
4. Interest shall not accrue to the Producer on the assessment used to purchase additional Supplemental Water.

POLICY/CRITERIA FOR
WATER RESOURCE DEVELOPMENT ASSESSMENT
Section 18 (e)

e) Watermaster may levy an assessment on all Pumping to support the purchase, financing and/or development of new or additional Supplemental Water sources, in cooperation with one or more Responsible Agencies as appropriate.

1. Any Water Resource Development Assessment approved by the Watermaster shall be assessed on all Production.
2. The Water Resource Development Assessment funds are intended to ensure that the Basin maintains a reliable Supplemental Water supply to support the Judgment's Physical Solution and are intended to be used for the benefit of the entire Basin.
3. Any proposed use of Water Resource Development Assessment for development of a new or additional Supplemental Water source(s) shall require a technical document to be prepared and presented to the Watermaster, and shall include, as a minimum, the following information.
    a. Engineering Report
        i. Description
        ii. Source of water supply
        iii. Water supply reliability
        iv. Description of new facilities
        v. Detailed cost estimate
        vi. Detailed operations and maintenance cost estimate
        vii. A cost/benefit analysis
        viii. Description of potential impacts to Responsible Agencies
        ix. Description of basin-wide benefits
    b. California Environmental Quality Act (CEQA) and/or National Environment Policy Act (NEPA) compliance, as necessary

i. A Categorical Exemption
ii. A Negative Declaration
iii. A Mitigated Negative Declaration
iv. An Environmental Impact Report

c. Regulatory approval, as applicable
i. California Department of Public Health
ii. Regional Water Quality Control Board
iii. United States Environmental Protection Agency
iv. State Water Resources Control Board
v. Other State, County and Local Agencies

d. Funding summary and financial analysis
i. Description of all sources of funding
ii. Capital costs funding
iii. Operations, maintenance, repair and replacement costs funding
iv. Long-term financial strategy

4. In the event a Supplemental Water Supply project is presented to the Watermaster, Watermaster's Engineer and/or other designated Watermaster consultant(s) shall review the technical documents submitted and prepare a Staff Report evaluating the proposed project, including but not limited to :
a. Any Watermaster obligation and benefits.
b. Potential impacts to Responsible Agencies
c. Benefits to the Basin and the Producers.
d. An analysis of project costs compared to existing source(s) of supply.
e. An analysis of the long-term reliable yield of the proposed project.
5. The Watermaster Engineer's staff report shall be reviewed by the appropriate Watermaster Committee(s).

6. A new Supplemental Water Supply project that is endorsed by a Watermaster Committee(s) shall be subject to Section 11 of the Rules and Regulations
7. A new Supplemental Water Resources Development Assessment supply project that satisfies the public hearing process may be agenized for action by Watermaster regarding a Water Resources Development Assessment.
a. Watermaster's action on a Water Resources Development Assessment is subject to Court approval.
b. Parties wishing to oppose or support Watermaster's action may do so pursuant to Section 11 of these Rules and Regulations.
8. Following Court approval of a Water Resource Development Assessment, but prior to levying the assessment, Watermaster may execute an Agreement with the project proponent, if appropriate, including but not limited to a description of:
a. Reliable annual project yield.
b. All funding requirements.
c. Provisions for repayment of Watermaster Resource Development Assessments in the event alternative funding becomes available in the future.
d. The specific amount and length of time the Resources Development Assessment will be levied.
e. Any other items deemed appropriate by Watermaster.

POLICY/CRITERIA FOR
AGREEMENT FOR STORAGE AND EXPORT OF SUPPLEMENTAL WATER
Section 34 (r)

1. Potential Parties to a Storage and Export Agreement shall include, but not be limited to the following:
   a. Main San Gabriel Basin Watermaster.
   b. Party to the Judgment, as applicable.
   c. The appropriate Responsible Agency(s)
      i. Three Valleys Municipal Water District
      ii. Upper San Gabriel Valley Municipal Water District
      iii. San Gabriel Valley Municipal Water District
   d. Non-party to the Judgment, as applicable.

2. Recitals (likely need a lot more)
   a. Watermaster may fix terms and conditions under which parties and non-parties may store Supplemental Water in and export said Supplemental Water from the Basin;(Section 34 (r) of the amended Judgment)
   b. Entities to a Storage and Export Agreement who are Parties to the Watermaster Judgment remain bound by ALL provisions of the Judgment and Rules and Regulations.
   c. Entities to a Storage and Export Agreement who are non-Parties to the Watermaster Judgment shall remain non-parties to the Judgment and receive no rights, privileges, or responsibilities under the Judgment, except those specified herein.
   d. Non-parties wishing to store and export Supplemental Water agree to the enforcement and dispute resolution procedures of the Judgment, including without limitation, submission to dispute resolution before the Court with continuing jurisdiction under the Judgment.
   e. A Storage and Export Agreement shall be administered by the Watermaster.

   f. At a minimum, the following shall be reported to the Watermaster:
      i. Production
      ii. Meter test results
      iii. Section 28 submittals (if applicable)
      iv. Monthly Supplemental Water delivery and export
   g. There shall be no obligation or commitment by Watermaster for a proposed "Project's" success or failure.
   h. All extractions under this Agreement shall be for export purposes only and are not a primary water supply source to the exporter.
   i. Compliance with all provisions of Section 28 (new or increased production), as applicable.
   j. Watermaster shall control all spreading or injection and extraction scheduling and procedures for the storage and export of Supplemental Water.
   k. In an effort to facilitate Storage and Export agreements, Watermaster shall impose conditions to ensure that there will be no adverse impact to any other production source as a result of the agreement, and shall maintain continuing authority over such storage and export.
   l. Parties through Watermaster, shall maintain continuing ownership of all storage space in the Basin.
   m. Exporter shall be solely responsible for securing any and all permits and regulatory approvals necessary for the storage and export of Supplemental Water.
   n. All costs pursuant to this action shall be borne by the project proponent.

3. Supplemental Water Storage and Export Project Description
   (Specific to each project)
   a. The source of Supplemental Water shall be identified.
   b. The Supplemental Water supply reliability shall be addressed.
   c. The description of delivery location(s) (turnout) shall be identified.
   d. The proposed replenishment location(s) shall be identified.

e. The proposed extraction facilities and location(s) shall be described and the location identified.
f. The proposed extraction plan shall be identified.
g. A detailed description of project operation shall be provided.
h. Compliance with all regulatory and environmental requirements.

4. Agreement Provisions
   a. Storage Requirement to store Supplemental Water in the Basin prior to export.
      i. Watermaster shall determine the minimum balance which shall be in storage at all times.
      ii. Watermaster shall determine the quantity of Supplemental Water deliveries which shall be deemed a contribution to the Basin.
      iii. All water stored pursuant to a Storage and Export Agreement shall be subordinate in priority to other Supplemental Water pursuant to Section 26(d)(3), 26(d)(4), and 26(d)(5) of the Rules and Regulations.
      iv. Watermaster may establish conditions regarding the export at such time the storage falls below the minimum balance.
      v. Watermaster shall determine the minimum quantity of water to be maintained in storage before all export must cease.
      vi. Watermaster shall determine a cost for the evaluation, negotiation, and implementation of a Storage and Export Agreement, and require a financial deposit in advance pursuant to Section 46(a).
      vii. Watermaster shall calculate any special costs, damages or burdens resulting from the storage and export of Supplemental Water. Exporter shall be solely responsible for payment of any such damages, burdens and costs assessed by Watermaster.
      viii. Watermaster shall determine and account for all losses in stored water.
   b. Description of the Supplemental Water Supply

   c. Supplemental Water Quality
      i. The quality of the Supplemental Water shall be subject to Watermaster pre-approval.
      ii. Watermaster may use the "Criteria for the Delivery of Supplemental Water" and the "Salt and Nutrient Management Plan" as a guide.
   d. Basin Contribution for Export
      i. Watermaster shall determine the amount of stored water that shall be contributed to the Basin.
      ii. All contributed water shall be provided to the Basin at no cost to Watermaster or Parties to the Judgment.
   e. Watermaster Assessment (Section 45(b)(6))
      i. Exporter shall be assessed and shall pay to Watermaster applicable Administration assessment on all Production.
      ii. Exporter shall be assessed and shall pay to Watermaster all other applicable assessments on all Production.
      iii. Failure to promptly pay any assessment or fee may be cause for immediate termination of the Agreement.
   f. Project Scheduling – Watermaster Notification
      i. Term of agreement shall consider turn-over and abandonment of stored water.
      ii. Exporter shall provide Watermaster with a schedule which identifies all planning, funding, design, permitting, and construction, and shall be updated on a regular basis. Project delay may be cause for termination.
      iii. Exporter shall at minimum, annually provide Watermaster with an operations schedule identifying planned deliveries and extractions for Watermaster approval.
   g. Replenishment Facilities Priorities
      i. All storage agreements shall at all times consider priorities expressed in Section 26 of the Rules and Regulations.

ii. Priority for storage and export shall be pro-rated by the Watermaster at its discretion, as needed.

h. All Agreements shall address limitation on extraction based upon the Key Well elevation.

i. Reporting to Watermaster consistent with the Rules and Regulations.

j. Watermaster Continuing Authority

  i. Watermaster shall retain control of pumping for Basin water quality.

  ii. Agreement shall consider Basin cleanup plans and projects (which may be coordinated with EPA, WQA and other agencies).

  iii. Watermaster shall incur no liability.

k. Other Agreement (considerations).

  i. Project Modification, Reduction, or Termination by all parties to the Agreement

  ii. Disputes/Resolution

  iii. Agreement Term

  iv. Good Faith

  v. Watermaster to have, or shall be considered for, the first right of refusal to purchase Stored Water prior to such water being exported.

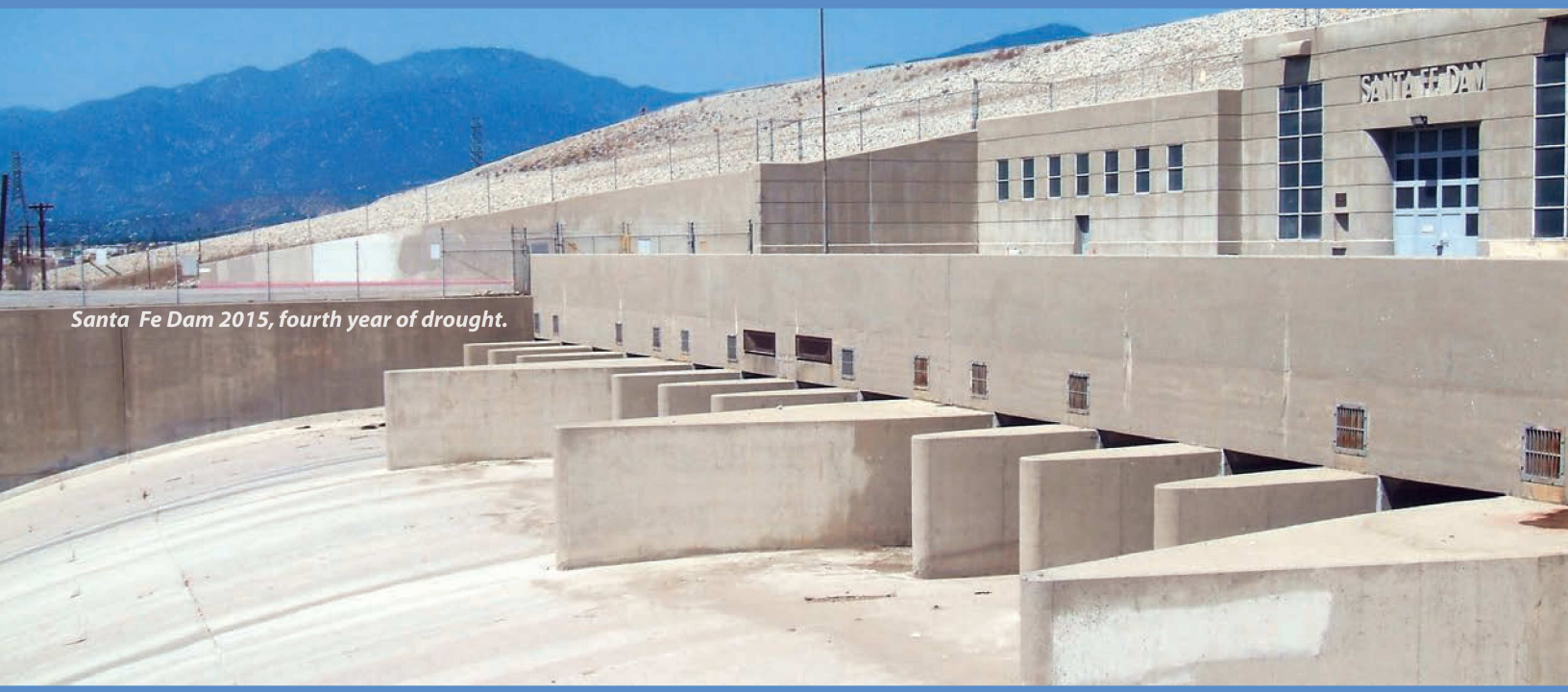
  vi. The storing and exporting parties agree to indemnify and hold Watermaster harmless from any and all claims resulting from the storage and export of Supplemental Water.

  vii. Force Majore

APPENDIX J

Main San Gabriel Basin Watermaster Five-Year Water Quality and Supply Plan

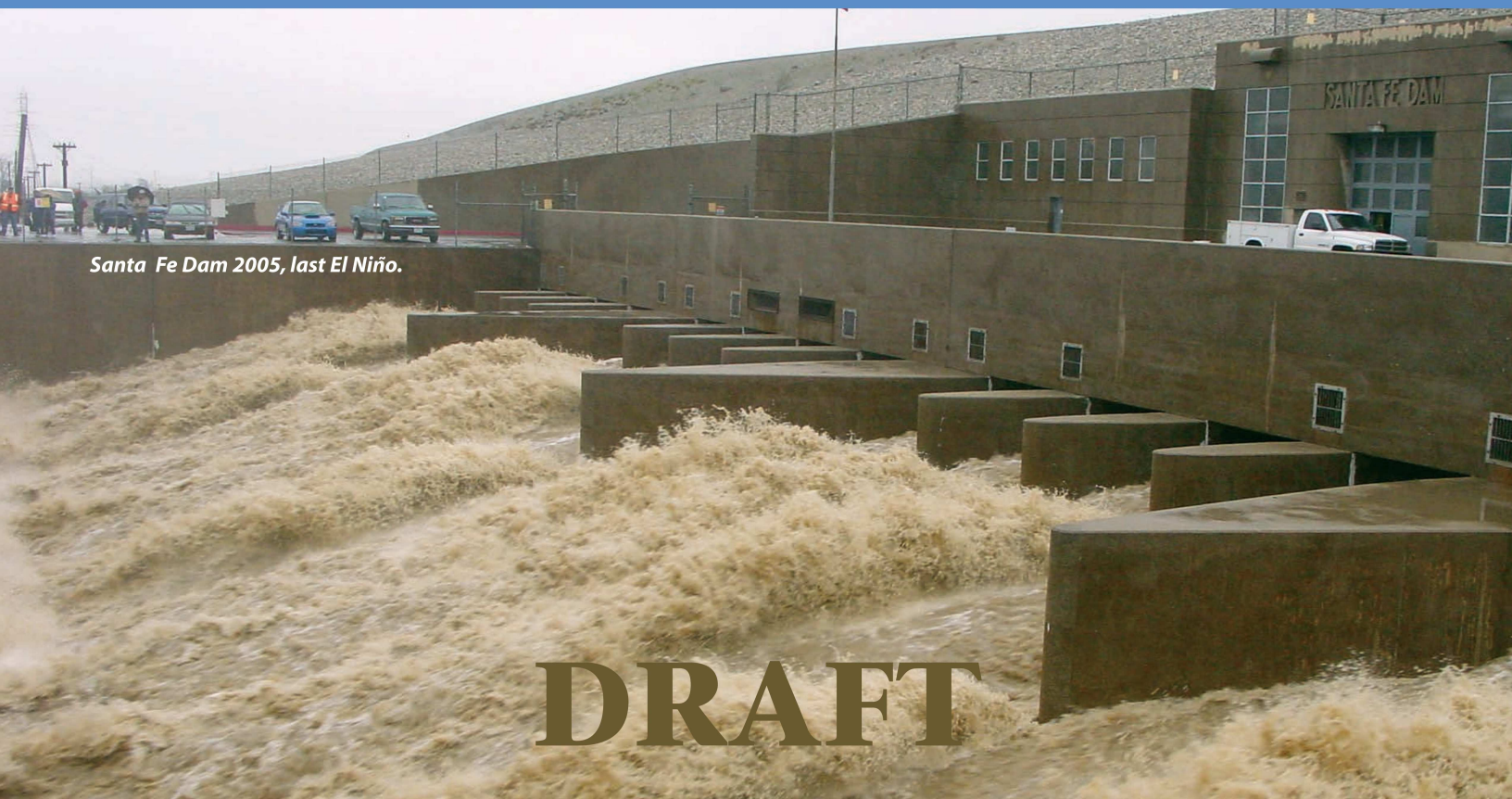
Five-Year
Water Quality and Supply Plan



Santa Fe Dam 2015, fourth year of drought.

Main San Gabriel Basin
WATERMASTER

2015–2016 to 2019–20



Santa Fe Dam 2005, last El Niño.

DRAFT

"To assure that pumping does not lead to further degradation of water quality in the Basin, a Five-Year Water Quality and Supply Plan must be prepared and updated annually by Watermaster…"

Section 28 of Watermaster's Rules and Regulations

Five-Year Water Quality and Supply Plan

November 2015

MainSanGabrielBasin WATERMASTER

Telephone (626) 815-1300 • Fax (626) 815-1303
725 North Azusa Avenue • Azusa, California 91702
www.watermaster.org

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INTRODUCTION

Watermaster prepares and annually updates this Five-Year Water Quality and Supply Plan (Five-Year Plan) in accordance with the requirements of Section 28 of its Rules and Regulations. The objective is to coordinate groundwater-related activities so that both water supply and water quality in the Main San Gabriel Basin (Basin) are protected and improved.

PURPOSE OF THE FIVE-YEAR PLAN

Many important issues are detailed in the Five-Year Plan, including Watermaster's plans to:

1. monitor groundwater supply and quality;
2. develop projections of future groundwater supply and quality;
3. ensure adequate supplemental water is available for groundwater replenishment;
4. review and cooperate on cleanup projects, and provide technical assistance to other agencies;
5. assure that pumping does not lead to further degradation of water quality in the Basin;
6. address emerging contaminants in the Basin;
7. develop a cleanup and water supply program consistent with the U.S. Environmental Protection Agency (USEPA) plans for its San Gabriel Basin Superfund sites; and
8. continue to perform responsibilities under the Baldwin Park Operable Unit (BPOU) Project Agreement relating to project administration and performance evaluation.

WATERMASTER BACKGROUND

The Los Angeles County Superior Court created the Main San Gabriel Basin Watermaster in 1973 to resolve water issues that had arisen among water users in the San Gabriel Valley. Watermaster's mission was to generally manage the water supply of the Main San Gabriel Groundwater Basin.

During the late 1970s and early 1980s, significant groundwater contamination was discovered in the Basin. The contamination was caused in part by past practices of local industries that had inappropriately disposed of industrial solvents, as well as by infiltration of nitrates from an earlier agricultural period. Cleanup efforts for industrial contamination were undertaken at the local, state, and federal levels.

WATERMASTER RECEIVES WATER QUALITY RESPONSIBILITIES

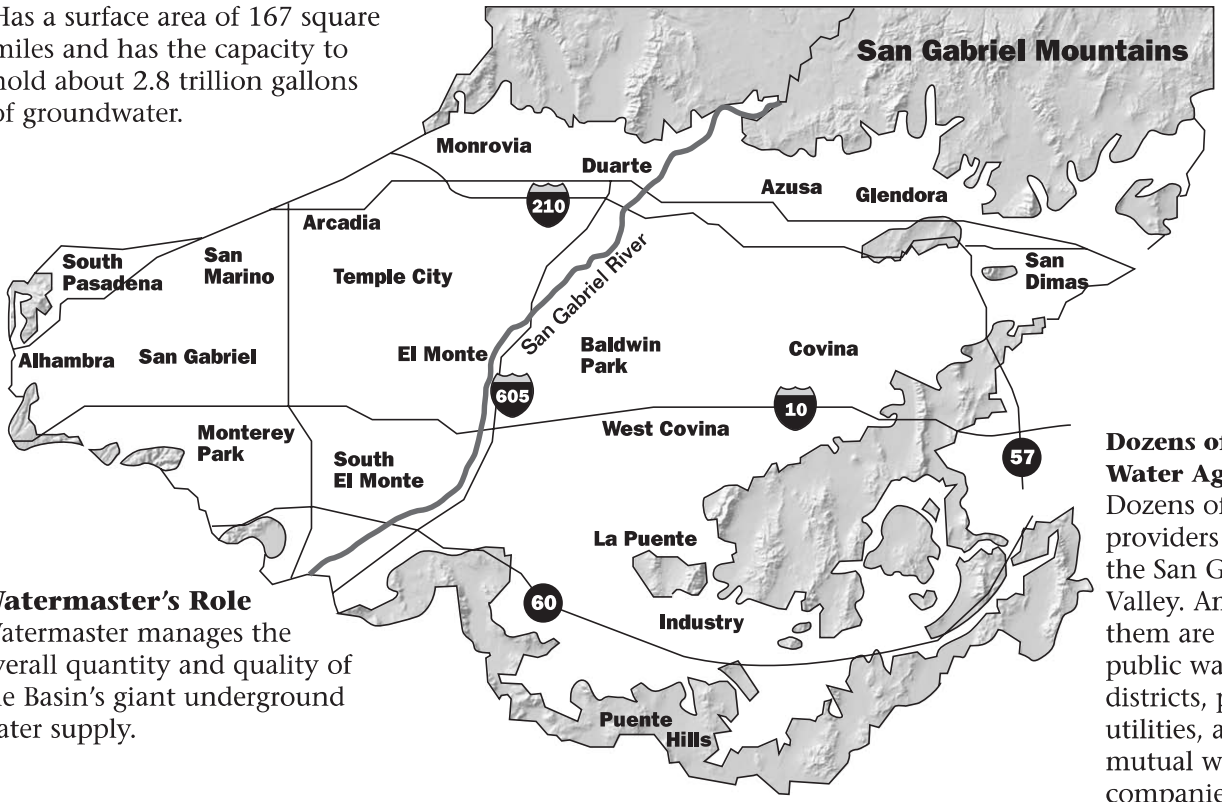
By 1989, local water agencies adopted a joint resolution concerning water quality issues, which stated that Watermaster should coordinate local activities aimed at preserving and restoring the quality of groundwater in the Basin. The joint resolution also called for a cleanup plan.

In 1991, the Los Angeles County Superior Court granted Watermaster the authority to control pumping for water quality purposes. Accordingly, Watermaster added Section 28 to its Rules and Regulations regarding water quality management. The new responsibilities included: developing this Five-Year Water Quality and Supply Plan; updating it annually, and submitting it to the California Regional Water Quality Control Board Los Angeles Region (Regional Board); and making it available for public review by November 1 of each year.

Figure 1. AREA COVERED BY MAIN SAN GABRIEL BASIN

Precious Underground Water Supply
Provides up to 90 billion gallons of groundwater annually, enough to meet 80 percent or more of San Gabriel Valley's 1.4 million residents' demand for water.

2.8 Trillion Gallons
Has a surface area of 167 square miles and has the capacity to hold about 2.8 trillion gallons of groundwater.



Watermaster's Role
Watermaster manages the overall quantity and quality of the Basin's giant underground water supply.

Dozens of Water Agencies
Dozens of water providers serve the San Gabriel Valley. Among them are cities, public water districts, private utilities, and mutual water companies.

CURRENT WATER SUPPLY CONDITIONS

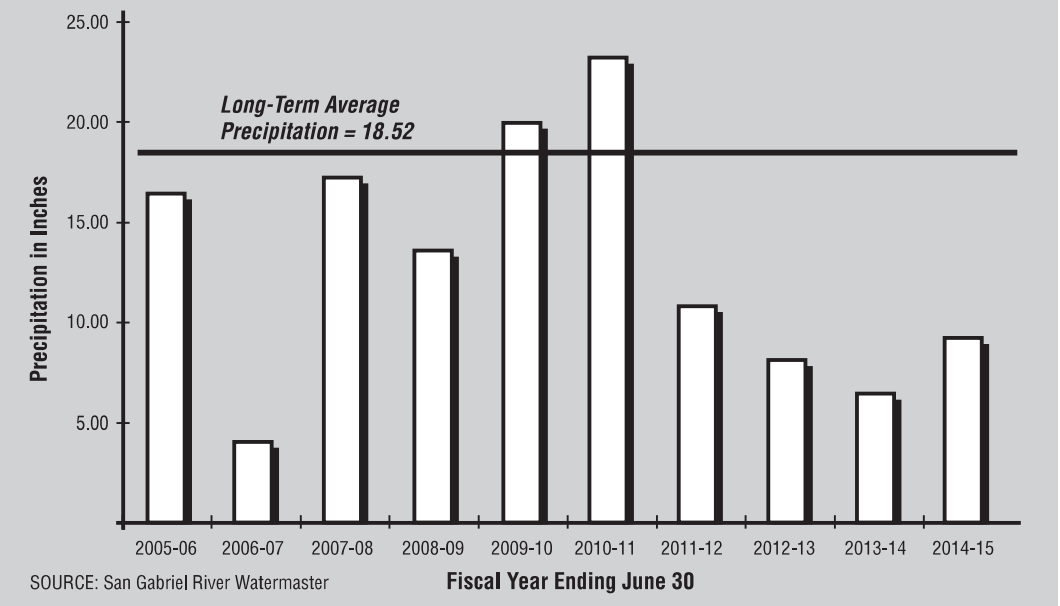
Rainfall in the San Gabriel Valley was well below average. As a result, replenishment of storm runoff was also below average. Consequently, the groundwater level decreased by about 10 feet during fiscal year 2014-15.

WATER SUPPLY INFLOWS DURING 2014-15

VALLEY RECEIVES BELOW-AVERAGE RAINFALL

In 2014-15 the San Gabriel Valley received about 9 inches of rain, which is about 49 percent of the long-term average of 18.52 inches.

Figure 2. RAINFALL BELOW LONG-TERM AVERAGE



The long-term average rainfall is 18.52 inches. The rainfall total is made up of an average taken from four stations located in San Dimas, Diamond Bar, El Monte and Pasadena.

LOCAL STORMWATER CAPTURE
6 PERCENT OF LONG-TERM AVERAGE

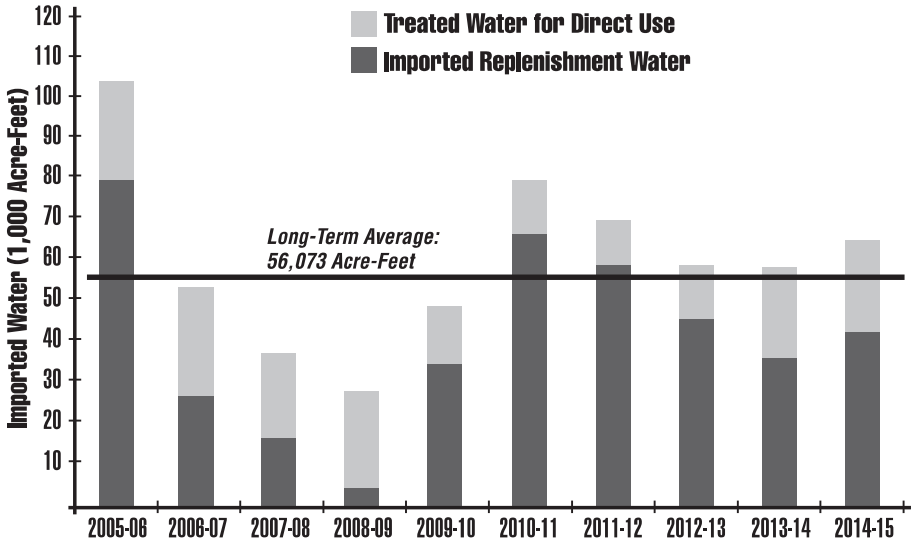
Fiscal year 2014-15 is the fourth consecutive year of below average rainfall. During fiscal year 2014-15, rainfall was about 49 percent of average and contributed to storm water capture of about 6,600 acre-feet, which is about 6 percent of the long-term average. In addition, as of June 30, 2015, only about 20,000 acre-feet of local storm runoff remained in storage in reservoirs in the San Gabriel Canyon. Typically, about 13,000 acre-feet is in the reservoir at the beginning of the storm season in October. That would leave only about 7,000 acre-feet of water for groundwater replenishment—representing a scant ten-inch increase in groundwater elevation within the Basin.

LOCAL WATER USE BELOW AVERAGE

Total water use within the San Gabriel Valley consists of groundwater production, surface water diversions, treated imported water deliveries, and recycled water for irrigation projects. During fiscal year 2013-14, total water use was about 267,500 acre-feet. During fiscal year 2014-15, total water use was about 235,800 acre-feet, consisting of about 196,400 acre-feet of groundwater production, 11,900 acre-feet of treated local surface water, 22,500 acre-feet of treated imported water, and 5,000 acre-feet of recycled water. The decrease in total water use from the prior year (about 35,000 acre-feet) is due to a greater awareness by consumers of the drought conditions and increased water conservation efforts by those consumers. Total water use is about 12 percent lower than the long-term average of about 267,000 acre-feet.

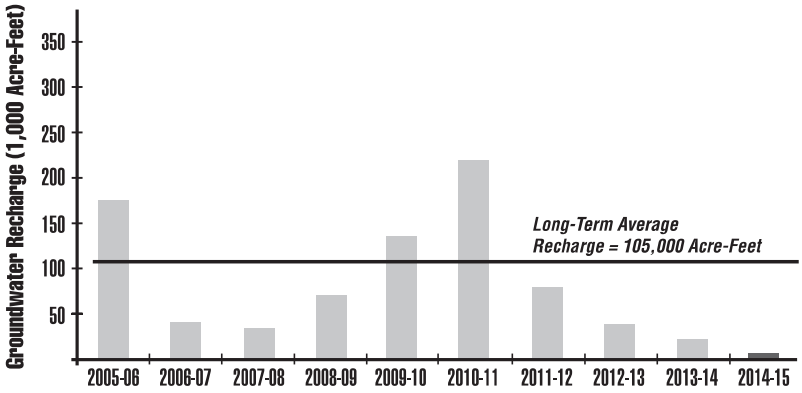
Main San Gabriel Basin Watermaster annually establishes an Operating Safe Yield (OSY), which is based on prevailing hydrologic conditions in the San Gabriel Valley. Production in excess of the OSY is subject to an assessment that is used to purchase untreated imported water to replenish the Basin. Overproduction during fiscal year 2014-15 was 47,700 acre-feet, which is about 20 percent greater than the 10-year average of 39,700 acre-feet.

Figure 3. IMPORTED WATER DELIVERIES ABOVE LONG-TERM AVERAGE



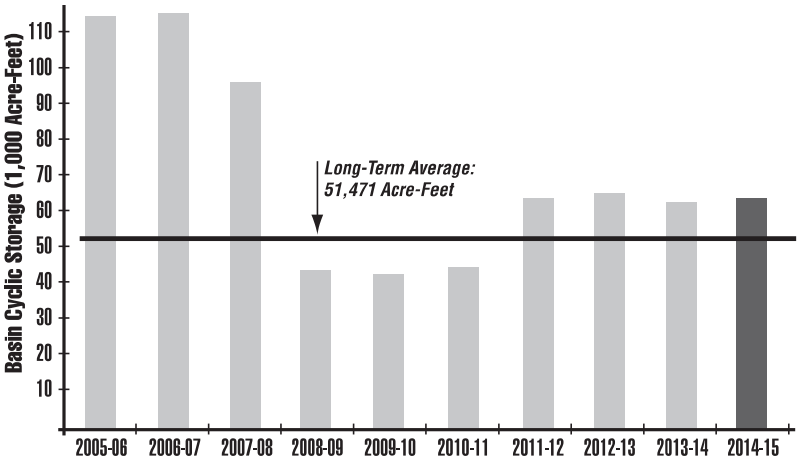
2014-15 Imported Water. Imported water deliveries (treated and untreated) totaled about 64,000 acre-feet for direct use and groundwater replenishment. This is 14 percent higher than the long-term average.

Figure 4. LOCAL WATER CONSERVED ABOUT 6% OF AVERAGE



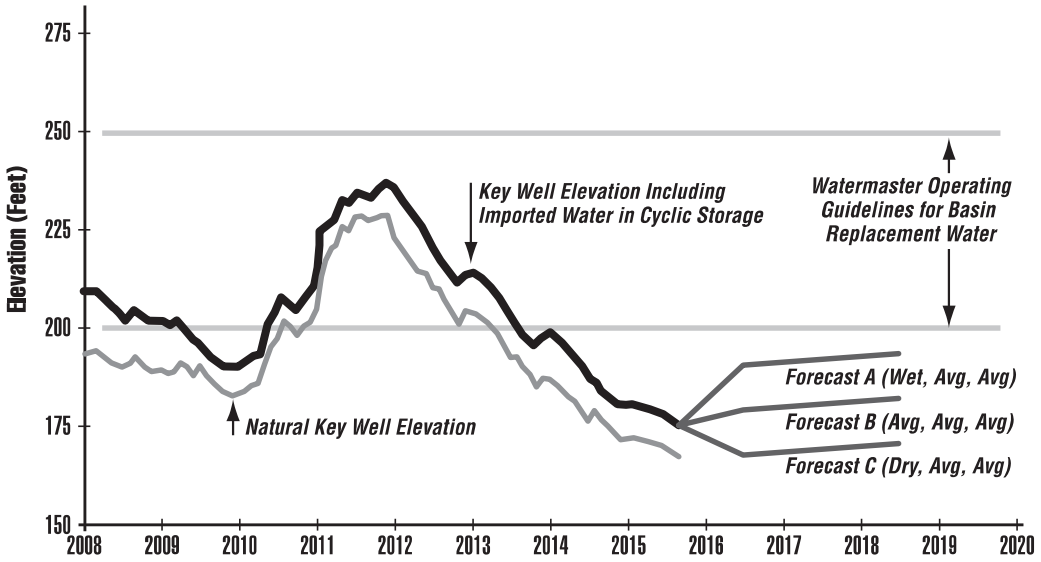
Approximately 6,600 acre-feet of local water was conserved during 2014-15, which is about 6 percent of the long-term average of 105,000 acre feet.

Figure 5. CYCLIC STORAGE REMAINS STEADY



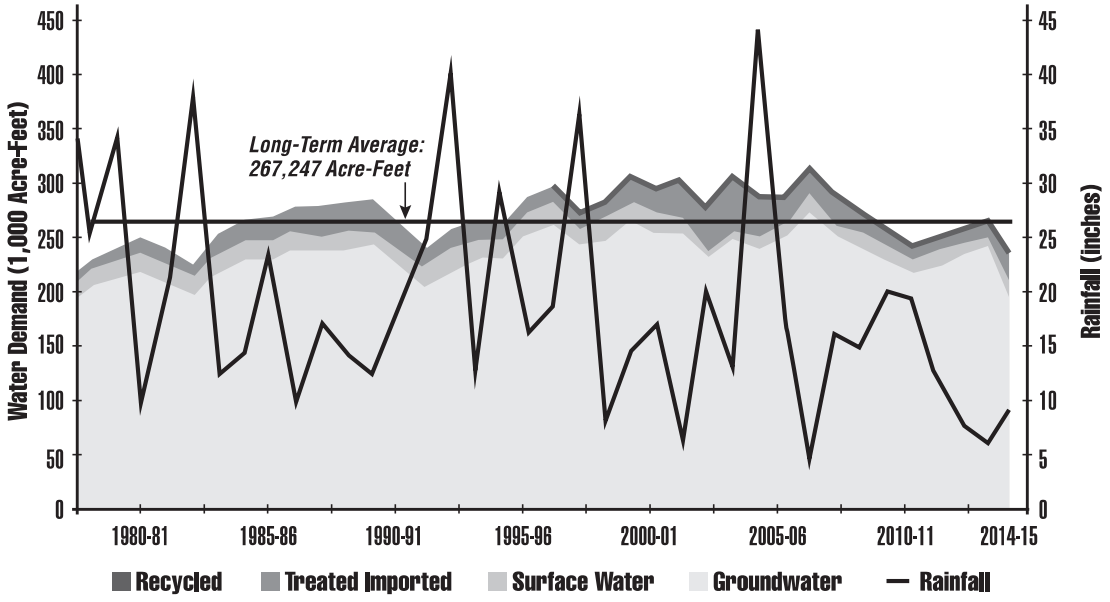
As of June 30, 2015, a total of about 61,900 acre-feet was in Cyclic Storage, consisting of about 14,300 acre-feet of Three Valleys Municipal Water District, about 3,000 acre-feet of San Gabriel Valley Municipal Water District, about 5,000 acre-feet of Upper San Gabriel Valley Municipal Water District, about 7,000 acre-feet of Watermaster, and about 32,600 acre-feet of Producer Cyclic Storage. Cyclic Storage, as of June 30, 2014, has increased by about 500 acre-feet since the end of fiscal year 2014-14. The long-term average is about 51,500 acre-feet.

Figure 6. CYCLIC STORAGE AND RAINFALL IMPACTS ON KEY WELL



The additional water provided by cyclic storage (shown with the black line) helps local agencies meet their future replacement water obligations. This graph also forecasts Key Well elevations for three scenarios: upcoming: wet years, average years and dry years.

FIGURE 7. TOTAL WATER DEMAND DECREASED SIGNIFICANTLY



Long-term average water demand is about 267,247 acre-feet. During fiscal year 2014-15 the total demand was about 235,800 acre-feet, made up of groundwater (196,400 acre-feet), surface water (11,900 acre-feet), imported treated water (22,500 acre-feet), and recycled water (5,000 acre-feet).

OPERATING SAFE YIELD

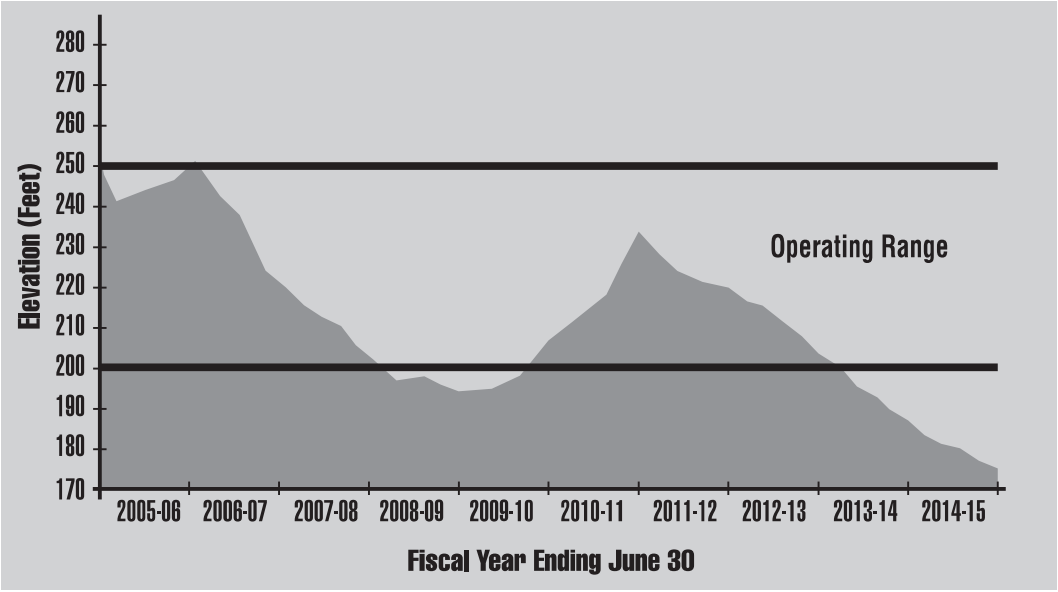
Main San Gabriel Basin Watermaster annually establishes an Operating Safe Yield (OSY), which is based on prevailing hydrologic conditions in the San Gabriel Valley. Production in excess of the OSY is subject to an assessment that is used to purchase untreated imported water to replenish the Basin. Overproduction during fiscal year 2014-15 was about 47,700 acre-feet, which is about 28 percent higher than the long-term average of 37,200 acre-feet. The OSY was set at 150,000 AF for fiscal year 2014-15. The historical long-term average OSY is about 195,000 AF. During fiscal year 2014-15, the OSY was set using a management approach that seeks to set the OSY within a narrower range than previously. This is part of the overall effort to manage the Basin in a way that makes the water supply more stable and costs more predictable in both wet and dry years.

Watermaster aggressively responded to the decreasing trend of the groundwater level at the Key Well during fiscal year 2014-15 by establishing an OSY of 150,000 acre-feet for fiscal year 2015-16 (identical to the OSY for fiscal year 2014-15 and about 45,000 acre-feet below the long-term average of about 195,000 acre-feet). The reduced OSY provides Watermaster with a mechanism to purchase additional replenishment supplies for the Basin, compared to the long-term average OSY.

KEY WELL BELOW OPERATING RANGE

The Baldwin Park Key Well is used as the benchmark for determining how the groundwater level for the entire Basin is trending. Pursuant to the Judgment, Watermaster manages the Basin to maintain the groundwater level at the Key Well between 200 feet and 250 feet to the extent possible. Below-average rainfall between fiscal years 2005-06 and 2008-09, coupled with below-average storm runoff, contributed to the Baldwin Park Key Well water level falling from about 248.4 feet in June 2005 to a historical low (at that time) of 189.2 feet on December 3, 2009. Two consecutive years of above-average rainfall (20 inches during fiscal year 2009-10 and 24 inches during fiscal year 2010-11), contributed to increase the groundwater elevation at the Key Well to about 233.5 feet as of June 30, 2011. However, four consecutive years of below-average rainfall, below average stormwater runoff, and local groundwater production resulted in a decrease in the groundwater elevation at the Key Well to 177.5 feet as of June 30, 2015, despite delivery of about 41,000 acre-feet per year of untreated imported water and reduced production. This level is about 23 feet below the “low” end of the operating range for Watermaster, about 10 feet lower than the year before, and represents a new historic low groundwater elevation at the Key Well.

Figure 8. KEY WELL ELEVATIONS DURING THE LAST TEN YEARS



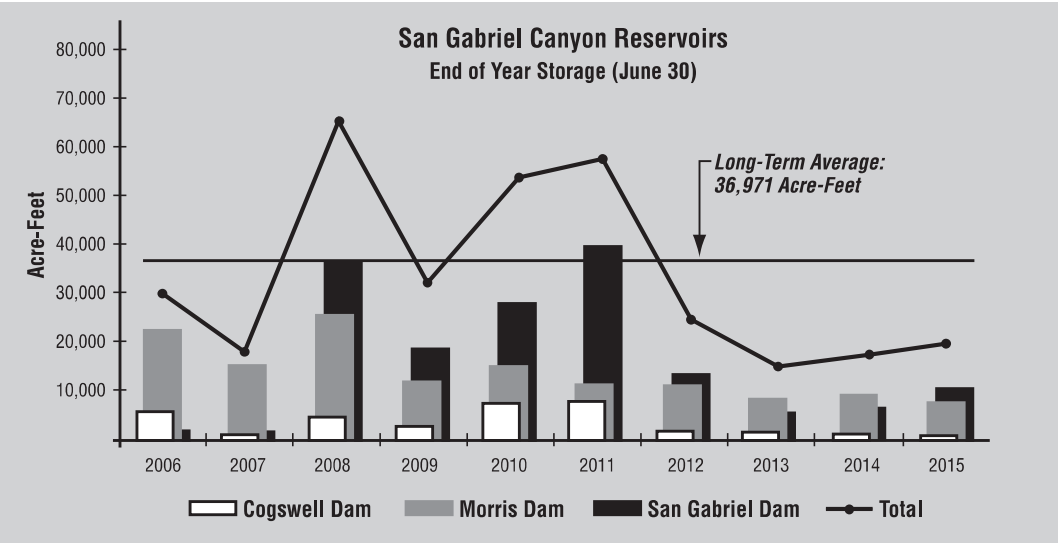
The groundwater elevation at the Key Well on June 30, 2015, was about 177.5 feet, which is below the Basin's operating range of 200 to 250 feet and represents a new historic low.

DECREASE IN WATER STORED IN CANYON RESERVOIRS

Cogswell, San Gabriel, and Morris reservoirs have a combined maximum storage capacity of about 85,000 acre-feet. At the end of the 2014-15 fiscal year, about 20,000 acre-feet of water was stored in these reservoirs. This is about 4,000 acre-feet more than the previous year, representing about 55 percent of the long-term average of about 37,000 acre-feet of water in storage at the end of the fiscal year, but only about 25 percent of total reservoir capacity. In addition, about 6,600 acre-feet of local runoff was released from storage in local reservoirs for recharge into the groundwater basin during fiscal year 2014-15.

Figure 9. WATER STORED IN SAN GABRIEL CANYON RESERVOIRS

Total water stored in San Gabriel Canyon Reservoirs at the end of the fiscal year was 20,000 acre-feet, about 55 percent of the long-term average.



BASIN REPLENISHMENT ACTIVITIES

Historical Basin management practices encouraged Producers to maximize groundwater production instead of relying on treated imported water to address water demands in excess of Producer's water rights. Under normal conditions, Watermaster quantifies groundwater production in excess of Producers' water rights, and arranges to have an equal amount of untreated imported water delivered to replenish the overproduction from the Basin at a "Full Service" untreated water rate. However, in response to the recent drought, Watermaster has implemented additional actions to manage Basin groundwater supplies.

IN-LIEU REPLENISHMENT PROGRAM

As a result of four consecutive years of below average precipitation, untreated imported water supplies have been significantly reduced. In an effort to manage the impact of reduced untreated imported water available for Basin replenishment, Watermaster developed a program to temporarily shift groundwater demand (in excess of Producers' water rights) to treated imported water to reduce the need for untreated imported water deliveries. The In-lieu Program was implemented during fiscal year 2014-15, and about 5,000 acre-feet of groundwater production was shifted to treated imported water.

IMPLEMENTATION OF WATER RESOURCE DEVELOPMENT PROGRAM

Watermaster adopted Resolution No. 05-14-263, which established a Water Resource Development Assessment (RDA), that was applied to all production during fiscal year 2014-15. The purpose of the RDA is to establish a fund from which untreated imported water may be purchased and delivered to the Basin. It is intended to create a "reservoir" of water that is available to assist in the management of the Basin in the event untreated water is not available in the future as a result of a short-term Statewide emergency.

IMPORTED WATER ALLOCATION

Watermaster and Producers recognized prolonged drought conditions will adversely impact untreated imported water availability. Consequently, Watermaster took proactive measures to increase Producer Cyclic Storage from about 15,000 acre-feet as of the end of June 2010 to 42,000 acre-feet as of June 2015. In response to four consecutive years of drought conditions, the Metropolitan Water District of southern California (MWD) implemented a "Water Supply Allocation Program" (WSAP). The WSAP provides an untreated imported water allocation to Upper District of about 25,000 acre-feet and about 4,000 acre-feet to Three Valleys District. Consequently, additional untreated imported water requirements which may be incurred may be deducted from pre-deliveries made by Watermaster and Producers to Cyclic Storage accounts.

In addition to those programs noted above, Watermaster is actively pursuing alternative means of Basin replenishment including:

- encouraging consumer-based conservation efforts to reduce groundwater production;
- securing alternative Supplemental Water supplies and maximizing delivery of imported water from State Water Project contractors;
- pursuing a firm supply of treated recycled water;
- implementing tighter coordination and management to allow replenishment of imported water even during rainy periods, and finding new opportunities to bring in imported water,
- instituting use of new, more flexible financial tools such as mid-year assessments, pre-purchase of water, and other tools to increase water imports, and;
- developing criteria for potential new water storage and export programs.

PROJECTED GROUNDWATER DEMANDS

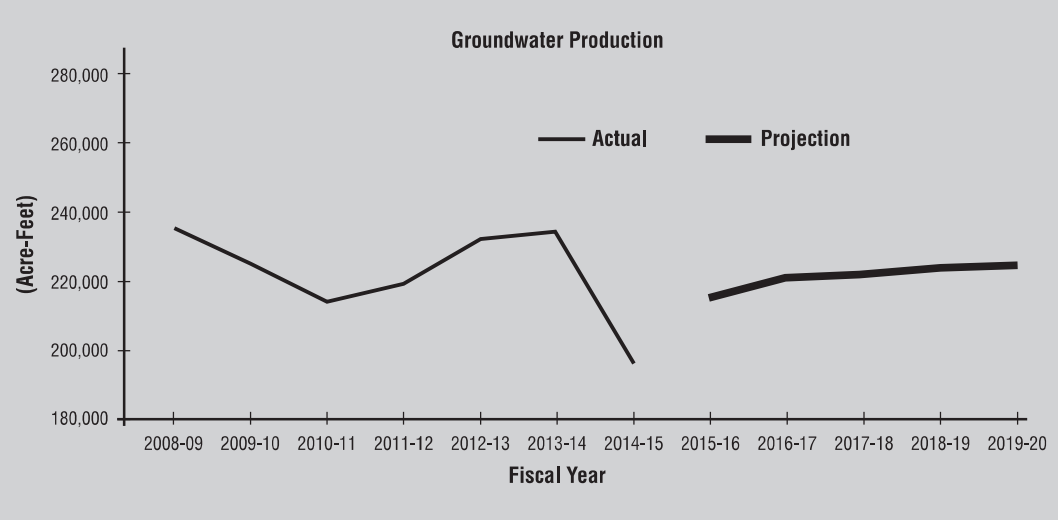
PRODUCER ESTIMATES

Section 28 directs each Producer to submit a report to Watermaster detailing its projected water supply and water production requirements over the following five years. Projections were received from 21 Producers, accounting for about 88 percent of the groundwater production from the Basin.

For those Producers who did not submit projections, Watermaster provided an estimate based on the assumption that each Producer had an aggregate projected growth rate that was the same as those Producers who did submit projections. Projected groundwater production is shown in Appendix A. Figure 10 shows the total projected and historical groundwater production from the Basin since 2007-08.

Figure 10. PROJECTED AND HISTORICAL WATER PRODUCTION

Water production has decreased over the prior year, due in part to consumer water conservation.



Total groundwater production for the 2014-15 fiscal year from the Basin was 196,400 acre feet, which is significantly lower than the previous year's production of 233,700 acre-feet. The decrease in groundwater production is primarily the result of increased water conservation at the consumer level. Groundwater production is influenced by a variety of conditions, including population, seasonal precipitation, groundwater contamination, and availability of surface water. Excluding the impacts of seasonal precipitation, groundwater production had experienced a gradual long-term increase, consistent with increasing population, as shown on Figure 7. The impacts of groundwater contamination during the 1980s and 1990s resulted in reduced groundwater production, offset by an equal increase of treated imported water purchases. Since the late 1990's groundwater production and treatment facilities have become operational, enabling water purveyors to resume use of groundwater. However, since the late-2000s, there has been a significant decrease in groundwater (and overall) demand, which is likely the result of increased water conservation by consumers.

CURRENT WATER QUALITY CONDITIONS

Groundwater delivered to customers continues to be of high quality and always meets state and federal drinking water standards. However, a number of contaminants in areas of the Basin require careful monitoring and treatment before the water is served for domestic use. These contaminants include a variety of industrial solvents referred to as Volatile Organic Compounds, or VOCs. Another common contaminant found in the Basin is nitrate, primarily from fertilizers used during the Valley's agricultural period.

Since 1997, additional contaminants have been detected: perchlorate, a solid rocket fuel ingredient; N-nitrosodimethylamine (NDMA), associated with liquid rocket fuel; 1,2,3-trichloropropane (1,2,3-TCP), a degreasing agent; and 1,4-dioxane, a stabilizer for chlorinated solvents.

In response to the detection of these contaminants, Watermaster and local water entities aggressively pursued construction of treatment facilities to control the spread of contaminants, and continue providing high quality water to consumers, which meets all state and federal drinking water standards. This policy of remediation and reuse both preserves a valuable resource, particularly in the midst of the current drought, and reduces the overall cost of groundwater cleanup. Initially, a number of VOC treatment facilities were constructed, while excessive nitrate concentrations were blended with higher quality water to acceptable levels. Since the detection of perchlorate, NDMA, 1,2,3-TCP, and 1,4-dioxane, Watermaster has been instrumental in the successful operation of treatment facilities to treat those contaminants.

While only present in limited parts of the Basin, these chemicals pose difficult challenges to water Producers. When the chemicals were initially detected, Watermaster responded vigorously by working closely with the local water community to sponsor research, as well as to design, fund, and construct cleanup projects as rapidly as possible rather than wait for the USEPA and the firms named as responsible for the contamination. Watermaster subsequently led negotiations that resulted in the Baldwin Park Operable Unit (BPOU) Project Agreement, including reimbursement for groundwater cleanup costs from certain parties responsible for the contamination. Under the BPOU Agreement, Watermaster is responsible for overall project coordination and administration, groundwater monitoring, and compliance with USEPA reporting requirements. Watermaster also participates in decisions regarding technology selection, construction, and operations. Now that all of the BPOU treatment facilities are operational, Watermaster also monitors the BPOU project's performance in containing and removing contamination.

In addtion cleanup activities with the BPOU, Watermaster coordinates and maintains records on groundwater cleanup efforts within the Puente Valley Operable Unit (PVOU), the El Monte Operable Unit (EMOU), South El Monte Operable Unit (SEMOU), and the Area 3 Operable Unit (Area 3 OU). The location of these Operable Units is shown on Figure 11.

PRIMARY CONTAMINANTS IN THE GROUNDWATER BASIN

VOLATILE ORGANIC COMPOUNDS AND NITRATES

VOCs and nitrates are the most prevalent contaminants found in the Basin. Intensive monitoring and research concerning these two types of contaminants have been underway for many years. The location and cleanup methods for VOCs are generally well understood; during fiscal year 2014-15, 30 plants treated about 25 billion gallons (about 78,300 acre-feet), as shown in Appendix E, of VOC-contaminated water.

Note in Figure 12 that although VOC contamination is substantial, it is centered in just a few areas, leaving a large portion of the Basin unaffected. Water containing nitrates above the Maximum Contaminant Level (MCL) is either blended with other water sources or not used. Figure 13 indicates that nitrates, similar to VOCs, are centered in a few areas and have the highest concentrations in the eastern portion of the Basin away from the most productive pumping areas.

PERCHLORATE

In January 2002, the State Water Resources Control Board, Division of Drinking Water (DDW) formerly the California Department of Public Health (CDPH), and prior to that the California Department of Health Services, lowered the Notification Level (NL) for perchlorate from 18 to 4 parts per billion, and a total of 22 wells were removed from service due to unacceptable levels of perchlorate. DDW subsequently raised the NL to 6 parts per billion in March 2004 and later established an MCL of 6 parts per billion during October 2007. Watermaster played a key role in development of the first treatment facility to remove perchlorate from drinking water. Ion-exchange technology treatment facilities were operational at five sites in the BPOU and at two facilities in other parts of the Basin during fiscal year 2014-15.

NDMA

During 1998, eight local wells were found to contain levels of NDMA above the NL at that time of 2 parts per trillion. Five of the wells with measurable levels of NDMA had already been taken out of service for other reasons, and the other three were put on inactive status once NDMA was detected. DDW subsequently raised the NL to 10 parts per trillion. As with perchlorate, Watermaster played a key role in the construction of NDMA treatment facilities in the BPOU area of the Basin. Five facilities were operational during fiscal year 2014-15.

Figure 11. LOCATION MAP OF USEPA OPERABLE UNITS

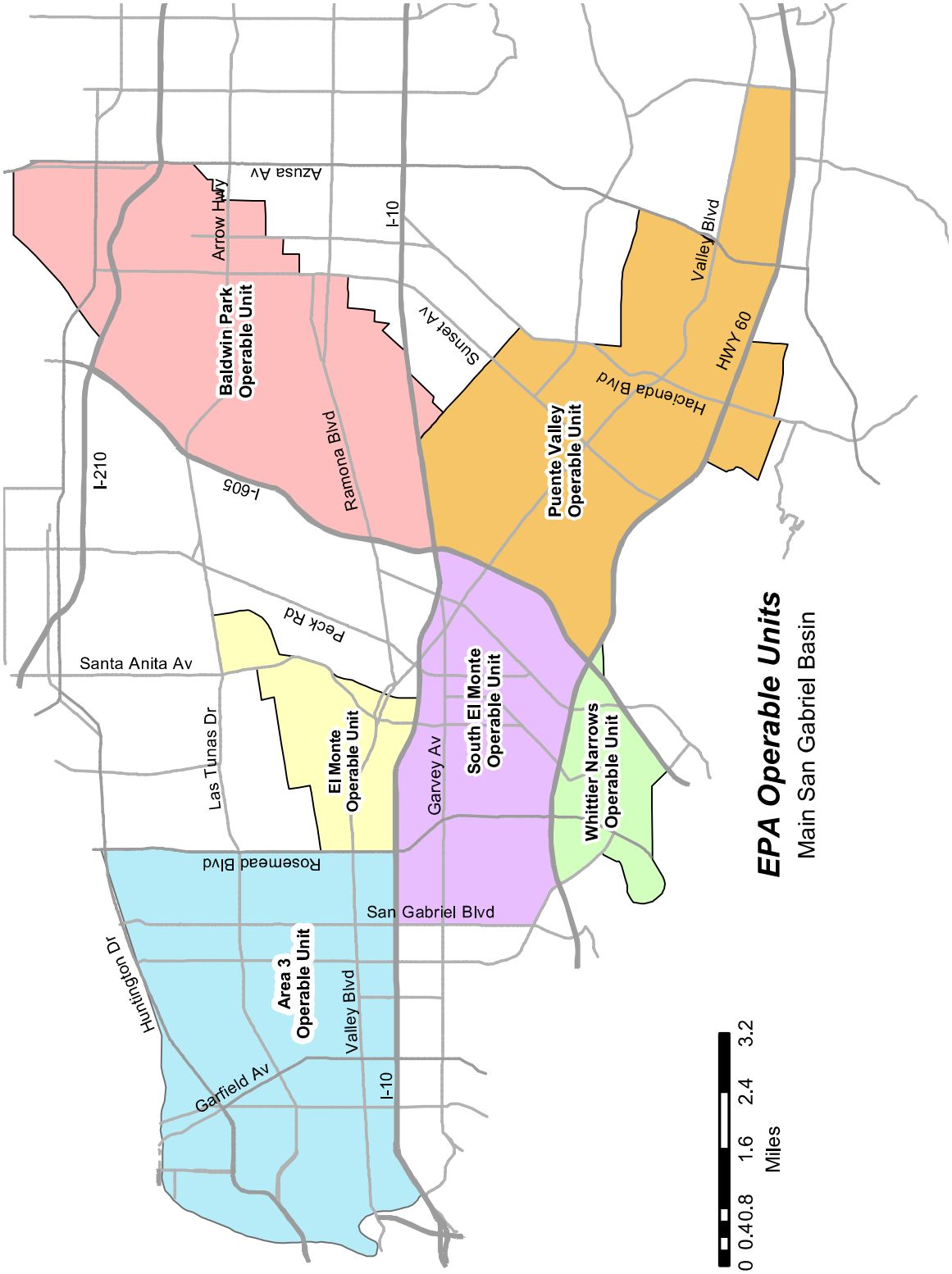


Figure 12. VOLATILE ORGANIC COMPOUND LEVELS IN GROUNDWATER THROUGHOUT THE BASIN

Extensive cleanup programs are underway in the areas affected by VOC contamination. Because the main plumes of contamination are centered in just a few areas, much of the Basin remains unaffected.

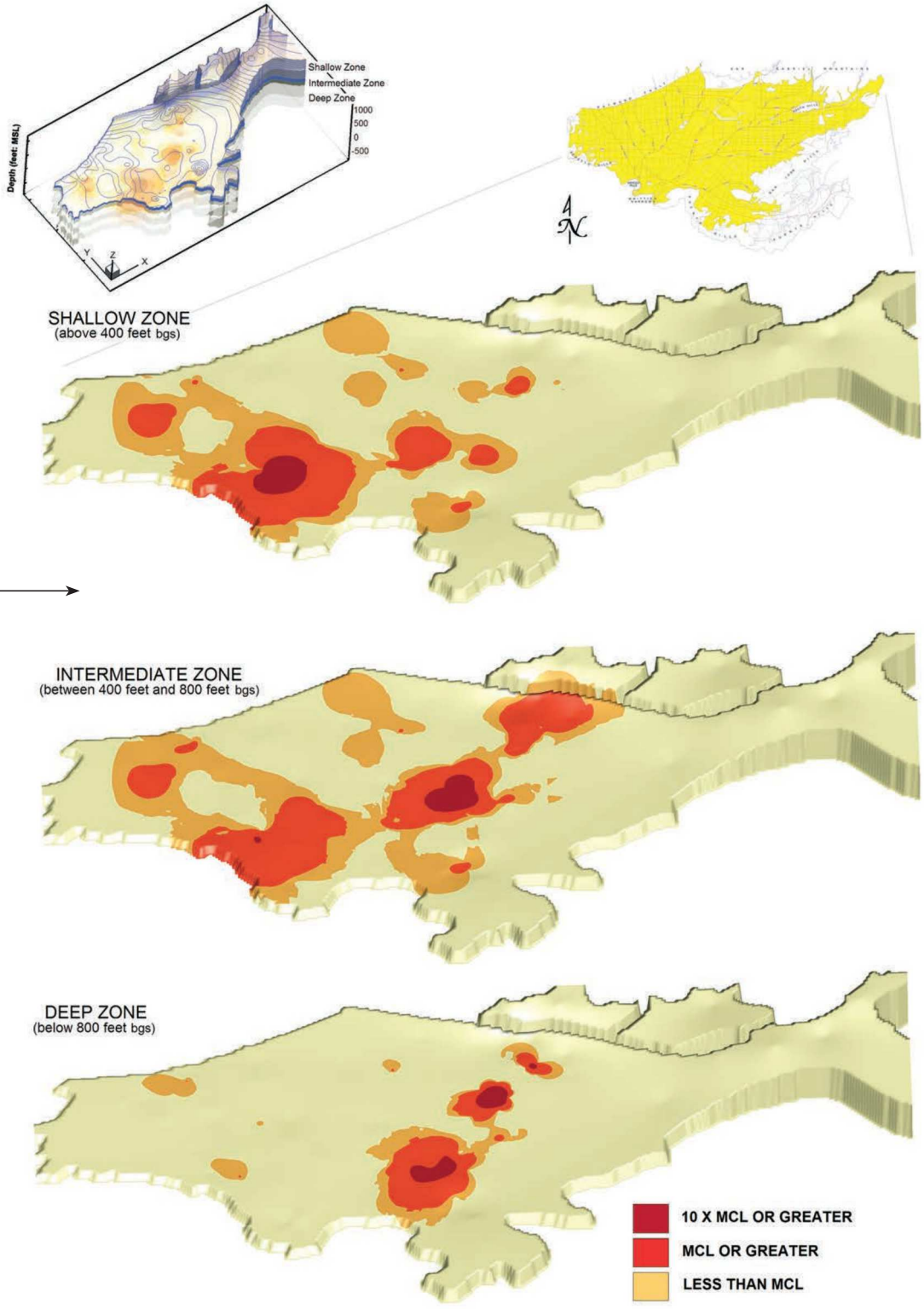
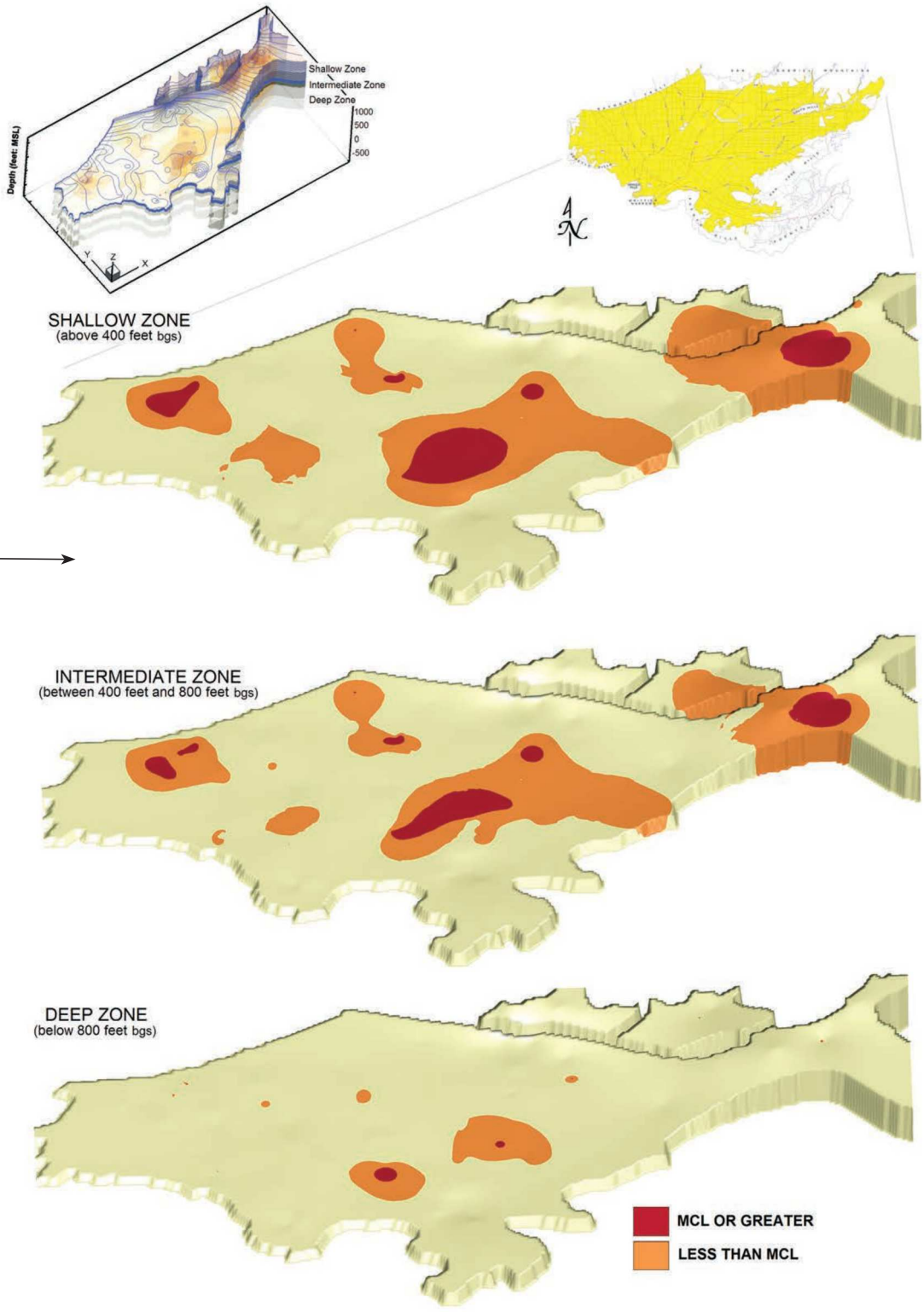


Figure 13. NITRATE LEVELS IN GROUNDWATER THROUGHOUT THE BASIN

Nitrate (NO3) contamination is highest in the eastern portion of the Basin, away from the San Gabriel River, the area of most intensive groundwater pumping.



TRICHLOROPROPANE (1,2,3-TCP)

The compound 1,2,3-trichloropropane is a degreasing agent that has been detected in the groundwater above the NL of 5 parts per trillion, primarily in the BPOU and the Area 3 OU. It was detected in the BPOU during the winter of 2006, and its presence delayed use of one treatment facility for potable purposes. Following detection, DDW indicated that the appropriate treatment technology is liquid phase granular activated carbon. Subsequently, Watermaster, in cooperation with its BPOU project partners, worked to construct treatment facilities to remove 1,2,3-TCP from the groundwater to make it suitable for potable uses. Those facilities were operational during fiscal year 2014-15.

HEXAVALENT CHROMIUM (CR6)

Cr 6 is a naturally occurring substance that has been detected in drinking water wells throughout the Basin. Historically, it was included in the analytical test results for Total Chromium, which has an MCL of 50 parts per billion. Effective July 1, 2014, DDW established a new MCL (exclusively for Cr6) of 10 parts per billion. In addition to being a naturally occurring substance, Cr6 is also associated with industrial sources of contamination, such as metal plating. Watermaster is coordinating with regulators to identify Basinwide Cr6 concentrations in an effort to establish a background water quality, although Cr6 concentrations in all active wells are below the MCL.

WELLS ASSESSED FOR VULNERABILITY TO CONTAMINATION

One of the primary purposes of the Five-Year Plan is to identify wells in the Basin that are vulnerable to contamination. A well is considered vulnerable if the concentration of contaminants has ever reached 50 percent of the NL or MCL allowed by state drinking water regulations. Watermaster reviews: water quality tests performed on each well, regional water quality conditions, and contaminant migration patterns in an effort to project which wells may be vulnerable over the next five years, and participates in plans to construct treatment facilities, as needed.

WATER QUALITY PROTECTION PLAN

Watermaster maintains a Water Quality Protection Plan that provides an early warning to Producers of potential increases in contaminant levels. The Water Quality Protection Plan also provides suggested alternative sources of supply, and proposes long-term actions to solve the contamination problem(s) without contributing to the migration of contaminants in the Basin.

FIVE-YEAR WATER QUALITY AND SUPPLY PLAN

The Main San Gabriel Basin's designation as a federal Superfund site was prompted by the discovery of widespread VOC contamination. Cleanup plans were developed to contain and remove VOCs from groundwater, and Watermaster, along with various other local water agencies, water Producers and regulators, have worked to develop the expertise, financing and treatment technologies to effectively address Basin wide cleanup of VOCs.

Watermaster facilitates groundwater cleanup projects that also meet water supply needs.

The discovery of perchlorate and NDMA, however, complicated the existing VOC cleanup approach by creating a number of challenges. Most important, these new contaminants could not be removed using existing treatment facilities, and new, additional treatment methods had to be identified, financed, and implemented.

This report outlines a comprehensive water quality cleanup and water supply plan for the Main San Gabriel Basin, including each of the USEPA Operable Units. Watermaster's plan for each area is consistent with the USEPA plans, and its goal is to implement cleanup as promptly as possible, with or without the cooperation of the Responsible Parties.

SALT AND NUTRIENT MANAGEMENT PLAN

During February 2009, the State Water Resources Control Board (SWRCB) adopted the "Recycled Water Policy", which adopted goals for water recycling, water conservation and replenishment of stormwater runoff to enhance water supplies throughout California. One component of the Recycled Water Policy requires all groundwater basins to develop a "Salt and Nutrient Management Plan" (SNMP) no later than May 2016. Watermaster took the lead role in developing the SNMP for the Main San Gabriel Basin. The SNMP identifies the existing water quality of the Main San Gabriel Basin (specifically Total Dissolved Solids (TDS), Nitrate, Chloride and Sulfate), which are not addressed by USEPA cleanup activities, and compares that water quality to standards established by the Los Angeles Regional Water Quality Control Board (LA RWQCB). Each of the four water quality parameters comply with the standards established by LA RWQCB resulting in significant flexibility to implement new programs to enhance groundwater replenishment and reliability.

GROUNDWATER MONITORING PROGRAMS

Monitoring involves measuring groundwater levels, groundwater quality, and groundwater flow. Watermaster continuously refines its understanding of the groundwater Basin to better define the safe yield of the Basin, and to protect and improve local water quality.

GROUNDWATER ELEVATION MONITORING

CONTINUE KEY WELL AND SUPPLEMENTAL KEY WELL OPERATION AND DATA PROCESSING

The entire 167-square-mile groundwater Basin is managed as one unit based on the groundwater levels as measured at a single Key Well in Baldwin Park. Water levels have been measured at this well since 1903 and are currently measured every three hours by an automated recorder.

Additional groundwater level recorders have been installed near the Santa Fe Spreading Grounds; adjacent to the San Gabriel River above the I-210 Freeway; in the City of Rosemead; in the City of Covina; and near the Whittier Narrows Dam. These water level records are synchronized with the record in the Key Well. Collectively, water level data from these wells provides a better understanding of impacts of recharge operations at the Santa Fe Spreading Grounds on Basin hydrogeology. Water elevation data are collected semi-annually at about 170 additional wells throughout the Basin, and water level recorders may be installed in some of those wells over the next five years.

CONTINUE BASINWIDE GROUNDWATER ELEVATION MONITORING PROGRAM (BGWEMP)

The purpose of the BGWEMP is to obtain groundwater level measurements from a large number of wells across the Basin. The information is used to prepare groundwater contour maps showing the direction of groundwater flow. The data are also used in the Basin computer model to simulate future groundwater flow patterns. The BGWEMP plan for the coming years includes:

- taking weekly measurements of water levels in 9 of the 170 primary wells;
- gathering semi-annual measurements of water levels at all 170 of the primary wells;
- obtaining water levels in secondary wells from well owners or water Producers, the San Gabriel Valley Protective Association, Regional Board, USEPA, and others;
- updating the database with water level data;
- preparing semi-annual groundwater contour maps of the entire Basin; and
- participating in the California Statewide Groundwater Elevation Monitoring (CASGEM) program.

GROUNDWATER QUALITY MONITORING

CONTINUE BASINWIDE GROUNDWATER QUALITY MONITORING PROGRAM (BGWQMP)

Under the BGWQMP, all production wells in the Basin are sampled at least once a year for VOCs, nitrates, and TDS. In addition, sulfate and chloride are sampled at least once every three years as required by DDW. The frequency of BGWQMP sampling compliments the monitoring requirements under state law, and supplements information gathered through Regional Water Quality Control Board source investigations, and USEPA remedial investigations. The data collected by BGWQMP are used to identify and evaluate the current locations and magnitude of contaminant levels, along with the effectiveness of the cleanup project.

CONTINUE TITLE 22 WATER QUALITY TESTING

Watermaster continues to perform DDW-mandated Title 22 water quality sampling of groundwater from approximately 200 active wells in the Basin. Watermaster also continues to track regulations and inform local water purveyors about regulatory issues and requirements. Information from centralized water quality testing is added to Watermaster's water quality database, which contains data from many sources. The centralized testing enables Watermaster to identify water quality trends on a regional scale that might otherwise go unnoticed at a specific well, and also lowers monitoring costs to Producers.

GROUNDWATER FLOW AND CONTAMINANT MIGRATION STUDIES

Groundwater level and quality data are entered into the Basin computer model, which simulates where contamination is projected to flow in the future. The goal is to project contaminant levels by areas in advance of the actual event, and identify remedial steps to be taken. The Basin computer model has been used to identify the area of contamination that may be captured (capture zone) under various groundwater pumping scenarios. The capture zone is also able to show the length of time it may take contamination to flow toward a well, and subsequently be treated for contaminant removal prior to use as a drinking water supply.

GROUNDWATER ELEVATION SIMULATIONS SHOW FUTURE PUMPING WILL NOT SIGNIFICANTLY CHANGE GROUNDWATER MOVEMENT

To determine the direction of groundwater flow through the Basin, Watermaster compiles the daily average 2014-15 production for each well, enters the data into the groundwater model, and simulates how production impacts water levels throughout the Basin. A computer simulation is then run using estimated production for 2019-20, assuming all other water supply variables (i.e. local water recharge, imported water recharge, subsurface inflow/outflow) do not change. These simulations indicate the

estimated increase in groundwater production, based on projections by Producers, as of fiscal year 2019-20 will not significantly change the overall direction of Basin groundwater movement, which continues to flow generally from east to west to a pumping trough in the western portion of the Basin, and also northeast to southwest, exiting through Whittier Narrows. The simulation for 2019-20 also shows localized pumping depressions in the Baldwin Park area, which are expected to be created by continuous pumping from groundwater extraction wells associated with the BPOU contaminant cleanup project to contain and control groundwater contaminant movement. Contaminated groundwater from those wells is treated at several treatment facilities and the DDW-permitted water is provided for potable use.

Simulations of the direction of groundwater flow in 2014-15 and projections for 2019-20 show that the estimated increase in groundwater pumping during this period would not significantly change the overall direction of Basin groundwater movement.

SIMULATE IMPACTS OF GROUNDWATER PUMPING ON CONTAMINANT MIGRATION

Simulations similar to the ones described above were used to make the finding that pumping from USEPA mandated cleanup projects as managed by Watermaster helps to control and contain contaminant migration. Groundwater quality data collected during 2014-15 and projected quality data for 2019-20 were entered into the groundwater model for the contamination migration studies. The computer model is used to simulate how the flow of water would affect the migration of contamination. The simulation showed that changes in groundwater flow did not have major impacts on the migration of contaminants (refer to Figures 16 and 17 in Appendix F).

GROUNDWATER CLEANUP PROJECTS

Watermaster coordinates and provides technical assistance on many cleanup projects in the Basin, although the cleanup facilities are owned and operated by local water utilities. Watermaster's involvement includes coordinating proposed USEPA cleanup programs to ensure, to the extent feasible, that treated water is put to beneficial use within the Basin, and that projects are consistent with the Judgment.

REVIEW OF SECTION 28 APPLICATIONS

Watermaster reviews every proposal to construct, destroy, or modify a well, or build a treatment plant pursuant to Section 28 of its Rules and Regulations.

Watermaster's review ensures that any new or increased extractions from the Basin or any changes in production patterns are consistent with contamination cleanup efforts, and will not adversely affect Basin water quality. In conjunction with the evaluation of an application to construct a new well or a treatment facility, Watermaster uses a computer model to predict the potential future impacts of each project on contaminant migration and Basin cleanup.

BASIN CLEANUP PROJECTS/USEPA OPERABLE UNIT PLANS

The USEPA established Operable Units for the various areas within the Basin that have been contaminated and require groundwater cleanup. The Operable Units are Area 3 (Alhambra area), Baldwin Park, El Monte, Puente Valley, South El Monte, and Whittier Narrows (See Figure 11). USEPA has established a methodical process that includes a review of the extent of contamination (Remedial Investigation), development of cleanup alternatives (Feasibility Study), and selection of the most appropriate cleanup plan (Proposed Plan). Following these activities, the USEPA issues a report identifying the agreed-upon Cleanup Plan (Record of Decision). Subsequently, the project facilities are designed and constructed.

The USEPA has identified cleanup plans for nearly all the Operable Units. Unlike the USEPA, Watermaster is not only concerned with cleaning up the Basin, but also wants to ensure that the water supply needs of the region are met. With USEPA plans generally in place, Watermaster continues to work with affected Producers, Responsible Parties, and others to implement solutions that not only provide effective cleanup and conform to the USEPA plans, but also meet local water supply needs.

This Five-Year Plan describes each of the Operable Units along with the USEPA proposed cleanup plan. In addition, Appendix A identifies current, and projected groundwater production over the next five years, to address the contamination and to implement the cleanup plans. In areas where the groundwater supply has been affected by contamination, Watermaster works with affected Producers and other local water agencies to implement cleanup as quickly as possible, with or without the cooperation of the Responsible Parties. Watermaster and affected Producers continue to seek cost recovery from the Responsible Parties for any cleanup costs they incur.

BALDWIN PARK OPERABLE UNIT (BPOU)

The BPOU is a seven-mile-long, one-mile-wide area of groundwater contamination that lies east of the San Gabriel River, stretching from an area north of the I-210 freeway in Azusa to south of the I-10 freeway in Baldwin Park (see Figure 11). The contamination primarily has been the result of improper use and disposal of industrial chemicals in the Azusa area, and it continues to spread generally in a southwesterly direction.

The USEPA originally issued its Record of Decision (ROD), or cleanup plan, for the BPOU in the mid-1990s. The ROD calls for pumping and treating groundwater in the northern area, where contaminant concentrations are highest, and also in the southern area to limit further migration of contaminants. The ROD involves pumping and treating an average of about 7,000 gallons per minute in the northern area and 16,000 gallons per minute in the southern area. The ROD also recommends

the use of existing water supply wells, treatment systems, and pipelines when feasible. Importantly, the plan encourages adding the treated water to the potable supply, rather than simply recharging it back into the ground or discharging it to storm drain.

The discovery of perchlorate and NDMA during the late 1990s resulted in the shutdown of numerous treatment facilities, including the La Puente Valley County Water District (LPVCWD) Plant and San Gabriel Valley Water Company (SGVWC) Plant B6 that were designed by local water agencies to remove VOCs but not the new contaminants. Shutting down the VOC treatment plants allowed contaminants to migrate southward into previously unaffected areas, in turn forcing the shutdown of other water supply wells.

In 2002, after several years of negotiation led by Watermaster, eight of the BPOU Responsible Parties (called Cooperating Respondents, or CRs) and seven Water Entities signed the BPOU Project Agreement. Under this landmark agreement, Watermaster continues to provide overall project management and project coordination services. The CRs have paid the cost to construct, and are required to continue to provide funding to operate the USEPA-required BPOU cleanup facilities for a total of about 15 years under the current agreement through 2017. Several water purveyors own and operate the facilities, and they use the highly treated water in their water systems. The San Gabriel Basin Water Quality Authority (WQA) has also obtained outside funds to help construct necessary BPOU treatment facilities, extraction wells, and pipelines. Negotiations by Watermaster, WQA, and the Water Entities with the CRs to extend the cleanup are ongoing.

The BPOU Project consists of four centralized treatment facilities with a combined extraction and treatment capacity of up to 25,900 gpm. Those treatment facilities are located at Valley County Water District's Lante Plant (7,800 gpm), San Gabriel Valley Water Company's Plant B6 (7,800 gpm) and Plant B5 (7,800 gpm), and La Puente Valley County Water District's (LPVCWD) site (2,500 gpm). The location of these treatment facilities is shown on Figures 14 and 15.

VALLEY COUNTY WATER DISTRICT (VCWD) PROJECT

In the northerly portion of the BPOU, the VCWD Project consists of three extraction wells, including two wells, pumping up to 7,800 gpm (average annual rate of 7,000 gpm) to a centralized treatment facility at the VCWD Lante Plant. The VCWD Project consists of separate facilities to treat VOCs, 1,2,3-TCP, perchlorate, NDMA, and 1,4-dioxane. In addition, a treated-water pipeline provides up to 6,000 gpm of fully treated water to Suburban Water Systems (SWS) to offset production lost due to contamination of some of its wells; VCWD can use the remaining portion of the treated water. The VCWD Project began operation for contamination cleanup in 2006 and received its DDW operating permit in July 2007 to provide

potable water to customers. Since operation began in 2006, the VCWD treatment facility has treated about 62,500 acre-feet and has removed about 39,600 pounds of contaminants, as shown in Appendix E.

VCWD and its BPOU partners are coordinating the construction of a new single-pass, ion-exchange facility that will remove perchlorate more cost effectively. Construction of the new system is complete, but start-up has been pushed back while the parties determine the most cost-effective way to address high nitrate concentrations. Meanwhile, the existing VCWD treatment facility continues to provide treated water for municipal use.

LPVCWD PROJECT

The LPVCWD consists of three existing production wells. Well-pumping capacity is limited to 2,500 gpm to equal the capacity of the treatment facility. The LPVCWD project consists of separate facilities to treat VOCs, perchlorate, NDMA, and 1,4-dioxane. The LPVCWD project is permitted by DDW and has been operating since March 2001. Treated water in excess of LPVCWD's needs is provided to SWS to enable the treatment facility to be operated on a continuous basis. Since operation began, the LPVCWD treatment facility has treated about 61,000 acre-feet (including prior operations with only VOC treatment) and removed about 11,100 pounds of contaminants, as shown in Appendix E.

SGVWC B6 PROJECT

The SGVWC B6 project is permitted by DDW and has been operational since July 2005. The B6 project consists of four extraction wells and a centralized treatment facility that treats up to 7,800 gpm (average annual rate of 7,000 gpm). The facility treats the contaminated groundwater for VOCs, perchlorate, NDMA, and 1,4-dioxane. The treated water is provided to SGVWC customers. Since operation began, the SGVWC B6 treatment facility has treated about 101,200 acre-feet, (including prior operations with only VOC treatment), and removed about 18,000 pounds of contaminants, as shown in Appendix E.

SGVWC B5 PROJECT

The SGVWC B5 Project consists of one extraction well and two existing wells that provide up to 7,800 gpm (average annual rate of 7,000 gpm) to a centralized treatment facility located at the SGVWC B5 site. The treatment facility treats the contaminated water for VOCs, perchlorate, NDMA, and 1,4-dioxane. The treated water is provided to City of Industry customers (1,200 gpm) and the balance (6,600 gpm) is provided to SGVWC customers. The SGVWC B5 Project was permitted by DDW in fiscal year 2007-08. Since operation began in 2007, the SGVWC B5 treatment facility has treated about 86,500 acre-feet and has removed about 3,700 pounds of contaminants, as shown in Appendix E.

Figure 14. VOC PLUME MAP IN BPOU

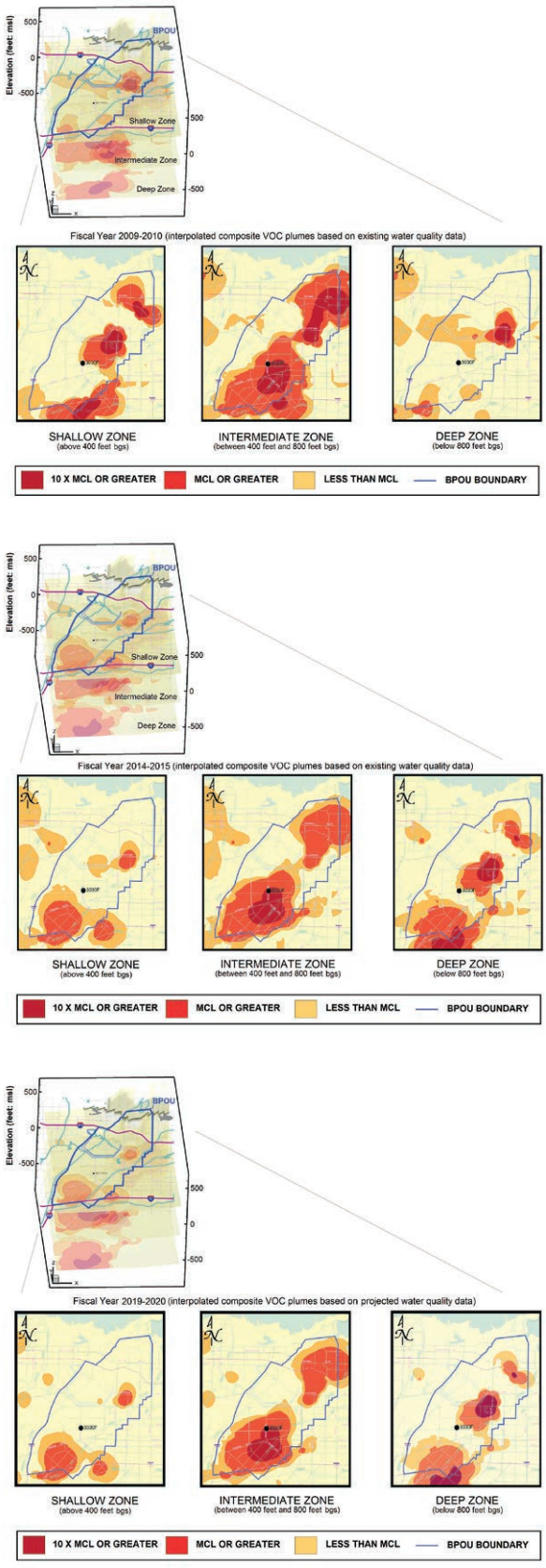
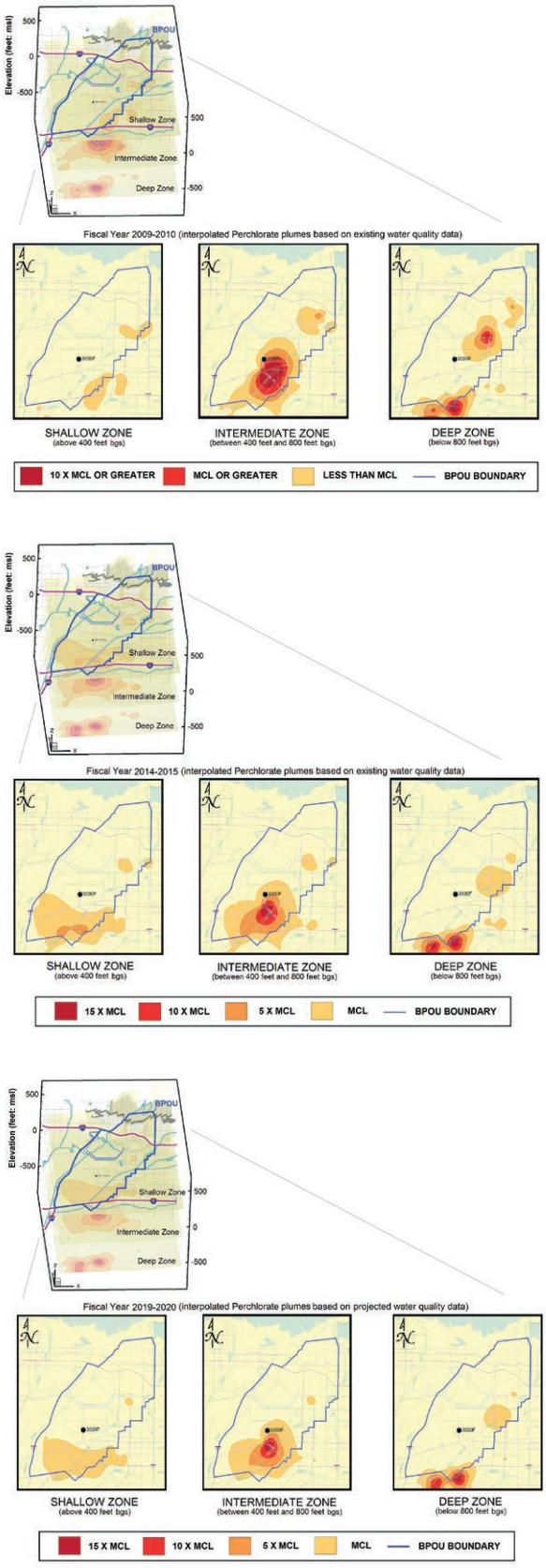


Figure 15. PERCHLORATE PLUME MAP IN BPOU



PURVEYOR PROJECTS

In addition to the USEPA-required BPOU facilities, several water purveyors have built treatment facilities at other wells within the BPOU area to meet water supply needs until the USEPA remedy prevents the continued spread of contamination. California Domestic Water Company (CDWC) has constructed facilities at its well field to remove VOCs, perchlorate, and NDMA and the quantity of water treated is shown in Appendix E. Similarly, Watermaster has issued permits under Section 28 of its Rules and Regulations to SWS to construct new wells that also are being used to blend with wells impacted by contaminants. These activities reduce reliance on expensive imported water, and contribute to contaminant removal.

BPOU CLEANUP PROGRESS

Watermaster regularly reviews water quality data to evaluate the impact the production wells and specially-constructed extraction wells have on control of contamination migration. It is difficult to develop a precise picture of the geographic extent of contamination because water quality is obtained from numerous wells that produce water from different depths below the groundwater table. Figure 14 shows the approximate extent of VOC contamination and operating VOC treatment facilities from about five years ago and from current data. In addition, the anticipated treatment facilities and the approximate geographic extent of VOC contamination, using engineering judgment, for five years into the future is also shown on Figure 14. The 2014-15 plume indicates treatment facilities are controlling plume movement. Watermaster anticipates the area of the VOC plume will continue to decrease, as shown on the 2019-20 plume. Similarly, Figure 15 shows the approximate extent of perchlorate. The series of three plume characterizations indicate that plume movement is expected to be controlled and, similar to VOCs, continue to decrease in the future (2019-20).

The term of the BPOU Project Agreement is 15 years and extends through 2017. Watermaster will continue to coordinate BPOU cleanup activities among the various parties to the BPOU Project Agreement through at least 2017 (which is the expiration of the initial BPOU Agreement), including negotiation of an extension to the BPOU Project Agreement, interfacing with USEPA, overseeing agreements between water purveyors to use the treated water, and providing accounting services to track BPOU Project costs and funds received. With all of the BPOU facilities now operational, Watermaster is also coordinating collection of field data, such as water production, water quality and water levels, and is providing BPOU Project performance reports to USEPA in cooperation with the CRs.

The projects will ensure that there is an adequate water supply for the BPOU area. These projects are consistent with the USEPA ROD, meet contaminant removal and containment requirements, and meet local water supply needs.

SOUTH EL MONTE OPERABLE UNIT (SEMOU)

The SEMOU covers approximately eight square miles in the south-central portion of the Basin. It is bounded by the I-10 Freeway, the 60 Freeway, the I-605 Freeway, and San Gabriel Boulevard (See Figure 11). A ROD for the SEMOU was issued in 2000, addressing VOC contamination in a limited area. Subsequently, additional water supply wells became contaminated, and new contaminants, including perchlorate, were detected in wells in the SEMOU area. In November 2005, USEPA revisited its ROD and issued an Explanation of Significant Differences (ESD) indicating that SEMOU cleanup projects would also address treatment of perchlorate. Because a perchlorate source has not yet been identified in that area, the Responsible Parties (RPs) objected to a requirement to pay for perchlorate treatment, and negotiations for the RPs to fund SEMOU groundwater cleanup activities have been moving slowly.

In the meantime, area water purveyors who were impacted by contaminant migration and new perchlorate detections were forced to construct new or additional treatment facilities to maintain safe, reliable water supplies. The City of Monterey Park, San Gabriel Valley Water Company, and Golden State Water Company (GSWC) have all constructed new or additional treatment facilities within SEMOU. The San Gabriel Basin Water Quality Authority (WQA) has assisted these Producers by securing outside funding to help offset project costs.

MONTEREY PARK PROJECT

Monterey Park constructed a water treatment facility at its Delta Plant to treat VOCs and perchlorate. Monterey Park Well No. 9 (which only had detectable concentrations of VOCs) began operating through the VOC treatment facility in April 2002. Following construction and permitting of the perchlorate treatment facility, Monterey Park Well No. 12 began operation in spring 2005. Monterey Park began operation of Well No. 15 in summer 2006. Production is from Monterey Park Wells No. 12 and No. 15 to operate consistent with the SEMOU ROD. Watermaster and Monterey Park maintain data on water quality in monitoring wells located up gradient of Wells No. 9, 12, and 15. Since the treatment facility began operation, over 61,300 acre-feet of water has been treated and about 10,100 pounds of contaminants removed from the groundwater, as shown in Appendix E.

SAN GABRIEL VALLEY WATER COMPANY (SGVWC) PLANT 8 PROJECT

SGVWC Plant 8 VOC Treatment Facility has a capacity of 5,000 gpm and has been in operation since fiscal year 2001-02. In response to increasing VOC concentrations, SGVWC voluntarily constructed supplemental VOC treatment at Plant 8. The supplemental VOC treatment facility was permitted by DDW in September 2006 and went online in December 2006. Since the original VOC treatment facility operation, over 37,200 acre-feet of water has been treated and about 4,900 pounds of contaminants have been removed from the groundwater, as shown in Appendix E.

GOLDEN STATE WATER COMPANY (GSWC) PROJECT

GSWC VOC treatment facility at San Gabriel Wells No. 1 and 2 had been permitted and operating. However, with the establishment of the revised Perchlorate NL in 2002, GSWC voluntarily removed the wells from operation. Subsequently, GSWC installed an ion exchange system to remove perchlorate and has resumed operation at its San Gabriel Well No. 1. The treatment facility has treated about 16,300 acre-feet of water and removed about 500 pounds of contaminants, as shown in Appendix E.

EL MONTE OPERABLE UNIT (EMOU)

The EMOU covers an area of about 10 square miles in the south-central portion of the Basin. It is bounded by the I-10 Freeway on the south, Rosemead Boulevard on the west, and Santa Anita Avenue and Rio Hondo on the east. The northern boundary generally follows Lower Azusa Road (see Figure 11). While shallow contamination is found throughout the EMOU, deep (intermediate zone) contamination is found in the northwest and easterly area of the EMOU.

The USEPA's ROD for the EMOU includes numerous small, shallow extraction wells and treatment, along with two areas of deep extraction and treatment. Due to generally poor water quality in the area, the shallow groundwater will not be used for a potable supply. The deep extractions are recommended for potable use by local water purveyors. The remediation efforts are separated into "Westside" and "Eastside" activities.

EMOU WESTSIDE PROJECTS

On the Westside, there are plans to clean up contaminants occurring in the shallow aquifer. The shallow zone water is treated for VOCs, discharged to an adjacent channel and the fully treated water is infiltrated back into the Basin. The treatment facility (Hermetic Seal) has treated about 200 acre-feet and removed about 20 pounds of contaminants, as shown in Appendix E. The deep-zone extraction and treatment in the northwest area is being accomplished by the existing Encinita Wellfield and Treatment Facility owned by GSWC, which began operation during 1998. During July 2002, USEPA issued an Explanation of Significant Differences (ESD), which indicated that perchlorate, NDMA, 1,4-dioxane, and hexavalent chromium had been detected in excess of DDW notification levels. In the event water from extraction wells cannot be blended to acceptable levels, additional treatment facilities will need to be installed, significantly increasing cleanup costs. Thus far, extraction and treatment of VOCs at GSWC Encinita Plant have not been impacted. The GSWC treatment facility has treated about 23,200 acre-feet of water and has removed about 550 pounds of contaminants, as shown in Appendix E.

EMOU EASTSIDE PROJECTS

The remediation on the Eastside will also involve cleanup of contaminants in the shallow aquifer. Final disposition of the water has not yet been determined and is still being coordinated by Watermaster. The VOC contamination in the deep aquifer is anticipated to be produced from three wells and the fully treated water will be provided to the City of El Monte. Watermaster will continue to assist with data collection and permitting of facilities over the next five years.

PUENTE VALLEY OPERABLE UNIT (PVOU)

The PVOU lies in the southeastern portion of the Basin, essentially bounded by the 60 Freeway on the south, Azusa Avenue on the east, and the I-10 Freeway on the north (see Figure 11). The PVOU encompasses the Puente Valley, which is tributary to the southeasterly portion of the Basin. Contamination in the PVOU includes various VOCs. All aquifers within the PVOU (shallow, intermediate, and deep) are considered sources for municipal water supplies. The USEPA has issued a ROD for the PVOU. The plan identified in the ROD includes extraction and treatment of groundwater within the shallow and intermediate zones from wells located in the center of the PVOU.

PVOU SHALLOW-ZONE PROJECT

The cleanup plan for shallow-zone contamination includes nine wells that will collectively produce about 1,000 gpm. Due to the poor quality of shallow-zone water (which is high in naturally-occurring dissolved solids), the water will not be used as drinking water, but will instead be treated to remove VOCs and will then be recharged back into the Basin. Watermaster is currently working with USEPA and the Responsible Party to develop an agreement to allow production and discharge of the PVOU shallow-zone water.

PVOU INTERMEDIATE ZONE

Watermaster is working with USEPA, Responsible Parties, and local water entities to develop a cleanup solution that meets potable water supply needs. Approximately 1,000 gpm will be produced from the intermediate zone extraction wells, treated and used for potable purposes by a local water purveyor.

WHITTIER NARROWS OPERABLE UNIT (WNOU)

The USEPA declared the WNOU is a "fund-lead" project, meaning that the USEPA (with the state) has funded the design, construction, and operation of the remedy, and will seek cost recovery from Responsible Parties later. The USEPA cleanup plan involves a series of shallow and intermediate zone extraction wells with treatment (see Figure 11). As of May 2013, the responsibility for the WNOU was transferred

from USEPA to the California Department of Toxic Substances Control (DTSC). Furthermore, the WNOU Shallow Zone Project (as described below) ceased operation during 2013 due to improved water quality.

WNOU SHALLOW ZONE PROJECT

During fiscal year 2002-03, NDMA was detected in some of the shallow extraction wells, prolonging the testing and review process for the shallow zone water through June 2007. Studies indicated the shallow zone contamination could be adequately contained at an extraction rate of 2,500 gpm. Treated shallow zone water has been discharged for conservation and recreational use at Legg Lake, and Watermaster entered into a production agreement with USEPA and the County of Los Angeles regarding the accounting of that water. Since production began at the WNOU facility, over 30,000 acre-feet of groundwater has been treated, and over 1,620 pounds of contaminants have been removed. During fiscal year 2012-13 the WNOU's Shallow Zone Project ceased operation.

WNOU INTERMEDIATE ZONE PROJECT

The City of Whittier obtained a DDW permit to use the 6,000 gpm of treated intermediate zone water for municipal use instead of producing water from its existing wells. During April 2013, the City of Whittier ceased taking treated intermediate zone water. Subsequently, the treated intermediate zone water has been delivered to Legg Lake, while DTSC negotiates with a municipal water supplier to accept additional treated intermediate zone water. Since production began in late 2005, about 43,900 acre-feet of groundwater has been treated and about 1,600 pounds of contaminants removed, as shown in Appendix E.

AREA 3 OPERABLE UNIT

The Area 3 Operable Unit is located in the westerly portion of the Basin. It is generally bounded on the south by the I-10 Freeway, on the east by Rosemead Boulevard, on the North by Huntington Drive, and on the west by the boundary of the Main Basin (see Figure 11). EPA has installed a series of monitoring wells to collect water quality data to supplement data collected from water supply wells and has initiated a Remedial Investigation and Feasibility Study to identify the extent of the contamination and to evaluate appropriate cleanup remedies. In addition, Watermaster issued a permit during 2005-06 to the City of Alhambra to construct a treatment facility to remove VOCs from wells No. 7, 8, 11, and 12. The treatment facility became operational in April 2009, prior to USEPA's development of a final remedy, but is necessary for Alhambra to receive a reliable source of supply from the groundwater basin. The facility has treated about 22,300 acre-feet and has removed about 700 pounds of contaminants, as shown in Appendix E.

PRODUCERS' WATER SUPPLY PLANS

Watermaster's Water Quality Protection Plan provides early warning to Producers before their wells are found to exceed drinking water quality standards. The Plan also contains pre-analyzed suggestions to the Producers for responding to the presence of contaminants.

WATER SUPPLY PLANS TO MEET PROJECTED DEMANDS

Water Producers propose to construct 10 new wells and five treatment plants during the next five years. Watermaster will continue providing the following services to assist Producers in meeting water demand:

- investigate all new or increased water extractions;
- provide computer modeling and technical support on treatment issues concerning the impact of extractions on contaminant migration;
- prioritize areas requiring further investigation, and coordinate with Producers on water supply modifications; and
- direct changes in pumping or treatment as necessary.

CONDUCT STUDIES, MONITORING AND INVESTIGATIONS

The Main San Gabriel Groundwater Basin is very complex, covering 167 square miles, and has the capacity to hold about 2.8 trillion gallons of water. Water enters the Basin from countless, natural and man-made locations, and is extracted by over 200 wells operated by dozens of independent Producers. Watermaster conducts special studies to identify projected water demands and to increase understanding of the Basin, so that it can be managed in a way that preserves and improves water supply and quality. In addition, Watermaster routinely reviews available data and is prepared to construct new monitoring wells to obtain supplemental water level and water quality data to better, manage the Basin. As a result of these activities, and the cooperative activities with, the Regional Board (noted below), there is no longer on-going VOC or Perchlorate contamination occurring; rather the focus and emphasis are on clean-up activities.

LANDFILL INSPECTIONS

Watermaster routinely conducts on-site inspections of area landfills to ensure they are operated in a way that does not allow contaminants to seep into the groundwater. Watermaster reports any violations of Waste Discharge Requirements to the Regional Water Quality Control Board for enforcement.

IDENTIFY AND REDUCE POTENTIAL SOURCES OF CONTAMINATION, COOPERATE WITH THE REGIONAL WATER QUALITY CONTROL BOARD

Since 1993, Watermaster has obtained information from the RWQCB about sources of VOC contamination in the Basin as part of the RWQCB investigations of potential contaminated sites. The information includes a description of all potential sources of contamination investigated by the RWQCB, including:

- maps showing the location of all investigation sites;
- available cause-and-effect relationships between pollution sources and contaminated wells; and
- plans and tentative schedules to abate the source of pollution and to clean up the soil and water.

Watermaster has reviewed a large amount of information gathered in RWQCB files and entered it into a database. This information is used in Watermaster's Section 28 process to help evaluate changes in pumping practices in relation to known contamination sources.

AQUIFER PERFORMANCE TESTS

Watermaster has developed a groundwater flow model for the entire Basin that assists in evaluating the potential impacts of changes in groundwater production. Although Watermaster completed its three-year Aquifer Performance Test investigation, additional tests will be conducted as required for Section 28 applications or for other needs. A tabulation of potential Aquifer Performance Test investigation sites is included in Appendix D. The sites identified include a pumping well and at least one monitoring well. The tests provide information on the characteristics of the aquifer, such as transmissivity, hydraulic conductivity, and coefficient of storage. The information gathered on aquifer characteristics will support cleanup activities including groundwater model development and calibration (see Appendix D).

DIRECTORY TO APPENDICES

The Following Appendices Are Found in This Section:

A. Projected Groundwater Demands from 2015-16 to 2019-20

B. Simulated Changes in Groundwater Elevations at Wells or Wellfields in Main San Gabriel Basin

C. Highlights of Volatile Organic Compounds and Nitrate Concentrations and Wells Vulnerable to Contamination

D. Potential Sites for Aquifer Performance Tests

E. Summary of Treatment Facility Activity in the Main San Gabriel Basin

F. Simulated Basin Groundwater Contours 2014-15 and 2019-20 (Figures 16 and 17)

APPENDIX K

POLICY NUMBER 9-00-8

POLICY NO. 9-00-8

UPPER SAN GABRIEL VALLEY MUNICIPAL WATER DISTRICT

Policy Regarding the Participation of the District in the funding of Wellhead Treatment and Groundwater Remediation Projects in the Main San Gabriel Groundwater Basin

I. Purpose

The purpose of this policy is to set forth criteria and conditions by which the Board of Directors of the Upper San Gabriel Valley Municipal Water District will consider providing funding, exclusively or in cooperation with the San Gabriel Basin Water Quality Authority (WQA), Main San Gabriel Basin Watermaster (Watermaster) and other interested parties, for wellhead treatment and/or groundwater remediation projects in the Main San Gabriel Groundwater Basin. This policy also establishes the general manner and methodology by which such funding can be distributed by the District for approved projects and programs.

II. Statement of Facts

The primary duty of the District is to provide a safe and reliable supplemental water supply for the San Gabriel Valley water agencies. The water supplied by the District is utilized by retail water purveyors to supplement the naturally occurring groundwater pumped from the Basin. The District principally relies on imported sources of water (Sacramento Delta and Colorado River) to satisfy local demand for supplemental water supply.

The annual demand on the District for untreated and treated supplemental water has been as high as 60,000 acre feet. Treated water is used for direct municipal and industrial applications and untreated water is used to augment natural groundwater basin recharge and help mitigate basin over-draft.

As a founding member of the WQA, the District recognizes and supports WQA's §406 Plan ("Plan") (Exhibit A) which provides prescriptive remedies for groundwater contamination in the San Gabriel Valley. In recognition of the Plan and its purpose, the District will work in concert with the WQA to implement the Plan thereby strengthening its position in potentially recovering the funds provided under this policy.

III. Issues

Historic commercial and residential land uses in the San Gabriel Valley have caused the introduction of a wide variety of regulated pollutants to the groundwater basin. In some cases, beneficial use of groundwater is precluded in those areas of the basin where contamination is sufficiently pervasive. Contaminant migration and the discovery of new pollutant species is further limiting the production of groundwater from the basin.

High capital costs create a disincentive for retail water purveyors to construct treatment facilities necessary to keep contaminated wells in operation. As a consequence, opportunities will be lost to remediate the groundwater basin by extracting and treating contaminated water at those impacted sites. Additionally, the deactivation of contaminated wells may cause the contaminants to migrate to otherwise uncontaminated areas of the basin. Further, as the basin water quality continues to degrade, retail purveyors will likely become more reliant on imported water supplies to meet the needs of their customers.

Due to greater competition and higher unit price for imported water supplies, shifting production off the basin carries significant ramifications for the San Gabriel Valley. Such a shift away from groundwater use will effect unfavorable economic and water supply reliability consequences for both residential and commercial customers alike. Thus, the Board of Directors find that it is within the District's scope of responsibility and in the best interest of the public to enact programs that will preserve and optimize the use of the groundwater resources of the San Gabriel Valley.

IV. Policy Objectives

Within the precincts of its statutory authority, budgetary limitations and policy objectives, the District will provide financial assistance for the procurement and/or construction of treatment facilities at contaminated well sites in the San Gabriel Valley. The principle objectives of this program, in no particular order, are:

1. Optimize local utilization of groundwater resources.
2. Reduce or eliminate local reliance on treated, non-interruptible imported water supplies.
3. Maximize local water supply reliability.
4. Provide for wholesale water supply price efficiency.
5. Protect public health and safety.

V. Policy Guidelines

Projects to be considered for approval by the Board must meet the guidelines of this program and satisfy certain criteria to qualify for funding under this program. That criteria is listed as follows:

1. The project must be located within the boundaries of the USGVMWD.
2. The project must be constructed in a manner so as to reactivate, or maintain operation of, an existing well that otherwise could not continue operation because of excessive contamination.
3. The project must be designed such that its operation presents a significant water supply benefit to the public served.
4. The project must be designed such that its operation provides a significant groundwater remediation benefit.

5. The project must employ proven or DHS certified treatment technology to allow for a high probability of success.
6. The project must be structured such that either the District has a reasonable probability of substantial cost recovery from parties responsible for groundwater contamination, or it addresses an urgent and immediate public health and safety crisis that cannot be resolved in a more efficient and effective manner.
7. The project must be reviewed by the District Engineer.

Funding can be provided in several forms depending upon the circumstances surrounding the project. When structuring the distribution of funds, factors such as the likelihood of cost recovery, the future availability of other sources of funding and the primary goals of the project will be considered. To maximize the potential for cost recovery and securing funding from other sources, District project funds will be distributed through the WQA's project accounts where possible.

VI. Implementation Procedure

1. The project proponent will submit a funding request for a conceptual or specific project.
2. Staff will review the request for policy compliance and forward the request to the District Engineer for appraisal.
3. Staff and Engineer will meet with project proponent to resolve any outstanding issues and finalize application materials.
4. Staff and Engineer will consult and coordinate with Watermaster and the WQA to develop a draft implementation plan for the project.
5. Staff and Engineer will prepare a recommendation regarding the proposed project for consideration by the Board of Directors.
6. The Board of Directors will provide staff and Engineer specific direction regarding the proposed project.

Dated this 19th of September, 2000.

President **Secretary**

APPENDIX L

WQA 406 PLAN

San Gabriel Basin Groundwater Quality Management and Remediation Plan "§406 Plan"

SAN GABRIEL BASIN

Water Quality Authority

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Cleaning Up Our Groundwater
For Future Generations

March 21, 2005

San Gabriel Basin Water Quality Authority
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Executive Summary
San Gabriel Basin
Groundwater Quality Management and Remediation Plan for Year 2005

Purpose and Goals of Plan

The San Gabriel Basin Groundwater Quality Management and Remediation Plan ("§406 Plan") amends the San Gabriel Basin Groundwater Quality Management and Remediation Plan adopted in 2004. The §406 Plan is an accelerated plan to clean up groundwater pollution in the San Gabriel Basin. The plan includes project descriptions and identifies funding sources such as responsible parties as well as federal funding through the San Gabriel Basin Restoration Fund and the Title XVI program, state funding through Proposition 13, Proposition 50 and local programs.

The plan recognizes that the pollution problem is so critical in some areas that accelerated action is necessary to halt the spread of underground toxins before they contaminate more drinking water wells and adjacent aquifers. The other major component of the plan is that it places a high priority on recovering the valuable water generated by cleanup facilities for beneficial use.

Having taken federal and state agencies years to define the extent of the pollution and identify responsible parties, the §406 Plan refines WQA's objectives, principles, remedial standards and activities. These elements will move the WQA into an accelerated phase to achieve results much faster. On-going efforts will now be stepped up to acquire funds from responsible parties while making it clear that the WQA will not sacrifice cleanup and water supply reliability activities and will pursue litigation in those situations in which the parties are not willing to voluntarily participate in a timely manner.

Details of the Plan

- Addresses contamination in the Baldwin Park, El Monte, South El Monte, Puente Valley, Alhambra and Whittier Narrows areas
- Describes funding requirements of cleanup projects in the affected areas
- Pursues voluntary participation from responsible parties except where litigation becomes necessary
- Places a priority on developing projects that combine cleanup with supply
- Seeks to leverage funding from responsible parties, federal, state and local agencies to further the cleanup effort

You may view a copy of the WQA §406 Plan on our website: www.wqa.com

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I. Legal Authority

This §406 Plan is developed and adopted under the authority of the WQA Act.

§406 of the WQA Act requires the WQA "to develop and adopt a basinwide groundwater quality management and remediation plan" that is required to be consistent with the EPA's National Contingency Plan ("NCP") and Records of Decision ("ROD") and all requirements of the Los Angeles Regional Water Quality Control Board ("LARWQCB"). According to the WQA Act, the §406 Plan must include:

1) Characterization of Basin contamination;
2) A comprehensive cleanup plan;
3) Strategies for financing the design, construction, operation and maintenance of groundwater cleanup facilities;
4) Provision for a public information program; and
5) Coordination of activities with federal, state, and local entities.

The WQA shall review and adopt this §406 Plan on an annual basis and, if necessary, shall make revisions according to changing regulatory, political and/or funding environments.

In support of the §406 Plan, the WQA shall also adopt an annual fiscal year budget (July 1 through June 30) which shall include all projects (actual or planned) that WQA is facilitating through its participation during that time period. The budget shall identify various funding sources and combinations thereof to ensure that full funding for each project (capital and/or O&M) can be achieved.

II. Policy Statement for Year 2005

The WQA general policy statement is the foundation of the §406 Plan. Therefore, the first steps in revising the §406 Plan are to review the past year's activities and to identify successes as well as challenges and obstacles that may have delayed or hindered cleanup progress. Using that information as a basis, WQA can apply current conditions and determine WQA's direction for the coming year.

Summary

As in previous years, the San Gabriel Basin Water Quality Authority ("WQA") is revising its San Gabriel Basin Groundwater Quality Management and Remediation Plan ("§406 Plan"). The §406 Plan which is required by our enabling act ("WQA Act"), Statutes 1992, Chapter 776 (West's California Water Code Appendix, §134-101 et seq.) promotes improvement of groundwater quality in the San Gabriel Basin ("Basin") by setting forth: (1) a general process under which this plan shall be developed and implemented; (2) remedial goals; and (3) a restatement of existing regulatory authority governing cleanup within the Basin, in addition to requirements of the United States Environmental Protection Agency ("EPA"). Additionally, elements of the §406 Plan fit into a framework of overarching remedial principals and sets forth specific projects proposed to be facilitated by the WQA or by others within the Basin.

Date:

This §406 Plan is effective March 21, 2005.

Address:

Supporting materials are available for viewing at WQA offices, located at 858 Oak Park Road, Suite 200, Covina, CA 91724. WQA offices are open from 8:00 a.m. to 5:00 p.m., Monday through Friday, excluding recognized holidays. It is recommended that an appointment be made to review these materials by calling (626) 859-7777.

General Information:

For general information, WQA may be contacted at (626) 859-7777 between the hours of 8:00 a.m. to 5:00 p.m., Monday through Friday, excluding recognized holidays. Various materials may also be viewed on the Internet at www.wqa.com.

POLICY STATEMENT 2005

The WQA was created and authorized by the State Legislature to address the critical need for coordinated groundwater cleanup programs in the San Gabriel Basin. The WQA is committed: 1) to protecting public health and safety; 2) to prioritizing, facilitating, and coordinating groundwater cleanup/supply programs with local water providers and/or U.S. EPA; and 3) to minimizing local financial and economic impacts, including impacts on local groundwater consumers. The WQA recognizes that groundwater contamination issues in the San Gabriel Basin are complex and the U.S EPA Superfund response alone may not adequately address the environmental, regulatory and financial issues that affect the one million residents and the many thousands of businesses who rely primarily on the San Gabriel Basin for potable water. In order to address affected local water supplies, as well as cleanup and containment goals, WQA will promote and participate in technical and financial partnerships, wherever possible. If partnerships cannot be voluntarily formed in a timely manner, WQA will seek ways to move forward and implement the necessary groundwater cleanup and will consider all options to require financial participation from those responsible for the contamination.

Based upon this analysis, WQA will modify its direction to pro-actively approach the rapidly growing problems of emerging chemicals ("EC"). Requests and competition for federal and state funding (primarily due to nationwide perchlorate problems) have escalated significantly in the last year. At the same time, local groundwater providers continue to face growing ambiguity and sometimes conflicting federal and state requirements.

The revised Policy Statement will become effective with the adoption of this document and will remain in effect until institutional, environmental or other changes necessitate a revision of the Policy Statement.

III. Background Information

A. Overview of the Groundwater Contamination

The San Gabriel Valley's groundwater Basin has the dubious distinction of being one of the most contaminated in the nation. The Basin's groundwater is contaminated from the ground disposal—dating back to World War II— of synthetic organic compounds used primarily as solvents in industrial and commercial activities.

The seriousness of the groundwater contamination problem became evident when high concentrations of volatile organic compounds ("VOCs") were discovered in Azusa in 1979 near a major industrial complex. Over the next four years, further investigation revealed widespread VOC contamination significantly impacting the Basin. This discovery led EPA to place four portions of the Basin on the NPL under authority of Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), also known as the Superfund program.

Unfortunately in 1997, newly detected contaminants, perchlorate and N-Nitrosodimethylamine (NDMA) liquid/solid rocket fuel, complicated and delayed progress. Most notably affected was the largest geographical area of the San Gabriel Valley Superfund site known as the Baldwin Park Operable Unit (BPOU). This led EPA, state and local agencies to conduct further investigation of the sources and treatment technologies available for remediating potable water.

In prior years, several VOC treatment/supply projects were expanded at significant costs to treat perchlorate and other emerging compounds. More recently, many of these multiple treatment train projects were further burdened with increased levels of VOCs. As a result, additional VOC treatment, also known as "dual-barrier", was needed to meet State Department of Health Services ("DHS") permitting requirements under their Technical Memorandum 97-005. While the additional treatment is necessary, each step has incrementally increased the costs of capital construction and operations and maintenance resulting in an overall project cost 4 to 5 times the original VOC treatment/supply project. Of all of the operable units in the basin, South El Monte Operable Unit ("SEMOU") has been affected the most by the need for additional treatment.

B. Overview of WQA Authority

WQA was formed by special act of the California Legislature (Senate Bill 1679, Russell). The WQA Act gives WQA authority, *inter alia*, to plan for and to coordinate among several agencies with authority affecting cleanup of the Basin. §406 of the WQA Act requires WQA to develop and adopt a basinwide groundwater quality management and remediation plan. §406 further requires the plan to provide for: (1) a characterization of the Basin's contamination; (2) the development and implementation of a comprehensive Basin cleanup plan; (3) the financing of the design, construction, operation, and maintenance of groundwater cleanup facilities; (4) provisions for a public information and participation program; (5) the coordination with federal, state and local entities; and (6) the maintaining of consistency with the National Contingency Plan, any applicable EPA RODs, all LARWQCB requirements, and all applicable cleanup agreements with federal, state and local agencies. The §406 Plan has to be developed with an eye toward the statutory requirement that "the basin-wide plan shall consider the benefits to be achieved by the plan or any proposed project in relation to its economic impact on persons or entities within the boundaries of the authority."

C. History of WQA Planning

As required by §406, WQA first adopted the §406 Plan in June of 1993. This plan identified a mission and eight goals and served as the guiding principles over the next six years of early action projects to remove and contain contamination (well ahead of the Superfund-mandated process) and to characterize the extent and movement of contamination.

Once the data, necessary to design and construct projects on a regional basis, was available, including information on the extent and movement of groundwater contamination, the WQA officially adopted the amended the §406 Plan on March 6, 2000. Since that time, the WQA, using the §406 Plan as its implementation guide, facilitated the design and/or construction of several treatment facilities described within the §406 Plan.

As in previous years, the WQA will continue to assist EPA with its response efforts by engaging the authority of other agencies. Section 102(b) of the WQA Act declares legislative intent directing the WQA to coordinate among state and federal government agencies to plan and implement groundwater cleanup. The Remedial Standards (Section V(b)) established by the §406 Plan (as required by Section 106 of the WQA Act) incorporate rules, regulations and standards previously adopted by other agencies of the State of California. The Remedial Standards harmonize and coordinate the requirements of the Main San Gabriel Basin Watermaster ("Watermaster"), the State Water Resources Control Board ("SWRCB"), the LARWQCB, and the DHS. One purpose of the Remedial Standards is to help integrate groundwater cleanup objectives with water supply objectives, according to the legislative intent directive set forth in Section 102(a) of the WQA Act.

The EPA has recognized some of these Remedial Standards as applicable or relevant and appropriate requirements (ARARs). Federal Superfund Law requires parties responsible for pollution to comply with ARARs in the process of carrying out federal cleanup orders. ARARs include any State standard that is (1) more stringent than any Federal requirement, (2) validly promulgated, (3) either "applicable" or "relevant and appropriate" and has been identified by the State to the USEPA. Due in part to the efforts of the WQA, the EPA's Unilateral Administrative Order (No. 2003-17)

for remedial design and remedial action in the SEMOU of the San Gabriel Valley Superfund Sites, issued on August 28, 2003, (1) encourages the parties identified as responsible for the pollution to integrate their cleanup obligations with water supply projects that exist or are under development and (2) directs compliance with ARARs, such as meeting water quality standards for potable water service established by DHS and/or for discharge of the product water established by the LARWQCB.

IV. Goals of the WQA §406 Plan

Originally, WQA's goals were developed as a result of discussions with federal, state and local agencies, various stakeholders, and comments heard at public workshops and hearings. Each year, the goals are re-evaluated to determine applicability and whether any additional goals should be added. While these goals have remained unchanged, WQA has expanded the descriptions under the four goals to further validate WQA's focus. The four goals are:

1) Accelerate Removal of Contaminant Mass in the Basin;

2) Prevent Migration of Contamination into Critical Groundwater Supplies;

3) Integrate Cleanup with Water Supply; and

4) Minimize Economic Impact to the Public.

In the following sections, each of the four goals are described in more detail.

A. Accelerate Removal of Contaminant Mass in the Basin

In recent years, it has become increasingly apparent that cleanup actions, implemented earlier than CERCLA provides, are needed to address the immediate threats to the local water supplies. The goal of accelerating the removal of contaminant mass is fulfilled primarily by engaging the regulatory processes of other agencies of the State, and, wherever possible, prompting the implementation of activities ahead of the time required under the applicable regulatory process.

In the past, the WQA identified and focused its accelerated removal activities on projects that could immediately be implemented to remove contaminant mass. In more recent years, the focus has changed due to the ever-growing list of impacted water supply wells. This widespread impact has necessitated the early implementation of several treatment facilities by water purveyors, individually and jointly with the WQA and/or other agencies well ahead of the mandate from regulatory agencies.

With the rapid migration of contamination towards critical water supplies, the WQA now primarily focuses on projects that will accelerate and advance cleanup activities while providing a clean water supply. More of these types of early actions are necessary to either (1) remove contaminant mass to immediately prevent further degradation of downgradient aquifers, (2) contain the spread of contamination to protect critical water supplies, (3) restore critical water supplies, or (4) combine the aforementioned.

Although early actions are implemented before a regulatory mandate, there has and will continue to be extensive coordination with EPA and the LARWQCB to link the early action to the eventual mandate. By working closely with EPA, the WQA and other local stakeholders can affect EPA's decision-making and identify certain high priority cleanup projects that are consistent with EPA's objectives. Although EPA cannot formally endorse and mandate cleanup until a rigorous process is completed, WQA can facilitate and assist in the implementation of the required action well before the mandate. Several crisis situations exist within the Basin that demand this type of immediate action as described in Appendix A. Waiting on mandated actions have already had severe impacts in many parts of the Basin.

B. Prevent Migration of Contamination into Critical Groundwater Supplies

In many parts of the Basin, the contamination continues to spread towards, and threaten groundwater supply wells. Given that so many supply wells have already been shut down, the current situation continues to represent a significant threat to the Basin's water supply. Therefore, priority must be given to implementing cleanup projects that will prevent the loss of water supplies. In order to meet this goal, contaminant migration must be implemented quickly so that constituents will be prevented from entering clean

supplies. Further, this action must also prevent constituents from entering supplies with existing treatment not built or suited to treat the threatening contaminant(s). The goal to contain the contamination is supported with actions that specifically address threats to groundwater pumping centers. Loss of major production centers will continue to impair the water supply unless these types of threats are immediately addressed in a cleanup plan.

The Watermaster has existing rules and regulations which govern the location and production of water wells for water quality purposes. The WQA under this §406 Plan will work with the Watermaster and its existing rules and regulations to help contain and control the migration of contaminants within the Basin.

C. Integrate Cleanup with Water Supply

With so much of the local water supply impaired, it is essential that water treated from the cleanup projects be put to its highest and best use. Putting the treated water back into the supply system will serve to enhance the overall water supply situation in the Basin and help many water purveyors mitigate the threat to their water supply. The desired objectives can be achieved by maximizing the use of existing facilities that have either been shut down or have been impaired. When new facilities are needed, these should be integrated into the supply of the appropriate water purveyor.

If cleanup facilities are built without the consideration of the local supply, then many water purveyors will be forced to build redundant treatment facilities on impaired wells or import increasingly scarce surface supplies from other areas. Currently, water purveyors only use surface water sources when they are readily available or when groundwater sources become impaired or unavailable; otherwise the predominant source of supply is from the local groundwater.

Although cleanup projects that put treated water to beneficial use will provide localized benefits, there are, of course, broad benefits that impact the regional water supply situation in California. The necessity to develop new sources and to fully utilize existing sources is very evident in court decisions within the State and the Colorado River Watershed. For example, the 2003 Quantification Settlement Agreement ("QSA") between the United States Department of the Interior and Southern California Colorado

River users restricts the State's withdrawal of Colorado River water to its original allotment of 4.4 million acre-ft per year in non-surplus years. In addition, the dependability of the State Water Project is decreasing as a result of a lack of storage facilities, and there are potential restrictions that may result from the ongoing CALFED process. Now more than ever, it is critical to protect and develop the groundwater resources so that both groundwater and surface waters of the State can be managed more effectively. Critical to this statewide need is the full utilization and restoration of the Basin groundwater.

The Los Angeles County Superior Court has Constitutional authority, through its continuing jurisdiction under the Judgment in the case of *Upper San Gabriel Valley Municipal Water District v. City of Alhambra*, LACSC 924128, to promote the beneficial use of water and to prevent the waste of water in the Basin. Through the Court's continuing jurisdiction under the Judgment, the Watermaster has adopted rules and regulations governing the location and production of water wells for water quality purposes. The LARWQCB has Constitutional, statutory and regulatory authority to regulate discharges to waters of the State, to promote the beneficial use of water, and to prevent the waste of water. DHS has statutory and regulatory authority to set and enforce standards for public drinking water systems, including acceptable water treatment processes. The WQA intends to engage the existing rules, regulations and standards of these agencies of the State to coordinate and promote the reasonable and beneficial use of water produced and treated under mandate from the EPA. WQA recognizes that a number of voluntary or consensual arrangements ultimately will be required to implement the objective to integrate water cleanup operations and water supply operations in the Basin. In addition to engaging existing regulatory authority held by other agencies, WQA intends to encourage the needed voluntary or consensual arrangements through the exercise of authority under the WQA Act, including its authority to seek recovery of WQA's costs to respond to and cleanup groundwater contamination in the Basin.

D. Minimize Economic Impact to the Public

The issue of who pays for the cleanup is often the biggest obstacle in initiating the necessary cleanup programs. Although Potentially Responsible Parties (PRPs) may be held completely liable for the costs of a response action under the CERCLA mandate, actions normally do not occur until a lengthy process is completed. Equally detrimental to the water supply crisis is the fact that there is no assurance that the immediate water supply concerns will be addressed under CERCLA. Therefore, many water purveyors may still need to construct their own treatment facilities or look for alternative supplies at their own expense even after the PRPs fulfill their obligation under CERCLA.

Adding to the economic complexity of the situation is the fact that EPA conducts its own detailed financial evaluation of PRPs and may settle for a reduced amount. And even then, many businesses cannot fully absorb the financial liability without detrimentally impacting their businesses. In the meantime, the spread of contamination continues to impact more water supply sources and, by extension, the basic reliability of plentiful water to support the economic basis and vitality of the Basin. To address this goal, WQA has pursued and continues to aggressively pursue sources of funding from responsible parties and the federal/state government. Despite these efforts, organizations like WQA and some of the local water purveyors have had to pool their own resources to immediately initiate many of the required response actions. This has required a financial commitment on behalf of the local public (at least initially). Early actions financed outside of the CERCLA process have been necessary to assure that many of the critical projects are implemented quickly. In addition, cleanup projects such as those prescribed by WQA are designed from a local perspective to address groundwater cleanup in conjunction with the water supply. However, costs borne by the public for this effort would have to be absorbed or recovered through litigation.

To accommodate potentially conflicting goals between accelerating cleanup and minimizing impact to water rate payers, WQA has identified high priority response actions that can be implemented ahead of EPA's mandate using available financial resources, including federal reimbursement funding, and in some cases, financial participation from PRPs. If a required project lacks sufficient funding, a commitment by

the affected water purveyors and/or WQA through its assessment, along with other potential local sources, will be required. Where WQA is required to use its own assessment to quickly assist in the development of a project, WQA will always consider cost recovery actions to minimize costs borne by the public. To that end, WQA has already filed two cost recovery actions and may be soon considering other cost recovery actions against those responsible entities that chose not to participate in the sponsored early remedial actions.

V. §406 Plan

A. Definitions

1. This §406 Plan incorporates by reference the definitions of "facility," "hazardous substance," "national contingency plan," and "person". The terms "remedial action," or "remedy," or "cleanup," or "remediation," are used interchangeably herein. Additionally, such terms are intended to be encompassed by the definitions of "remove", "removal," "remedy," "remedial action," "respond," or "response," as appropriate and as those terms are defined in Title 42 (CERCLA) of the United States Code, § 9601, as amended.

2. This §406 Plan incorporates by reference Title 42 of the United States Code, §9607 (a), as amended, the class of persons who are PRPs for the cleanup of hazardous substances.

B. Remedial Standards

The WQA has identified certain appropriate rules, regulations and standards for the management of Basin remedial actions from among the rules, regulations and standards promulgated by the Watermaster, the LARWQCB and DHS. The rules, regulations and standards specified below are incorporated by reference in this §406 Plan and adopted as the Remedial Standards of the WQA.

These Remedial Standards, and the underlying existing rules, regulations and standards of the Watermaster, LARWQCB and DHS are additional requirements of the State which are applicable or relevant and appropriate to remedial actions ordered by the EPA in the Basin. (See Appendix C-2).

WQA will engage the existing procedures of the Watermaster, the LARWQCB and the DHS to implement the following Remedial Standards so that all remedial actions affecting Basin groundwater shall be conducted accordingly.

1. WATERMASTER SECTION 28

In furtherance of two objectives of this §406 Plan to prevent migration of contamination into critical groundwater supplies and to integrate cleanup activities with water supply operations, production of Basin water for remedial action purposes shall be carried out in conformance with Section 28 of the Rules and Regulations adopted by the Watermaster under authority of the Amended Judgment in *Upper San Gabriel Valley Municipal Water District vs. City of Alhambra,* Los Angeles County Superior Court Case No. 924128. (See Appendix C-1). Under this Remedial Standard water wells used for remedial action purposes shall be located, with the approval of the Watermaster, both to prevent migration of contaminated groundwater and to best integrate the water produced for remedial action with water supply operations in the Basin. If necessary, WQA will engage the existing implementation and enforcement procedures of the Watermaster to carry out this Remedial Standard. Section 28 of the Watermaster Rules and Regulations is attached as Appendix D-1 and incorporated herein.

2. LARWQCB DISCHARGE REQUIREMENTS

In furtherance of an objective of this §406 Plan to integrate cleanup activities with water supply operations, disposal of Basin water produced for remedial action purposes shall be carried out in conformance with discharge requirements issued by the LARWQCB and, if necessary, approved by the SWRCB. (See Appendix C-1). Under this Remedial Standard, Basin water produced and treated for remedial action purposes shall not be wasted and such water shall be put to the greatest reasonable and beneficial use of which it is capable. Conversely, the waste and unreasonable use or unreasonable method of use of such waters shall be prohibited. Additionally, under this Remedial Standard, Basin water produced and treated for remedial action purposes shall not be discharged to the environment except in conformance with discharge requirements issued by the LARWQCB.

The SWRCB and the LARWQCB are both subject to the requirements of the California State Constitution and California Water Code § 100 *et seq.* to promote the greatest reasonable and beneficial uses of the waters of the State and to prevent the waste and unreasonable use and unreasonable method of use of those waters. SWRCB's express statutory authority to prevent the waste and unreasonable use of water is set forth in Water Code § 275 which provides as follows:

> "The department and board shall take all appropriate proceedings or actions before executive, legislative, or judicial agencies to prevent waste, unreasonable use, unreasonable method of use, or unreasonable method of diversion of water in this state"

The LARWQCB exists, pursuant to Water Code §§ 13200-13201, as a branch of the SWRCB. The LARWQCB exercises its authority to regulate discharges to promote the beneficial use of water and prevent waste through the issuance of waste discharge requirements. Waste discharge requirements are predicated upon the water quality control plan ("Basin Plan") that each regional board is required to promulgate according to Water Code § 13241. Water Code § 13263(a) requires each regional board to issue discharge permits in conformity with its adopted Basin Plan.

Discharge requirements issued by the LARWQCB must be conditioned, taking into consideration the beneficial use of water, pursuant to Water Code § 13263(a), as follows:

> "The regional board, after any necessary hearing, shall prescribe requirements as to the nature of any proposed discharge, existing discharge, or material change in an existing discharge, except discharges into a community sewer system, with relation to the conditions existing in the disposal area or receiving waters upon, or into which, the discharge is made or proposed. The requirements shall implement any relevant water quality control plans that have been adopted, and shall take into consideration the beneficial uses to be protected, the water quality objectives

> reasonably required for that purpose, other waste discharges, the need to prevent nuisance, and the provisions of Section 13241."

Thus, in enacting Water Code §§ 13241 and 13263, the State has expressly stated its intent that the regional boards exercise their authority to regulate discharges to promote the beneficial use of water and prevent waste through the issuance of waste discharge requirements. Pursuant to the express terms of these statutes, this authority includes the prohibition on any discharge that is wasteful and does not promote the beneficial use of water.

The State has been approved to issue National Pollutant Discharge Elimination System ("NPDES") Program permits under the Federal Clean Water Act. Under that authority, the LARWQCB issued General NPDES Permit No. CAG914001 (the "General Permit"), adopted by Order No. R4-2002-0107 on May 23, 2002. The General Permit establishes Waste Discharge Requirements for discharges of Treated Groundwater from Investigation and/or Cleanup of Volatile Organic Compounds Contaminated-Sites to Surface Waters in Coastal Watersheds of Los Angeles and Ventura Counties. The General Permit prohibits, for example, the daily discharge of an effluent containing more than 4 ppb perchlorate (*See* General Permit, F (Effluent Limitations)).

The standards contained in the General Permit are ARARs. They were properly promulgated because they were adopted pursuant to the authority granted to the State under 40 CFR parts 122 and 123 and Section 402 of the Clean Water Act and other State authorities, including Water Code § 13263. The General Permit is generally applicable – it serves as a general NPDES permit and covers discharges to all surface waters in the Los Angeles Region (*See* General Permit, ¶23.). It is enforceable both administratively and through the Superior Court (*See* Water Code §§ 13300 et seq.). Finally, the General Permit standards are legally applicable or relevant and appropriate as state standards stricter than current federal standards. Thus, the standards set forth in the General Permit are ARARs.

If necessary, WQA will engage the implementation and enforcement procedures of SWRCB and LARWQCB to carry out this Remedial Standard. The applicable rules,

regulations and standards of SWRCB and LARWQCB are attached as Appendix D-2 and incorporated herein.

3. DHS WATER TREATMENT STANDARDS

In furtherance of an objective of this §406 Plan to integrate cleanup activities with water supply operations, water treatment for remedial action purposes shall be carried out in conformance with treatment standards for public drinking water systems adopted by the DHS (See Appendix C-3). Under this Remedial Standard, Basin water produced and treated for remedial action purposes shall not be wasted and such water shall be put to the greatest reasonable and beneficial use of which it is capable. Conversely, the waste and unreasonable use or unreasonable method of use of such waters shall be prohibited. Under authority of §106 of the California Water Code, domestic use is the highest beneficial use of water. Unless discharge or other use of the Basin water produced and treated for remedial action purposes is approved by the LARWQCB, all such water shall be made available for domestic use through public drinking water systems. Under this Remedial Standard, Basin water produced for remedial action, with the approval of the DHS, shall be integrated into water supply operations in the Basin.

The California Safe Drinking Water Act (Health & Safety Code §§ 116275 *et seq.*) (the "Act"), contains public water supply permitting provisions which authorize DHS to set permit conditions for water delivered by public water systems. In Section 116270(e) of the Act, the Legislature declared its intent to "ensure that the water delivered by public water systems of this state shall at all times be pure, wholesome, and potable." In addition, in Section 116270(g) of the Act, the Legislature declared its intent "to establish a drinking water regulatory program within the State Department of Health Services in order to provide for the orderly and efficient delivery of safe drinking water within the state and to give the establishment of drinking water standards and public health goals greater emphasis and visibility within the state department."

In 1997, the Chief of the Division of Drinking Water and Environmental Management of the DHS drafted a "Guidance for Direct Use of Extremely Impaired Sources" memorandum known as Policy Memo 97-005 ("Policy 97-005"). According to

Policy 97-005, it is a memorandum that provides guidance to DHS staff on the evaluation of extremely impaired sources of water for use as a supply of drinking water.

Pursuant to Policy 97-005, the following findings are required of DHS for approval to use an extremely impaired source[1]:

> 1) Drinking water MCLs and Action Levels[2] will not be exceeded if the permit is complied with; and
> (2) The potential for human health risk is minimized, and the risk associated with the project is less than or equal to the alternatives.

As set forth in Appendix C-2, the permit conditions in Policy 97-005 will be considered state ARARs if (1) they are more stringent than federal standards (2) they are properly promulgated standards, requirements, criteria or limitations, and (3) they are legally applicable or relevant and appropriate. The Policy 97-005 permit requirements are more stringent than federal standards. The requirements were "properly promulgated" because they are based on laws adopted by the California Legislature and administrative standards developed by the DHS. Finally, they are of general applicability to anyone who introduces water from extremely impaired sources into the drinking water system. Thus, the permit conditions in Policy 97-005 are ARARs.

If necessary, WQA will engage the implementation and enforcement procedures of the DHS to carry out this Remedial Standard. A copy of Policy 97-005 and the applicable rules, regulations and standards of DHS are attached as Appendix D-3 and incorporated herein.

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[1] An extremely impaired source, according to Policy 97-005, is one that meets one or more of the following criteria: 1) exceeds 10 times an MCL or action level (AL) based on chronic health effects, 2) exceeds 3 times an MCL or AL based on acute health effects, 3) is a surface water that requires more than 4 log *Giardia*/5 log virus reduction, 4) is extremely threatened with contamination due to proximity to known contaminating activities. 5) contains a mixture of contaminants of health concern or 6) is designed to intercept known contaminants of health concern.

C. Overarching Remedial Principles

These principles represent the general guidelines that will steer the implementation of the strategies and tactics contained in this §406 Plan.

1. Consensual participation in remedial activities shall be maximized.

2. Consistency with EPA actions and Watermaster Section 28 shall be maintained.

3. Control of decisions by the local public (i.e., producers and the water consumers/rate payers they represent) affecting groundwater quality and water supplies shall be maintained.

4. Expedite remedial activities, as appropriate, by providing incentives, such as (a) avoiding litigation costs and risks (e.g. adverse judgment, exposure to other PRPs/agencies, etc.), (b) providing funds from federal, state, the WQA or other sources, and (c) utilizing existing water producing/treatment equipment, where appropriate.

5. The overall economic impact to water consumers shall be minimized for all response actions by requiring financial participation from any party responsible for the contamination. Within the discretion of the WQA, a cost recovery action, including but not limited to a request for joint and several liability, will be initiated against any responsible party not participating at a financial level acceptable to WQA.

6. WQA shall facilitate the acceleration of the removal of contaminant mass in the Basin by working with the EPA, water purveyors and PRPs to (a) identify high priority cleanup projects that are consistent with EPA objectives, and (b) begin implementation of the required remedy as soon as possible. Cleanup projects that prevent or otherwise restrict the lateral or vertical migration of contamination shall be given higher ranking over those cleanup projects that do not prevent such migration.

7. Treated water shall be used for its highest and best use.

D. Operable Unit Specific Plans

After more than 10 years of studies and investigations, EPA's CERCLA activities have progressed to a point where the configuration of the required remedies, in conjunction with local needs, can be determined. In general, these remedies include multiple groundwater extraction and treatment facilities designed to remove and contain

the spread of contamination. Appendix A summarizes WQA's specific plans for the individual operable units including key components and OU specific issues. Table 1 identifies the annual estimated costs of each project within the Basin OU boundaries through FY 2009-10.

VI. Funding

The WQA has and continues to be committed to accelerating cleanup, integrating cleanup with water supply, preventing migration, and minimizing the financial impact to the public through its annual assessment. In order to meet these goals, adequate funds, primarily from PRPs, state and/or federal programs, are necessary for implementation. While the WQA recognizes that PRPs must fulfill their CERCLA liabilities, it is often a very slow process - a process that jeopardizes the time and cost of implementing projects. In addition, even though EPA has urged PRPs to consider affected water supplies, the CERCLA process does not allow EPA to require it. It is for these reasons that WQA is determined to aggressively seek funds from PRPs before, during and after project implementation, either voluntarily, through mandated CERCLA actions or through litigation measures. If funds cannot be generated from PRPs to begin an identified early action project, WQA will work with individual purveyors, Watermaster and/or other local agencies to develop funding for the project using federal and/or state funds, WQA member agency funds, including individual purveyors, and only if necessary, its own assessment. This section prioritizes each potential source of funding in the order of which it will be sought for a particular early response action.

A. Potentially Responsible Parities

As stated previously, WQA will seek voluntary funds from those responsible for the contamination. If the process of acquiring those funds is unilaterally stalemating or delaying the project, the WQA will move forward without this source of funds to ensure necessary cleanup/water supply projects are implemented.

The WQA is committed to securing PRP funding for any given project by providing incentives for PRPs to participate financially. In the absence of sufficient PRP funds, WQA and others may be required to combine its resources to fund a project. In

this event, WQA may choose to initiate cost recovery actions. This was the case in the BPOU, in which WQA brought two separate legal actions against PRPs in the year 2000 to recover costs incurred from the La Puente Valley County Water District ("LPVCWD") Treatment Plant and the Big Dalton Well Treatment Facility.

In 2002, WQA along with three affected purveyors (water entities) jointly settled with 13 of the more that 60 PRPs in the South El Monte Operable Unit. Thereafter, the water entities initiated litigation against the remaining PRPs in a concerted effort to recover escalating costs and ensuring funds for future operations of the cleanup projects built with WQA participation.

B. Federal Government

WQA, with the support and assistance of other local agencies, has sought and continues to seek all funding that may be available for projects in the Basin. As a result of those efforts, two federal programs have been authorized by Congress specifically for the Basin. Both of these reimbursement programs are administered through the United States Bureau of Reclamation ("USBR") directly to the WQA. In February of 2001, WQA adopted a set of procedures called the Federal Funding Program Administration (Appendix F) to guide the allocation process for both programs.

Both sources of federal funding will be used to the maximum extent possible to accelerate cleanup and to provide incentives for PRPs to address affected water suppliers while implementing cleanup actions in the Basin under CERCLA.

C. Restoration Fund (Dreier)

In December of 2000, Congress authorized the San Gabriel Basin Restoration Fund ("Restoration Fund"). The authorization of the Restoration Fund, when fully appropriated, will provide $75 million for groundwater cleanup in the Basin. Since that time, a total of $55 million has been appropriated and allocated to cleanup projects throughout the Basin.

This program requires a 35% non-federal match deposited into the Restoration Fund to reimburse the WQA up to a maximum of 65% from federal sources. Non-federal funds are classified as funds that are not from the Department of the Interior, but

rather PRP funds, state funds, local municipality funds, purveyor funds, WQA assessment funds or non-profit funds. Funds from this program may be used for design, construction and operation & maintenance for up to 10 years following construction. The Restoration Fund is administered via the USBR in conjunction with the WQA for use within the Basin.

Congress acknowledged that millions of dollars had already been spent to protect the Basin groundwater by remediating groundwater contamination and preventing further contamination. Due to the emergency nature of the contamination and the threat it posed to the local groundwater supply, Congress allowed the use of those past expenditures as a credit towards the 35% non-federal matching requirement under this program. The USBR is responsible for approving all qualifying prior expenditures. However, the WQA, at its discretion, will use this credit to meet the 35% matching requirement and eliminate the need to deposit additional funds into the Restoration Fund.

As of 2002, WQA has accumulated past cleanup cost information totaling more that $47 million. This amount is sufficient to meet the 35% non-federal matching requirement for the $55 million appropriated by Congress and deposited into the Restoration Fund to date. Based on more recent information, it is clear that additional funding will be required to continue the progress of ensuring that remedial activities will be combined with local water supply needs. To this end, in 2005, the WQA will seek an additional $15 million appropriation for the Restoration Fund. Additionally, the WQA will seek to raise the cap on the Restoration Fund by $50 million.

D. TITLE XVI

In 1992, Congress authorized the San Gabriel Basin Demonstration Project to implement conjunctive use projects in the Basin. By implementing cleanup projects that provide a reliable source of water and reduce the need for outside sources of water, many of the Basin's cleanup projects are eligible for this program.

This program requires a 75% match from non-federal sources to reimburse the project up to a maximum of 25% from federal sources. Funds from this program may

be used for design and construction only. The Title XVI fund is administered via the USBR directly to the WQA for use within the Basin.

Based on the Basin's enormous need for funds, the WQA will (1) continue to work to secure full appropriation of the remaining funds in the Title XVI authorization, and 2) work with Congress to seek legislation authorizing the transfer of any unobligated funds in the Title XVI program to the Restoration Fund.

In 2004, Congresswoman Grace Napolitano authored HR 1284 which was passed and signed into law. The legislation raised the cap on the Title XVI program by $12 million. The total authorization for the Title XVI program is now $50.5 million.

E. State Government

In 2000, voters passed Proposition 13, which authorized the Safe Drinking Water, Clean Water, Watershed Protection, Flood Protection Bond Act, which, in part, authorized $7 million in funding assistance for groundwater cleanup programs. Although the original intent of the language was to provide grant funds, the Department of Toxic Substances Control ("DTSC") has chosen to interpret the funding language to mean loan funds. To that end, DTSC established procedures in 2001 for a low interest 20-year loan. In response to DTSC's solicitation of applications, WQA applied for all of the funds on behalf of the Valley County Water District ("VCWD") Sub-Area 1 BPOU project and was awarded the entire amount.

As described in the previous federal funding sections regarding the Restoration Fund and Title XVI funds, a non-federal match is required in order to release the federal funds. While WQA will continue to work with PRPs to help meet that match, additional funds will be needed to release the millions of federal dollars dedicated to the Basin cleanup. To date, the State's participation in cleanup has been nominal. And in recognition that the State's budgetary crisis has led to a shortage of direct funding, the WQA will, instead, focus on securing bond funds such as the $30 million through the recently passed Proposition 50, the Water Security, Clean Drinking Water, Coastal and Beach Protection Act of 2002. Unfortunately, the ability for WQA to compete for these funds has been hindered by internal policies developed by the DTSC and the SWRCB. To resolve this barrier, the WQA will concentrate its efforts on legislative remedies.

Additionally, in order to augment the State's participation in groundwater cleanup, WQA will continue to work on having the $7 million Proposition 13 loan forgiven.

F. Water Quality Authority

WQA may impose an annual assessment for capital and operational costs not to exceed $10 per acre-foot. In the past, it has been WQA's policy to utilize assessment dollars to provide incentives for PRPs to move forward on a given project. With the recent availability of significant federal funds, these funds will only be utilized if sufficient federal and/or state dollars are or will not be available in addition to PRP funds. If PRPs do not voluntarily provide funds to a project, then the WQA will, on a project-by-project basis, consider the use of assessment funds to underwrite the project costs with or without other local dollars. However, the WQA is committed to recovering its costs from non-participating PRPs at a later date, so that the cost to the local consumer will ultimately be minimized.

G. Water Purveyors/Cities/Member Agencies/Other Local Water Agencies

As of January 2001, all potential projects requesting WQA participation must go through WQA's Procedure No. 38, "WQA Project Participation". As part of that procedure, the WQA requires the impacted water purveyor to fund or secure funds other than WQA's assessment representing a minimum of 25% of capital costs. In the event projects cannot be otherwise fully funded using any or all of the above funding sources, WQA will work with an affected city, member water agency and/or other local water agencies to develop potential funding sources. The WQA will pursue the recovery of these funds on behalf of the participating agency, if necessary.

VII. Public Information

The WQA has succeeded over a number of years in building public support for cleaning up contaminated groundwater in the Basin. The public information program will continue to build on that effort to foster understanding of the WQA's mission, projects and accomplishments and plans, and to encourage public participation in the cleanup process. The WQA will undertake efforts to ensure that all stakeholders,

including the general public, understand projects that involve the WQA and have ample opportunity to contribute ideas and opinions.

The program will employ a variety of methods to reach everyone from specialized audiences, such as the local water community and legislators in Sacramento and Washington, to the general public in the Basin and beyond. The WQA will constantly update its web site to provide instant access to public information, including news releases, publications, agendas, minutes of meetings, and reports on projects. In addition to WQA-specific issues, the WQA web site links to local, state and federal water agencies and organizations, giving the public immediate access to information on many local water issues, including groundwater contamination and cleanup activities. It also gives access to the names of officials who can be contacted for further information.

The WQA will work to keep the local offices of federal and state legislators informed of any developments and the progress of water cleanup issues in the Basin. These efforts will include office visits, tours of treatment facilities and an invitation to participate in the WQA legislative committee. The WQA has continued to host the Legislative Water Forum Luncheon in which local legislators are invited to provide updates on state legislation as it pertains to the Basin water community. Speakers in the series to date have included United States Senator's Barbara Boxer and Dianne Feinstein, Congressman David Dreier, Congresswoman Hilda Solis, Congresswoman Lucille Roybal-Allard and Assemblywoman Judy Chu.

The public information program uses a variety of written publications to carry its message. These may include annual reports, brochures, bulletins for specific projects and periodic news inserts in the *San Gabriel Valley Tribune*, *Pasadena Star News* and the *Whittier Daily News* , which are all published by the Los Angeles News Group. The inserts are distributed throughout the Basin, through home and business delivery and general sales of the Los Angeles News Group. The WQA will continue to provide the public with the latest information on its projects and programs

The WQA will continue to work closely with the news media and other organizations to reach the public. It will distribute press releases, contact and meet with reporters and editors to inform them of activities respond to press inquiries and take other steps to encourage media interest. The WQA will continue to work with major

news outlets, such as the Los Angeles News Group, *Los Angeles Times*, and foreign language publications, such as *La Opinion* and the *Chinese Daily News* . It also will continue to provide information to other local newspapers, city and chambers of commerce newsletters and publications directed at water and environmental interests, the business press and the electronic media.

The WQA Board, through a variety of means, including public meetings and workshops, also interacts with the public to provide information and to solicit input. In addition, the WQA will continue to work with other agencies on information projects and participate with other water agencies on public outreach efforts.

All projects involving WQA will follow an established process, including all applicable federal, state and local regulations. Because the Basin is a Superfund site, the process will always include meeting requirements under the NCP, including its public participation component, in order to ensure maximum cost recovery potential. In addition, whenever needed or requested, WQA will work closely with water purveyors to help them meet the extensive public outreach requirements set forth in the DHS Technical Memorandum 97-005. However, absent regulatory requirements, the WQA continues to be committed to informing the public of all of its activities.

VIII. Coordination with Other Agencies

The WQA was created to fulfill a need to coordinate response actions to the contamination in the Basin. The WQA continues to call for the involved federal, state, and local agencies to unite with all stakeholders to work more effectively and efficiently. Stakeholders include but are not limited to the EPA, the USBR, the DTSC, the SWRCB, the LARWQCB, the DHS, the WQA, the Watermaster, cities affected by the Basin groundwater contamination, water purveyors in the Basin, and PRPs.

IX.Litigation Plan

The WQA Act authorizes the WQA to bring legal action, including against responsible parties to recover from them the response costs incurred in connection with removal and remedial actions in the Basin.

Among other claims the WQA can assert for cost recovery, the WQA may bring suit under CERCLA, which provides that any person or entity who owns or operates a facility from which there has been an actual or threatened release of a hazardous substance which has caused the WQA to incur response costs, is liable for the costs of response. Liability similarly is imposed on persons and entities, among others, who previously owned or operated a facility at the time such hazardous substance(s) were released.

CERCLA further allows the WQA to seek to hold all PRPs jointly and severally liable for these response costs, recover prejudgment interest, and obtain a declaration from the court that the responsible parties are liable for future response costs. In addition, the WQA may seek to recover its attorneys' fees incurred in bringing legal action. A more detailed discussion of the WQA's legal options is included in Legal Appendix C- 3.

APPENDIX M

RESOLUTION 10-14-543

RESOLUTION NO. 10-14-543

A RESOLUTION OF THE BOARD OF DIRECTORS OF UPPER SAN GABRIEL VALLEY MUNICIPAL WATER DISTRICT TO DECLARE A WATER EMERGENCY

WHEREAS, on January 17, 2014, Governor Edmund G. Brown, Jr., declared a state of emergency to exist in California due to severe drought conditions; and

WHEREAS, on April 25, 2014, Governor Brown issued a proclamation of a continued state of emergency based on continued drought conditions; and

WHEREAS, on July 15, 2014, the State Water Resources Control Board approved and adopted statewide emergency regulations for urban water conservation due to emergency drought conditions, the need for prompt action, and current limitations in the existing enforcement process; and

WHEREAS, the water in the Main San Gabriel Basin ("Basin") has dropped to all-time historic lows, and continued sustainable groundwater production is currently threatened; and

WHEREAS, the water in the Basin, as measured at the Baldwin Park Key Well, is at a level of 182.3' above mean sea level as of September 26, 2014 and is therefore 17.7 below the low operating range of 200' above mean sea level set forth in the Main San Gabriel Basin Judgment; and

WHEREAS, the water in the Basin, as measured at the Baldwin Park Key Well, is at a level of 182.3' above mean sea level as of September 26, 2014 representing about 150,000 acre-feet of emergency storage that has been used to defer use of scarce imported water supplies needed by other Metropolitan Water District member agencies; and

WHEREAS, since January 2013 over 400,000 acre-feet has been withdrawn from storage in the Basin resulting in that much less demand on the imported water system during that same period; and

WHEREAS, certain communities in the San Gabriel Valley designed and constructed their domestic water supply systems based on a reliable groundwater supply under a management plan and Judgment that requires a reliable supply of supplemental water; and

WHEREAS, management of the groundwater contamination in the Basin requires that groundwater be produced and treated at certain rates irrespective of Basin conditions in order to prevent plumes of contaminants from migrating downstream and impacting other wells and the Central Basin; and

WHEREAS, groundwater produced from the Basin provides a reliable water supply to communities in Orange County and southeast Los Angeles County that do not overly the Basin; and

WHEREAS, the Upper San Gabriel Valley Municipal Water District ("Upper District") was formed in 1960 as a Metropolitan Water District of Southern California ("Metropolitan") member agency, under the Municipal Water District Act, for the purposes of serving as a responsible agency to the Judgment to provide replacement water; and

WHEREAS, the Main San Gabriel Basin Watermaster ("Watermaster") was formed by the Los Angeles County Superior Court in 1974 to manage the Basin on behalf of the water rights holders and the Court; and

WHEREAS, Metropolitan does not have statutory authority over groundwater management; and

WHEREAS, 2015 could be a fourth consecutive year of the most extreme drought in California's recorded history and the Basin level is forecast to continue to decline through 2015 and may, if the winter of 2015 is dry, fall to a critically low level of 160' at the Baldwin Park Key Well putting the water supply for some San Gabriel Valley communities in jeopardy; and

WHEREAS, the Basin's primary source of replacement water for recharge, Metropolitan, without any detailed knowledge of current Basin conditions or statutory authority over Basin management, is currently restricting the amount of water that can be obtained for purposes of recharging the Basin; and

WHEREAS, water suppliers throughout the Basin have imposed water use restrictions per the direction of the State Water Resources Control Board; and

WHEREAS, the Upper District aids water providers in the Basin in their conservation efforts through a significant water conservation program;

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE UPPER SAN GABRIEL VALLEY MUNICIPAL WATER DISTRICT that the Upper District declares a Water Emergency for all areas serviced by the Upper District pursuant to Water Code section 375.

BE IT FURTHER RESOLVED the Upper District Staff is directed to work with the Watermaster to identify any and all means of compelling Metropolitan to deliver water for purposes of recharging the Basin as required by the Judgment.

BE IT FURTHER RESOLVED that the Upper District demands Metropolitan treat the Upper District fairly, consistently, and in the same manner that it treats all other member agencies. In particular, Upper District demands Metropolitan adhere to the Metropolitan Water District Act and provide "like service for like rates" and deliver water requested by Upper District for Basin recharge on the same terms and conditions as provided to other Metropolitan member agencies that receive service by paying Metropolitan's "full service" water rates.

BE IT FURTHER RESOLVED that the Upper District adopts such water conservation actions as mandated by the State Water Resources Control Board's Emergency Regulation for Water Conservation, approved from time to time by the State Board, and as deemed most appropriate by local water providers through their local ordinances.

BE IT FURTHER RESOLVED that the Upper District staff is directed to work with the local water providers to help them implement all water conservation actions they deem most appropriate through their local ordinances as required by the State Water Resources Control Board.

PASSED, APPROVED AND ADOPTED on October 21, 2014.

AYES:	URIAS, CHAVEZ, FELLOW
NOES:	NONE
ABSTAIN:	NONE
ABSENT:	TOUHEY, TREVIÑO

Anthony R. Fellow, President

ATTEST:

Ed Chavez, Vice President

(SEAL)

APPROVED AS TO FORM:

Steven P. O'Neill, District Counsel

APPENDIX N

RESOLUTION 6-90-266

RESOLUTION NO. 6-90-266

A RESOLUTION OF THE BOARD OF DIRECTORS OF THE UPPER SAN GABRIEL VALLEY MUNICIPAL WATER DISTRICT URGING ITS SERVICE AREA TO REDUCE DEMANDS BY 10 PERCENT TO MITIGATE THE EFFECTS OF THE 1990 CALIFORNIA DROUGHT

WHEREAS, California is in the fourth consecutive year of below-normal precipitation;

WHEREAS, precipitation for the current water year has been substantially below normal in the watersheds of the imported supplies serving Southern California;

WHEREAS, precipitation in Southern California has also been below average and water levels in the Main San Gabriel groundwater basin have declined more than 40 feet the last few years;

WHEREAS, during the drought of 1988 Southern California reduced demands an additional 8 percent from what they would ordinarily have been;

WHEREAS, the drought of 1990 appears to be more severe than the drought of 1988;

WHEREAS, The Upper San Gabriel Valley Municipal Water District Board of Directors in 1988 urged all cities, water supply agencies and other public and private water users to adopt conservation measures to mitigate the effects of the continuing drought; and

WHEREAS, there is a need to reduce total demands on all water supply entities within the Upper San Gabriel Valley Municipal Water District service area by 10 percent in 1990 as compared to 1989, to reduce the potential for shortages for this year and even more severe shortages next year;

NOW, THEREFOR, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE UPPER SAN GABRIEL VALLEY MUNICIPAL WATER DISTRICT as follows:

Section 1. That the Board of Directors urges all cities, water supply entities, and other public and private water users in its service area to reduce their own usage and to urge their customers to reduce their usage by at least 10 percent, as compared to 1989, to assist in the mitigation of the effects of the drought during 1990, and to maintain the conserved water in storage against the possibility of even more severe shortages in 1991; and

Section 2. That a copy of this resolution be sent to the governing body and chief executive officer of every city and water supply entity within the Upper San Gabriel Valley Municipal Water District's service area.

PASSED, APPROVED AND ADOPTED this 6th day of June, 1990.

PRESIDENT

ATTEST:

SECRETARY

APPENDIX O

RESOLUTION 2-09-465 AND RESOLUTION 4-95-333

RESOLUTION NO. 2-09-465

A RESOLUTION OF THE BOARD OF DIRECTORS OF THE UPPER SAN GABRIEL VALLEY MUNICIPAL WATER DISTRICT REPEALING RESOLUTION NO. 1-08-453 AND ADOPTING WATER RATES AND CHARGES FOR CALENDAR YEAR 2009

WHEREAS, the Metropolitan Water District of Southern California ("MWD" herein) has adopted water rates and charges for its classes and conditions of service for the calendar year 2009 and this Upper San Gabriel Valley Municipal Water District ("Upper District" herein) wishes to reflect MWD's new rates and charges in the water rates and charges of the Upper District; and

WHEREAS, MWD has established charges in their rate structure including a Readiness-to-Serve Charge, Capacity Charge, Tier 1 and 2 commodity charges; and

WHEREAS, Upper District requested that MWD continue its Standby Charge in Upper District's service area with the intention that the above referenced Readiness-to-Serve charge be paid from the funds generated from said Standby Charge for calendar year 2009; and

WHEREAS, during Fiscal year 1991/92 Upper District entered into an agreement with MWD for the enlargement of the discharge valve on Service Connection USG-3. As part of this agreement, MWD will charge Upper District an additional $2.00 per acre foot for all water delivered through this enlarged discharge valve. It is the intention of Upper District to incorporate this $2.00 per acre foot charge into the rate established for delivery through Service Connection USG-3; and

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE UPPER SAN GABRIEL VALLEY MUNICIPAL WATER DISTRICT as follows:

Section 1. Resolution No. 1-08-453 adopted January 3, 2008, is hereby repealed.

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Section 2. Effective March 1, 2009, the following water rates are established and will remain effective through December 31, 2009:

Class of Service	Rate per Acre Foot
Full Service – Treated (Tier 1)	$681.00
Full Service – Treated (Tier 2)	$808.00
Groundwater Replenishment Service – Untreated	$337.00
Groundwater Replenishment Service – Untreated (Rate for MWD cyclic storage deliveries pre-purchased in 2008)	$251.90
Full Service – Untreated (Tier 1)	$450.00
Full Service – Untreated (Tier 2)	$577.00
Recycled Water Service	By Contract
Excess Annual Capacity Charge	$6,800 per CFS
Minimum Service Connection Charge (per year)	$680.00
Groundwater Replenishment Ready-to-Serve Charge	$42 per CFS/$6,300 per

Section 3. Description of Service Classes:

Full Service Treated (Tier 1)

For Calendar Year 2009 the Upper District has an allocation of Full Service Tier 1 supply of 16,511.6 acre feet at a rate of $681.00 per acre foot. That fixed supply will be equitably allocated to all treated water service connections at the end of Calendar Year 2009. Service connections utilizing supply exceeding the aforementioned allocation will be subject to Tier 2 charges.

Full Service Treated (Tier 2)

For Calendar Year 2009, the Upper District will have an unlimited allocation (subject to drought restrictions) of Full Service Tier 2 supply. Once the total allocation of Tier 1 supply is utilized, all treated water sold will be at the Tier 2 rate of $808.00 per acre-foot for the remainder of the calendar year.

Excess Annual Capacity Charges

The Full Service Tier 1 rate per acre foot as well as the Full Service Tier 2 rate per acre foot assumes an annual maximum daily average capacity usage* per acre foot of 0.0034 cubic feet per second. Sub-agencies that exceed the 0.0034 CFS/AF threshold will be subject to annual excess capacity charges. Excess capacity charges will be calculated as $6,800 for each CFS of

**May through September only.*

excess capacity utilized during the period of May through September 2009 and will apply for three years.

Groundwater Replenishment Service (Untreated)

The rate for untreated groundwater replenishment service will be $337.00 per acre foot. This service will be provided at service connection USG-3 and be subject to supply availability as determined by the Metropolitan Water District. The timing and rate of delivery (CFS) for this service shall also be subject to operating restrictions imposed by the Los Angeles County Department of Public Works. The rate for untreated groundwater replenishment service that was pre-purchased by the Upper District during Calendar Year 2008 from the MWD cyclic storage will be $251.90 per acre foot.

Full Service Untreated (Tier 1)

The Upper District's base year Tier 1 allocation is 16,511.6 acre feet. That total includes both treated and untreated Tier 1 deliveries. As a matter of policy, the Upper District will give preference to Tier 1 treated deliveries over untreated deliveries. Full service untreated deliveries will be billed at the Tier 1 rate of $450.00 only if there is sufficient allocation remaining after all full service treated deliveries have been accounted for. In the event that the Upper District base year allocation has been fully subscribed for the calendar year, all full service untreated deliveries will be subject to Tier 2 charges.

Full Service Untreated (Tier 2)

For Calendar Year 2009, the Upper District will have an unlimited allocation (subject to drought restrictions) of Full Service Tier 2 supply. Once the total allocation of Tier 1 supply is utilized, all untreated water sold will be at the Tier 2 rate of $577.00 per acre-foot for the remainder of the calendar year.

Section 4. Cost of Service Model:

The District has prepared a cost of service model for the period 2008 through 2014. The model includes forecasted treated and untreated water demands, anticipated costs, probable water rates, expected cost recovery and a reasonable application of rate stabilization funds. Future actual costs and rates may vary from those presented in the model. However, the model offers a

reasonable budgeting and planning tool for the District and its sub-agencies. The Board will periodically review the model to validate or modify assumptions to provide for the most rational projection of future costs and rates possible. The model presented in Exhibit A is incorporated herein by reference.

Section 5. Each groundwater replenishment customer shall pay a monthly ready-to-serve charge in addition to the water rate for groundwater replenishment service. This monthly ready-to-serve charge will be $42.00 for each cubic foot per second of groundwater replenishment service connection capacity, at an amount not-to-exceed $6,300.00 per month, payable in advance.

Section 6. A minimum charge equivalent to ten percent (10%) or one-tenth (1/10) of the value of one CFS of capacity ($6,800), which equals $680 for calendar year 2009, will be billed to the sub-agencies prorated on a monthly basis irrespective of the amount of water used.

Section 7. All sales, deliveries and availability of water at the rates established herein shall be subject to the ability of the Upper District to sell, deliver and make available such water under operating conditions determined by the General Manager of Upper District and of MWD, and subject to the water service regulations of Upper District and of MWD. All agencies that purchase treated or untreated water must comply with all rules, requirements, and regulations of Upper District Urban Water Management Plan adopted on or about December 2005 and any amendments or supplements thereto.

Section 8. The Board of Directors finds that the water rates and charges established herein will result in a fair and equitable revenue source to partially fund budgeted expenditures, thereby reasonably allocating costs of service to those who benefit therefrom.

Section 9. The Board of Directors recognizes that Southern California is facing water supply challenges arising from both ongoing drought and environmental factors. These factors have created uncertainty regarding the reliability of all sources of water for the foreseeable future. As such, the Board reserves the authority to modify, alter, or suspend any or all sections of this resolution as determined prudent to properly respond to new developments in water supply circumstances.

Section 10. The Secretary of Upper District shall cause a copy of this Resolution to be mailed to all current purchasers of water from Upper District including the users of water replenishment service connections.

PASSED, APPROVED AND ADOPTED this 17th day of February, 2009.

PRESIDENT

ATTEST

SECRETARY

SEAL

RESOLUTION NO. 4-95-333

A RESOLUTION OF THE BOARD OF DIRECTORS OF THE UPPER SAN GABRIEL VALLEY MUNICIPAL WATER DISTRICT REPEALING RESOLUTION NO. 5-94-321 ADOPTING WATER RATES FOR THE 1995/96 FISCAL YEAR AND ADOPTING A WATER RATE FOR SEASONAL STORAGE WATER SERVICE FOR GROUNDWATER REPLENISHMENT FOR THE 1996/97 FISCAL YEAR

WHEREAS, The Metropolitan Water District of Southern California ("MWD" herein) has adopted water rates and charges for its classes and conditions of service for the fiscal year 1995/96 and this District wishes to reflect MWD's new rates and charges in the water rates and charges of this District; and

WHEREAS, MWD has established new charges in their fiscal year 1995/96 rate structure including a Readiness-to-Service Charge, a New Demand Charge and a Connection Maintenance Charge; and

WHEREAS, this District requested by its Resolution No. 2-95-332 that MWD continue its Standby Charge for fiscal year 1995/96 in this District's service area with the intention that the above reference new MWD charges be paid from the funds generated from said Standby Charge for fiscal year 1995/96; and

WHEREAS, during Fiscal Year 1991/92 Upper District entered into an agreement with MWD for the enlargement of the discharge valve on Service Connection USG-3. As part of this agreement, MWD will charge Upper District an additional $2.00 per acre foot for all water delivered through this enlarged discharge valve. It is the intention of Upper District to incorporate this $2.00 per acre foot charge into the rate established for Seasonal Storage Service Untreated Water delivered through Service Connection USG-3; and

WHEREAS, in order to accommodate the requirements of the judgement in Upper San Gabriel Valley Municipal Water District v. City of Alhambra, et al., LASC No. 924128, and the customs and practices of the Watermaster, this District will adopt a seasonal storage service groundwater replenishment rate for fiscal year 1996/97.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF

THE UPPER SAN GABRIEL VALLEY MUNICIPAL WATER DISTRICT as follows:

Section 1. Resolution No. 5-94-321 adopted May 4, 1994, is hereby repealed. The water rates specified in said resolution, however, are hereby ratified, affirmed, and shall remain in full force and effect until July 1, 1995.

Section 2. Effective July 1, 1995, the following rates are established.

Class of Service	Rate per acre-foot
Noninterruptible Water	
Untreated	361.20
Treated	447.30
Emergency Water	
Untreated	1,083.60
Treated	1,341.90
Seasonal Storage Service	
Untreated	242.45
Treated	302.30

The definition and application of the foregoing classes and conditions of service shall be the same as those established, interpreted and amended from time to time by MWD through its Administrative Code and such other rules, regulations, policies ordinances or resolutions that have been or may be adopted by the MWD Board of Directors, which are by this reference are incorporated herein and adopted for this District as though set forth herein in their entirety.

Section 3. Effective July 1, 1996, the rate for untreated seasonal storage service water for groundwater replenishment shall be 254.57 per acre-foot.

Section 4. In addition to the water rate for seasonal storage service water for groundwater replenishment, each groundwater replenishment customer shall pay a monthly ready-to-serve charge of $42.00 for each cubic foot per second of groundwater replenishment service connection capacity, at an amount not to exceed $6,300.00 per month, payable in advance.

Section 5. A minimum charge of $25.00 per month will be made for all open service connections, irrespective of amount of water used.

Section 6. All sales, deliveries and availability of water at the rates established

herein shall be subject to the ability of the District to sell, deliver and make available such water under operating conditions determined by the General Managers of this District and of MWD, and subject to the water service regulations of this District and of MWD.

Section 7. The Board of Directors finds that the water rates and charges established herein will result in a fair and equitable revenue source to partially fund budgeted expenditures, thereby reasonably allocating costs of service to those who benefit therefrom.

Section 8. The Secretary of the District shall cause a copy of this Resolution to be mailed to all current purchasers of water from the District including the users of water replenishment service connections.

Dated this 19th day of April, 1995

PRESIDENT

ATTEST

SECRETARY

SEAL

APPENDIX P

Upper District California Urban Water Conservation Council annual Reports and Coverage Reports (2009-2010)

CUWCC BMP COVERAGE REPORT FOR WHOLESALE AGENCIES

Foundation Best Management Practices for Urban Water Efficiency

Agency: Upper San Gabriel Valley MWD **District Name:** No Data **CUWCC Unit #:** 230

Primary Contact no data no data **Email:** Elena@usgvmwd.org

Base Year: Calendar or FiscalYear Reporting Report Date: 27-May-11

Foundational BMPs

BMP 1.1.3 Wholesale Agency Assistance Programs

Date of 2009 Data Download May 26, 2011

Date of 2010 Data Download May 26, 2011

a) Financial investments and building partnerships Value of resources provided to retailers for: **2009**	**2009 Monetary Amount for Financial Incentives**	**2009 Monetary Amount for Equivalent Resources**
3. Residential	$ 429,031	
4. Commercial, Industrial, Institutional	$ 129,859	
5. Landscape	$ 1,709	
1.1 A. 3) b) Technical Support	$ 12,651	
Total Value of Resources	$ 573,250	$ -
	On Track	**On Track**

a) Financial investments and building partnerships Value of resources provided to retailers for: **2010**	**2010 Monetary Amount for Financial Incentives**	**2010 Monetary Amount for Equivalent Resources**
3. Residential	$ 268,804	
4. Commercial, Industrial, Institutional	$ 270,986	
5. Landscape	$ 75,282	
1.1 A. 3) b) Technical Support	$ 12,255	
no data	no data	
no data	no data	
Total Value of Resources	$ 627,328	$ -
	On Track	**On Track**

"On Track" if Retailer accepted offer and Wholesaler provided resources. "Not on Track" if Retailer accepted offer and Wholesaler did not provde resources.

Agency: Upper San Gabriel Valley MWD **District Name:** No Data **CUWCC Unit #:** 230

	2009 Technical Support Description	2010 Technical Support Description	
b) Technical Support	Hosted wokshops on residential water surveys. Provided advice, documents and water savings data for retailers to use for their own program efforts. For detailed description of programs and assistance provided, please see document e-mailed to natalie	Hosted wokshops on system water loss, AB 1881 and residential water surveys. Provided advice, documents and water savings data for retailers to use for their own program efforts. For detailed description of programs and assistance provided, please see do	" On Track" if Retailer accepted and Wholesaler provided and described Technical Support
	On Track	On Track	

	2009		2010	
c) Retail Agency	Programs Managed for Retailers	c) Retail Agency	Programs Managed for Retailers	
				" On Track" if Retailer accepted and Wholesaler provided and lists programs managed for retailers
	On Track		On Track	

	2009		2010	
d) Water Shortage Allocation				
Has Water shortage plan or policy been adopted?	February 12, 2008	Adoption Date	February 12, 2008	"OnTrack" if plan /policy adopted and document provided. "Not on Track" if no water shortage plan or policy adopted or document not provided.
	USGVMWD_230_2009_Water_Shortage_Allocation_Plan.pdf	File Name	USGVMWD_230_2009_Water_Shortage_Allocation_Plan.pdf	
	On Track		On Track	
e) Non signatory Reporting of BMP implementation by non-signatory agencies	no data		no data	Report if possible
	On Track		On Track	
f) Encourage CUWCC Membership		List Efforts to recruit retailers		
List Efforts to recruit retailers	Yes. Encouraged retailers to become members of the CUWCC.		Yes. Encouraged retailers to become members of the CUWCC during Conservation Actiona Roundtable meetings hosted by the Upper District.	"On Track" if efforts listed or dues paid.
	On Track		On Track	

Agency: Upper San Gabriel Valley MWD **District Name:** No Data **CUWCC Unit #:** 230

BMP 1.2 Water Loss Control

Date of 2009 Data Submittal: #N/A
Date of 2010 Data Submittal: May 26, 2011

	2009	
Complete a prescreening Audit	No	On Track if Yes
Metered Sales AF		Metered sales to retail agencies
Verifiable Other Uses AF		
Total Supply AF		Into wholesale system
(Metered Sales + System uses)/ Total Supply >0.89	#DIV/0!	On Track if =>.89, Not on Track if No
If ratio is less than 0.9, complete a full scale Audit in 2009?		On Track if Yes
Verify Data with Records on File?	Off	On Track if Yes
Operate a system Leak Detection Program?	Off	On Track if Yes

On Track

Comments **The Upper District has NO water system of its own, therefore there is NO system to audit.**

For wholesalers AWWA methodology applies to supplies to wholesalers, sales to retail agencies or sub wholesalers, and pipelines operated by wholesalers. End use retail customers are not considered in this

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

Provided 7 types of Water Loss Control Info

Leaks Repaire	Value Real Losses	Value Apparent Losses	Miles Surveyed	Press Reduction	Cost Interventions	Water Lost from Leaks AF
no data	$ -	$ -	0	No	$ -	no data

info only until 2012

The Upper District has NO water system of its own, therefore there is NO system to audit. **On Track**

Agency: Upper San Gabriel Valley MWD **District Name:** No Data **CUWCC Unit #:** 230

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

Date of 2009 Data Submittal: May 26, 2011
Date of 2010 Data Submittal: May 26, 2011

	2009	2010	
Exemption requested?	No	No	
At least as Effective As Requested?	No	No	
Does Agency have Unmetered Deliveries to Retail Agencies or Other Wholesalers?	No	No	
Metered Accounts billed by volume of use	Yes	Yes	Volumetric billing required for all connections on same schedule as metering
Completed a written plan, policy or program to test, repair and replace meters	No	No	On Track if Yes, Not on Track if No

The Upper District has NO water system of its own, therefore there is NO system to audit. **On Track**

CUWCC BMP COVERAGE REPORT FOR WHOLESALE AGENCIES

Foundation Best Management Practices for Urban Water Efficiency

Agency: **Upper San Gabriel Valley MWD**
WHOLESALE Water Supplier

District Name: **Upper San Gabriel Valley MWD** **CUWCC Unit #:** **230**

Coverage Report Date: May 19, 2011

Primary Contact Elena Layugan **Email:** Elena@usgvmwd.org

BMP 2. EDUCATION PROGRAMS

date 2009 datafile downloaded: May 26, 2011
date 2010 datafile downloaded: May 26, 2011

BMP 2.1 Public Outreach Actions Implemented and Reported to CUWCC

	2009	2010
1) Contacts with the public (minimum = 4 times per year)	5	8
2) Water supplier contacts with media (minimum = 4 times per year, i.e., at least quarterly).	6	6
3) An actively maintained website that is updated regularly (minimum = 4 times per year, i.e., at least quarterly).	Yes	Yes
4) Description of materials used to meet minimum requirement.	General water conservation information Newsletter articles on conservation Newsletter articles on conservation Select a public contact News releases Select a type of media contact Select a type of media contact Select a type of media contact	General water conservation information Newsletter articles on conservation Select a public contact Select a public contact News releases Select a type of media contact Select a type of media contact Select a type of media contact
5) Annual budget for public outreach program.	$ 168,564	$ 136,606
6) Description of all other outreach programs	Cost for all agencies listed above	0
	On Track for 6 Actions	**On Track for 6 Actions**

All 6 action types implemented and reported to CUWCC to be 'On Track')

Agency: **Upper San Gabriel Valley MWD** **District Name:** **Upper San Gabriel Valley MWD** **CUWCC Unit #:** **230**

WHOLESALE Water Supplier

Coverage Report Date: May 19, 2011

date 2009 datafile downloaded: May 26, 2011

date 2010 datafile downloaded: May 26, 2011

2.2 School Education Programs Implemented and Reported to CUWCC

	2009	2010	
Does this wholesale agency implement School Education Programs for Sub Wholesalers or Retail unility's benefit?	Yes	Yes	
Names of Sub Wholesale and Retail Agencies benefiting from Program?	All or parts of: Adams Ranch Mutual Water Company, Amarillo Mutual Water Company, City of Arcadia, City of Azusa, California American Water Company (Duarte System),	All or parts of: Adams Ranch Mutual Water Company, Amarillo Mutual Water Company, City of Arcadia, City of Azusa, California American Water Company (Duarte System),	
1) Curriculum materials developed and/or provided by wholesale agency	Brochures, activity booklets and educational posters that cover the hydrological cycle, water conservation, wastewater treatment and keeping our water clean.	Brochures, activity booklets and educational posters that cover the hydrological cycle, water conservation, wastewater treatment and keeping our water clean.	All 5 actions types implemented and reported to CUWCC to be 'On Track'
2) Materials meet state education framework requirements and are grade-level appropriate?	Yes	Yes	
3) Materials Distributed to K-6?	Yes	Yes	
Describe K-6 Materials	Brochures, activity booklets and educational posters that cover the hydrological cycle, water conservation, wastewater treatment and keeping our water clean.	Brochures, activity booklets and educational posters that cover the hydrological cycle, water conservation, wastewater treatment and keeping our water clean.	Describe materials to meet minimum requirements
Materials distributed to 7-12 students?	No	No	Info Only
4) Annual budget for school education program.	$ 235,000	$ 202,000	
5) Description of all other water supplier education programs	The Upper District offered the following school and youth education programs and materials: ~ Water Awareness Art Contests: In an effort	The Upper District offered the following school and youth education programs and materials: ~ Water Awareness Art Contests: In an effort	
	On Track	**On Track**	

Upper San Gabriel Valley Municipal Water District
BMP 1.1 Operation Practices for Wholesalers
BMP Report Year 2011 (FY 10-11)

PROGRAMMATIC: RESIDENTIAL ~

Residential High Efficiency Clothes Washers (HECW) Rebate Program ~
The Upper District's Residential High Efficiency Clothes Washer (HECW) Rebate Program provides rebates to residential customers within the District boundaries, for the purchase and installation of a qualifying HECW. This rebate provides a much-needed incentive to encourage consumers to select HECWs over the lower-costing, less-efficient models of washers. During the 2010 BMP report year, 1,377 HECW rebates were issued, which will result in an estimated annual water savings of approximately 38.02 acre feet (12,393,000 gallons) and a lifetime water savings of 570.23 acre feet (185,895,000 gallons).

High Efficiency Toilets (HETS) ~
The HET giveaway program utilizes local schools and/or community groups to assist in implementing the program. The proposed HET Retrofit Program would enable eligible residents, living within the Upper District boundaries, to receive up to two (2) HETs per household free of charge. Quantities are given away on a first come, first serve basis. High Efficiency Toilets are distributed for free to qualifying residents. 1,994 High Efficiency Toilets (HETs) were distributed during the 2010 BMP report year which will result in an estimated annual water savings of approximately 84.84 acre feet (27,656,780 gallons) and a lifetime water savings of 1,696.73 acre feet (553,135,600 gallons).

Residential Rebate Program ~
The Residential Water Efficiency Rebate Program offers rebates to residents retrofitting several types of high water-use fixtures/equipment with water efficient devices. Rebate items include: High-Efficiency Toilets (HETs), Weather-Based Irrigation Controllers (WBICs), Rotating Sprinkler Nozzles and Synthetic Turf. Rebates were provided for over 5,000 devices during the 2010 BMP report year that are estimated to result in an annual water savings of 15.33 acre feet (4,997,580 gallons) and a lifetime water savings of 298.97 acre feet (97,464,220 gallons).

Other Residential Devices Distributed ~
1,500 low flow showerheads were distributed, providing an estimated annual water savings of 5.10 acre feet (1,662,600 gallons) and a lifetime water savings of 22.50 acre feet (8,313,000 gallons).

PROGRAMMATIC: COMMERCIAL, INDUSTRIAL & INSTITUTIONAL ~

CII Water Conservation Rebate Program ~ The CII Water Conservation Rebate Program offers commercial, industrial, and institutional facilities, within District boundaries, rebates for retrofitting numerous types of high water-use fixtures/equipment with efficient water-use fixtures/equipment. Rebates for 590 fixtures conducted during the 2010 BMP report year are estimated to result in an annual water savings of 43.98 acre feet (14,337,480 gallons) and a lifetime water savings of 724.72 acre feet (236,258,720 gallons).

PROGRAMMATIC: LANDSCAPE ~

Synthetic Turf Retrofit Program ~ The Synthetic Turf Retrofit Program involves the removal of existing, irrigated natural turf and replacing the area with synthetic turf. The retrofitting not only reduces water consumption, but also results in the discontinuation of fertilizer and pesticides used for the area, thereby reducing the amount of nitrates and chemicals saturating the ground. 1 field was retrofitted that is estimated to result in an annual water savings of 8.83 acre feet (2,879,777 gallons) and a lifetime water savings of 88.34 acre feet (28,797,770 gallons).

TECHNICAL ASSISTANCE ~

Residential Water Survey Training Workshop ~
Two-day workshop covering the basics of conducting residential water surveys. The workshop is geared toward staff and/or representatives of water purveyors and includes a hands-on indoor and outdoor survey conducted at a residential site. A workshop took place on Oct. 28-29, 2009 which had a total of 21 participants.

COMMUNITY OUTREACH ~

Conservation Action Roundtable (CAR) ~

Meetings are focused toward staff of the Upper District's purveyors. Meetings include an overview of the Upper District's conservation efforts as well as relevant conservation topics/issues. The meetings also encourage attendees to share what conservation efforts are occurring at their own agencies and provide input regarding ways the Upper District can support its purveyors' efforts. Two meetings were held during the FY 09-10.

Workshop on Assistance for Implementation of AB 1881 ~

A meeting was held for City Planning staff and water purveyors regarding AB 1881 and the Model Water Efficient Landscape Ordinance (MWELO). Discussion included applicability, compliance, enforcement and "at least as effective as" issues. The workshop then focused on potential ways that the Upper District might be able to assist with implementing the MWELO. The workshop was held on January 20, 2010.

System Water Loss Workshop ~

Hosted a CUWCC workshop on system water loss management to provide training on auditing water supplies and implementing controls to keep system water losses to reasonable minimal levels. The workshop took place August 27, 2009.

Conservation Forum: Reclaimed Water/Plant/Soil Compatibility ~

The Upper District partnered with the County of Los Angeles Department of Parks and Recreation to host a forum regarding reclaimed water, irrigation, sustainable native plants and design considerations. The forum was held on September 30, 2009.

PARTNERSHIPS ~

WaterSense ~

The mission of the partnership is to promote the value of water and help Americans make smart decisions regarding water use and water-using products. To increase the adoption of water-efficient products and services by consumers and organizations. The partnership began in FY 09-10. WaterSense approved HETs are utilized for the HET distribution events. The WaterSense website is linked with the Upper District's website and the Upper District produces an ad campaign for "Fix A Leak" Week, which takes place in mid-March.

CLCA ~

The Upper District partners with the LA/SGV Chapter of the California Landscape Contractors Association to develop water efficient landscape ads.

LA County Dept. of Public Works ~

Partnered in hosting a free household hazardous waste collection event in May 2010. Also in promoting the LA County Dept. of Public Works www.smartgardening.com website.

USDA Forest Service ~

The Upper District has had a long-standing partnership with the US Forest Service to conduct watershed restoration programs as well as installation of permanent fixture toilets to reduce non-point source pollution in the local watershed.

CUWCC ~

The Upper District hosted the March 16, 2011 plenary session.

Retailers ~

San Gabriel Valley Water Company, Suburban Water Systems and Golden State Water Company have partnered with the District to provide supplemental co-funding for their customers that participate in some of the Upper District's conservation programs.

Metropolitan ~

As a member agency of the Metropolitan Water District of Southern California's (Metropolitan), Upper District is able to combine Metropolitan's programs and services with its own conservation programs to provide effective Wholesale Agency Assistance for local water retailers. Metropolitan offers staff, resources and workshops to assist with technical, programmatic, strategic or other pertinent issues and developments associated with water conservation activities and supplement Upper District's conservation efforts for the region as well as to its various retailers.

Approximate Savings for Programs with Definable Savings
2010 BMP Report Year (FY 09-10)

FY 09-10	Annual Water Savings (AF)*	Annual Water Savings (Gallons)	Lifetime Water Savings (AF)	Lifetime Water Savings (Gallons)
HECWs (1,377 Rebates)	38.02	12,393,000	570.23	185,895,000
HETs/ULFTs (Residential) (1,994 HETs)	84.84	27,656,780	1,696.73	553,135,600
Residential Rebate Program (215 Rebates)	15.33	4,997,580	298.97	97,464,220
CII Water Efficient Rebate Program (590 Fixtures)	43.98	14,337,480	724.72	236,258,720
Synthetic Turf Retrofit Program (1 field)	8.83	2,879,777	88.34	28,797,770
Showerheads	5.10	1,662,600	22.50	8,313,000
Total	**196.10**	**63,927,217**	**3,404.49**	**1,109,864,310**

BMP 2.1
Public Outreach
FY 09-10 Report Year 2010

Describe the program and how it's organized:

The Upper District has a Community and Government Affairs Coordinator on staff that maintains the Upper District's active public information program in an effort to promote and educate the public about water conservation and relevant water issues.

The Upper District offers an array of conservation brochures, activity booklets, public outreach displays, oral presentations and workshops. Numerous press releases, advertisements and presentations are also used to highlight water efficient projects and to raise awareness about water conservation efforts and local water issues. The Upper District also has a website that provides information about the agency, projects, conservation, local water issues and educational materials.

The Upper District's annual WaterFest drew approximately 6,000 attendees of all ages for this BMP report year. The Upper District utilizes the festival to reach out to the community and raise public awareness about water conservation, water quality, and other relevant water issues.

Upper District informational booths were staffed at 11 other events during the report year.

The focus and/or topic of conservation was part of 2 presentations conducted by the Upper District during the report year that involved approximately 180 audience participants.

During January and February, the Upper District hosted a series of water efficient landscaping and irrigation classes taught in English. In February through March another set of water efficient landscaping and irrigation classes were taught in Spanish. A residential smart gardening class was also held at the end of June 2009. The classes were offered free to the public and provided a hands-on learning experience for 178 participants interested in improving the water efficiency of their landscaping and gardens.

The District co-hosted, with the Forest Service, 3 Watershed Restoration events that educate participating volunteers about the link between their forest and local water supply. Approximately 715 volunteers participated in the Watershed Restoration events that took place during the report year.

The Upper District is a member agency of the Metropolitan Water District of Southern California (Metropolitan) and therefore, the public within the Upper District boundaries also receives, and benefits from, the extensive public information materials, outreach, advertisements, programs and efforts regarding conservation that Metropolitan provides.

BMP 2.2
School Education Programs
FY 09-10 Report Year 2010

The Upper District offered the following school and youth education programs and materials:

~ Water Awareness Art Contests: In an effort to raise awareness among children regarding water issues, the Upper District sponsors an annual poster art contest for 4 categories: K-2nd, 3rd-5th, 6th-8th and 9th-12th grade. The five winning posters for each category receive monetary awards. The top five winners of the K-2nd, 3rd-5th, 6th-8th categories are printed up as sheets of stickers and the top two 9th-12th grade designs are printed onto t-shirts.
The overall top five (5) entries for grades K-5th, 6th-8th and 9th-12th are submitted to Metropolitan Water District of Southern California's (Metropolitan) art contest. A total of 188 entries were received during the 2010 BMP report year for the art contest.

~ Solar Cup Competition: Upper District sponsored four (4) high school teams in Metropolitan's Solar Cup Competition, which provides high school students the opportunity to build solar powered boats that compete in race and endurance categories. The program offers student participants an opportunity to learn about natural resources, the development/use of alternative fuel sources and protection of water quality.

~ Water Education Grant Program: Upper District sponsors a water education grant program that offers teachers and/or schools within the Upper District boundaries grants of up to $1,000 to fund water-related educational projects. Six (6) grants, totaling $6,000 were funded for the BMP 2010 report year. The projects are estimated to involve over 660 students from grades K-6th.

~ Water Resource Library: The Upper District also maintains an onsite library offering a variety of current water education materials for all ages. Resources available for loan include activity books, textbooks, videotapes and computer software. These educational resources are different than the materials offered through Metropolitan's educational program, giving local schools access to a wider range of water education resources.

~ Water Educational Posters: Posters are in English, Spanish and Chinese and cover topics such as: hydrological cycle, recycled water, native plants, watershed, water pollution and water saving tips.

The Upper District is also a member agency of Metropolitan which has an extensive youth education program that offers age and grade-appropriate educational materials that meet the state education framework requirements. These educational materials are available for grade levels K-12th at schools within Metropolitan's territory, including ALL schools within the Upper District's boundaries. Metropolitan provides an active school education program that promotes water conservation and water conservation related benefits. Its educational program includes working with school districts, and both public and private schools within its boundaries to: provide instructional assistance, educational materials, and classroom presentations that identify urban, agricultural, and environmental issues and conditions in the local watershed. Since Upper District is a member agency of Metropolitan, all schools within the Upper District's boundaries are covered under Metropolitan's area and are offered these educational programs and materials. Metropolitan documents and reports on all of these educational efforts in their BMP reports to the CUWCC.

APPENDIX Q

Upper District California Urban Water Conservation Council annual Reports and Coverage Reports (2011)

CUWCC BMP Wholesale Coverage Report 2011

Foundational Best Managemant Practices for Urban Water Efficiency

BMP 1.1 Wholesale Agency Assistance Programs

ON TRACK

230 **Upper San Gabriel Valley MWD**

Name: Elena Layugan Email: Elen@usgvmwd.org

a) Financial Investments and Building Partnerships

BMP Section	Monetary Amount for Financial Incentives	Monetary Amount for Equivalent Resources	
BMP 3 Residential	268096.94		
BMP 4 CII	61216.75		
BMP 5 Landscape	88514		
BMP 1.1 Operation Practices	20392.35		
BMP 2.1 Public Outreach	174611.61		
BMP 2.2 School Education Program	164209.57		

b) Technical Support

c) Retail Agency

d) Water Shortage Allocation

Adoption Date: 2/12/2008

File Name: Hard copy uploaded as filename: USGVMWD_230_Water Shortage Allocation Plan.pdf

e) Non signatory Reporting of BMP implementation by non-signatory Agencies

N/A.

f) Encourage CUWCC Membership List Efforts to Recuit Retailers

Upper District hosted the 3-16-11 plenary session and encouraged retailers attendance. August 2011, in conjunction with CUWCC staff, a full presentation was held at Upper District's Conservation Action Roundtable to explain the purpose of CUWCC.

At Least As effective As Yes

Programmatic Efforts Summarized in uploaded document filename: USGVMWD_230_2011 OperationsPractices BMP 1-1 Comments.doc

Exemption No

Comments:

CUWCC BMP Coverage Report 2011

Foundational Best Management Practices For Urban Water Efficiency

BMP 1.2 Water Loss Control **ON TRACK**

230 Upper San Gabriel Valley MWD

Completed Standard Water Audit Using AWWA Software?	No
AWWA File provided to CUWCC?	No
AWWA Water Audit Validity Score?	
Complete Training in AWWA Audit Method	No
Complete Training in Component Analysis Process?	No
Component Analysis?	No
Repaired all leaks and breaks to the extent cost effective?	No
Locate and Repar unreported leaks to the extent cost effective?	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.	No

Provided 7 Types of Water Loss Control Info

Leaks Repairs	Value Real Losses	Value Apparent Losses	Miles Surveyed	Press Reduction	Cost Of Interventions	Water Saved (AF)

At Least As effective As Yes

The Upper District has NO water system infrastructure of its own, therefore there is NO system to audit. Water is delivered via infrastructure owned by MWD or Sanitation Districts.

Exemption No

Comments:

The Upper District has NO water system of its own, therefore there is NO system to audit.

CUWCC BMP Coverage Report 2011

Foundational Best Management Practices For Urban Water Efficiency

BMP 1.3 Metering With Commodity

ON TRACK

230 Upper San Gabriel Valley MWD

Numbered Unmetered Accounts	No
Metered Accounts billed by volume of use	No
Number of CII Accounts with Mixed Use Meters	0
Conducted a feasibility study to assess merits of a program to provide incentives to switch mixed-use accounts to dedicated landscape meters?	No
Feasibility Study provided to CUWCC?	No

Date: 1/1/0001

Uploaded file name:

Completed a written plan, policy or program to test, repair and replace meters	No

At Least As effective As Yes

The Upper District does not own or operate any meters nor does it own or operate any treatment facilities. Imported water is metered by the entity providing the water and exported water is metered by the end users who purchase the water.

Exemption No

Comments:

The Upper District does not own or operate any meters nor does it own or operate any treatment facilities. Imported water is metered by the entity providing the water and exported water is metered by the end users who purchase the water.

CUWCC BMP Coverage Report 2011

Foundational Best Management Practices For Urban Water Efficiency

BMP 2.1 Public Outreach

ON TRACK

230 **Upper San Gabriel Valley MWD** **Wholesale**

Does your agency perform Public Outreach programs? Yes

The list of retail agencies your agency assists with public outreach

California American Water - Los Angeles Service Area,City of Covina,Golden State Water Company - San Gabriel Valley,San Gabriel Valley Water Company - LA,Suburban Water Systems
The list of Upper District's Agency contacts that Upper District assists is uploaded in the ALAEA upload area.

Agency Name	ID number
California American Water - Los Angeles Service Area	5021
City of Covina	54
City of West Covina	96
Golden State Water Company - San Gabriel Valley	5045
San Gabriel Valley Water Company - LA	760
Suburban Water Systems	7019

The name of agency, contact name and email address if not CUWCC Group 1 members

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

Public Outreach Program List	**Number**
Website	13
Flyers and/or brochures (total copies), bill stuffers, messages printed on bill, information packets	7
General water conservation information	6
Total	**26**

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

Number Media Contacts	**Number**
News releases	7
Articles or stories resulting from outreach	3
Total	**10**

Did at least one website update take place during each quater of the reporting year? Yes

Public Information Program Annual Budget

Annual Budget Category	**Annual Budget Amount**
Public Outreach	235500
Total Amount:	**235500**

CUWCC BMP Coverage Report 2011

Foundational Best Management Practices For Urban Water Efficiency

BMP 2.1 Public Outreach

ON TRACK

Public Outreah Additional Programs
Information Tables/Booths
WaterFest
Watershed Restoration Events
Presentations

Description of all other Public Outreach programs

US Forest Service - Watershed Restoration Efforts

Comments:

At Least As effective As Yes

The list of Upper District's Agency contacts that Upper District assists is uploaded in the ALAEA upload area.

Exemption No 0

CUWCC BMP Coverage Report 2011

Foundational Best Management Practices For Urban Water Efficiency

BMP 2.2 School Education Programs

ON TRACK

230 Upper San Gabriel Valley MWD **Wholesale**

Does your agency implement School Education programs? Yes

The list of retail agencies your agency assists with public outreach

California American Water - Los Angeles Service Area,City of Covina,City of West Covina,Golden State Water Company - San Gabriel Valley,San Gabriel Valley Water Company - LA,Suburban Water Systems

The list of Upper District's Agency contacts that Upper District assists is uploaded in the ALAEA upload area.

Agencies Name	ID number
California American Water - Los Angeles Service Area	5021
City of Covina	54
City of West Covina	96
Golden State Water Company - San Gabriel Valley	5045
San Gabriel Valley Water Company - LA	760
Suburban Water Systems	7019

Materials meet state education framework requirements? Yes

Brochures, activity booklets and educational posters that cover the hydrological cycle, water conservation, wastewater treatment and keeping our water clean.

Materials distributed to K-6? Yes

Activity booklets and educational posters that cover the hydrological cycle, water conservation, wastewater treatment and keeping our water clean.

Materials distributed to 7-12 students? Yes (Info Only)

Activity booklets and educational posters that cover the hydrological cycle, water conservation, wastewater treatment and keeping our water clean.

Annual budget for school education program: 202000.00

Description of all other water supplier education programs

Water Awareness Art Contests, sponsorship of high school teams for Solar Cup competition, Water Education Grant Program, and educational posters offered.

Comments:

At Least As effective As No

Exemption No 0

Upper San Gabriel Valley Municipal Water District
BMP 1.1 Operation Practices for Wholesalers
BMP Report Year 2011 (FY 10-11)

PROGRAMMATIC: RESIDENTIAL ~

High Efficiency Toilets (HETS) ~
The HET giveaway program utilizes local schools and/or community groups to assist in implementing the program. The HET Retrofit Program enables eligible residents, living within the Upper District boundaries, to receive up to two (2) HETs per household free of charge. High Efficiency Toilets are distributed for free to qualifying residents. 1,003 High Efficiency Toilets (HETs) were distributed during the 2011 BMP report year which will result in an estimated annual water savings of approximately 42.73 acre feet and a lifetime water savings of 493.48 acre feet.

Residential Rebate Program ~
The Residential Water Efficiency Rebate Program offers rebates to residents retrofitting several types of high water-use fixtures/equipment with water efficient devices. Rebate items include: High-Efficiency Toilets (HETs), Weather-Based Irrigation Controllers (WBICs), Rotating Sprinkler Nozzles and Synthetic Turf. Rebates were provided for 35,356 devices during the 2011 BMP report year that are estimated to result in an annual water savings of 96.26 acre feet with a lifetime water savings of 1,324.91 acre feet. $207,989.73 was provided in co-funding for residential rebates.

PROGRAMMATIC: COMMERCIAL, INDUSTRIAL & INSTITUTIONAL ~

CII Water Conservation Rebate Program ~ The CII Water Conservation Rebate Program offers commercial, industrial, and institutional facilities, within District boundaries, rebates for retrofitting numerous types of high water-use fixtures/equipment with efficient water-use fixtures/equipment. Rebates for 1,158 fixtures conducted during the 2011 BMP report year are estimated to result in an annual water savings of 40.52 acre feet and a lifetime water savings of 322.38 acre feet. $39,756 was provided in co-funding for CII rebates.

Commercial, Industrial and Institutional (CII) Water Use Efficiency (WUE) Survey Program ~ The CII WUE Survey Program includes a CII conservation expert touring participating CII facilities, analyzing water use efficiency at each site and developing recommendations for improvements. All recommendations provided to CII site owners will be tailored toward the BMPs and the District's CII rebate program. During BMP report year 2011 WUE surveys were conducted for 14 CII sites within Upper District's area.

PROGRAMMATIC: LANDSCAPE ~

Turf Removal Program ~ The Upper District's Turf Removal Program provides grant funding in the amount of $1 per sq. for large landscape CII sites to remove existing, irrigated natural turf and replace it with water efficient landscape, synthetic turf, and/or permeable hardscape. A total of $88,514 was provided in grant funding for the removal of 88,514 sq. feet of live turf during the 2011 BMP report year which, is estimated to result in an annual water savings of 9.91 acre feet and a lifetime water savings of 99.10 acre feet.

TECHNICAL ASSISTANCE ~

Conservation Action Roundtable (CAR) ~
Meetings are focused toward staff of the Upper District's purveyors. Meetings include an overview of the Upper District's conservation efforts as well as relevant conservation togpics/issues. The meetings also encourage attendees to share what conservation efforts are occurring at their own agencies and provide input regarding ways the Upper District can support its purveyors' efforts. One CAR was held during the BMP 2011 year.

PARTNERSHIPS ~

WaterSense ~
Upper District continued to be a WaterSense partner in BMP report year 2011. The mission of the partnership is to promote the value of water and help Americans make smart decisions regarding water use and water-using products. To increase the adoption of water-efficient products and services by consumers and organizations. WaterSense approved HETs are utilized for the HET distribution events. The WaterSense website is linked with the Upper District's website and the Upper District produced an ad campaign for "Fix A Leak" Week, which takes place in mid-March.

CLCA ~
The Upper District continued its partnership with the LA/SGV Chapter of the California Landscape Contractors Association to develop water efficient landscape ads.

USDA Forest Service ~
The Upper District continued its long-standing partnership with the US Forest Service to conduct watershed restoration programs to increase reforestation efforts, improve native vegetation, root, and soil health as well reduce non-point source pollution in the local watershed. $8,000 in funding was provided to the USFS as part of the Upper District's Watershed Restoration Program partnership.

CUWCC ~
The Upper District continued its long-standing membership in the CUWCC. Upper District hosted the March 16, 2011 CUWCC plenary session. In August 2011, in conjunction with CUWCC staff, a full presentation was held at Upper District's Conservation Action Roundtable (CAR) to explain the purpose of CUWCC, membership benefits, and urge Upper District purveyors to join the CUWCC.

Retailers ~
Suburban Water Systems, San Gabriel Valley Water Company, and Golden State Water Company have partnered with the District to provide supplemental co-funding for their customers that participated in some of the Upper District's conservation programs.

Metropolitan ~
As a member agency of the Metropolitan Water District of Southern California's (Metropolitan), Upper District is able to combine Metropolitan's programs and services with its own conservation programs to provide effective Wholesale Agency Assistance for local water retailers. Metropolitan offers staff, resources and workshops to assist with technical, programmatic, strategic or other pertinent issues and developments associated with water conservation activities and supplement Upper District's conservation efforts for the region as well as to its various retailers.

BMP 2.1
Public Outreach FY 10-11
Report Year 2011

Describe the program and how it's organized:

The Upper District has a Community and Government Affairs Coordinator on staff that maintains the Upper District's active public information program in an effort to promote and educate the public about water conservation and relevant water issues.

The Upper District offers an array of conservation brochures, activity booklets, public outreach displays, oral presentations and workshops. Numerous press releases, advertisements and presentations are also used to highlight water efficient projects and to raise awareness about water conservation efforts and local water issues. The Upper District also has a website that provides information about the agency, projects, conservation, local water issues and educational materials.

The Upper District's annual WaterFest drew approximately 7,000 attendees of all ages for this BMP report year. The Upper District utilizes the festival to reach out to the community and raise public awareness about water conservation, water quality, and other relevant water issues.

Upper District informational booths were staffed at 8 other events during the report year.

The focus and/or topic of conservation was part of 14 presentations conducted by the Upper District during the report year that involved approximately 527 audience participants.

During the month of October the Upper District hosted a 4-part series of free residential water efficient landscaping and irrigation classes.

The District co-hosted, with the Forest Service, 3 Watershed Restoration events that educate participating volunteers about the link between their forest and local water supply. Approximately 503 volunteers participated in the Watershed Restoration events that took place during the report year.

The Upper District is a member agency of the Metropolitan Water District of Southern California (Metropolitan) and therefore, the public within the Upper District boundaries also receives, and benefits from, the extensive public information materials, outreach, advertisements, programs and efforts regarding conservation that Metropolitan provides.

BMP 2.2
School Education Programs
FY 10-11 Report Year 2011

The Upper District offered the following school and youth education programs and materials:

~ Water Awareness Art Contests: In an effort to raise awareness among children regarding water issues, the Upper District sponsors an annual poster art contest for 4 categories: K-2nd, 3rd-5th, 6th-8th and 9th-12th grade. The five winning posters for each category receive monetary awards that total $1,935. The top five winners of the K-2nd, 3rd-5th, 6th-8th categories are printed up as sheets of stickers and the top two 9th-12th grade designs are printed onto t-shirts.
The overall top five (5) entries for grades K-5th, 6th-8th and 9th-12th are submitted to Metropolitan Water District of Southern California's (Metropolitan) art contest. A total of 97 entries were received during the 2011 BMP report year for the art contest.

~ Solar Cup Competition: Upper District sponsored four (4) high school teams in Metropolitan's Solar Cup Competition. A total of $10,000 was provided to Upper District's sponsored teams. The event provides high school students the opportunity to build solar powered boats that compete in race and endurance categories. The program offers student participants an opportunity to learn about natural resources, the development/use of alternative fuel sources and protection of water quality.

~ Water Education Grant Program: Upper District sponsors a water education grant program that offers teachers and/or schools within the Upper District boundaries grants of up to $1,000 to fund water-related educational projects. Five (5) grants, totaling $4,936 were funded for the BMP 2011 report year. The projects were estimated to involve over 357 students from grades K-6th.

~ Water Resource Library: The Upper District also maintains an onsite library offering a variety of current water education materials for all ages. Resources available for loan include activity books, textbooks, videotapes and computer software. These educational resources are different than the materials offered through Metropolitan's educational program, giving local schools access to a wider range of water education resources.

~ Water Educational Posters: Posters are in English, Spanish and Chinese and cover topics such as: hydrological cycle, recycled water, native plants, watershed, water pollution and water saving tips.

The Upper District is also a member agency of Metropolitan which has an extensive youth education program that offers age and grade-appropriate educational materials that meet the state education framework requirements. These educational materials are available for grade levels K-12th at schools within Metropolitan's territory, including ALL schools within the Upper District's boundaries. Metropolitan provides an active school education program that promotes water conservation and water conservation related benefits. Its educational program includes working with school districts, and both public and private schools within its boundaries to: provide instructional assistance, educational materials, and classroom presentations that identify urban, agricultural, and environmental issues and conditions in the local watershed. Since Upper District is a member agency of Metropolitan, all schools within the Upper District's boundaries are covered under Metropolitan's area and are offered these educational programs and materials. Metropolitan documents and reports on all of these educational efforts in their BMP reports to the CUWCC.

APPENDIX R

Upper District California Urban Water Conservation Council annual Reports and Coverage Reports (2012)

CUWCC BMP Wholesale Coverage Report 2012

Foundational Best Managemant Practices for Urban Water Efficiency

BMP 1.1 Wholesale Agency Assistance Programs

ON TRACK

230 **Upper San Gabriel Valley MWD**

Name: Elena Layugan Email: Elena@usgvmwd.org

a) Financial Investments and Building Partnerships

BMP Section	Monetary Amount for Financial Incentives	Monetary Amount for Equivalent Resources	
BMP 1.1 Operation Practices	47028.16		
BMP 3 Residential	526772.58		
BMP 4 CII	119808.45		
BMP 5 Landscape	134730		
BMP 2.1 Public Outreach	181639		
BMP 2.2 School Education Program	131449.81		

b) Technical Support

c) Retail Agency

d) Water Shortage Allocation

Adoption Date: 2/12/2008

File Name: Hard copy uploaded as filename: USGVMWD_230_Water Shortage Allocation Plan.pdf

e) Non signatory Reporting of BMP implementation by non-signatory Agencies

N/a

f) Encourage CUWCC Membership List Efforts to Recuit Retailers

Email sent to Upper District's purveyors explaining the purpose of CUWCC, membership benefits, and urging Upper District purveyors to join the CUWCC.

At Least As effective As Yes

Programmatic Efforts Summarized in uploaded document filename: USGVMWD_230_2012 OperationsPractices BMP 1-1 Comments.doc

Exemption No

Comments:

CUWCC BMP Coverage Report 2012

Foundational Best Management Practices For Urban Water Efficiency

BMP 1.2 Water Loss Control **ON TRACK**

230 Upper San Gabriel Valley MWD

Completed Standard Water Audit Using AWWA Software?	No
AWWA File provided to CUWCC?	No
AWWA Water Audit Validity Score?	
Complete Training in AWWA Audit Method	No
Complete Training in Component Analysis Process?	No
Component Analysis?	No
Repaired all leaks and breaks to the extent cost effective?	No
Locate and Repar unreported leaks to the extent cost effective?	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.	No

Provided 7 Types of Water Loss Control Info

Leaks Repairs	Value Real Losses	Value Apparent Losses	Miles Surveyed	Press Reduction	Cost Of Interventions	Water Saved (AF)

At Least As effective As Yes

The Upper District has NO water system infrastructure of its own, therefore there is NO system to audit. Water is delivered via infrastructure owned by MWD or Sanitation Districts.

Exemption No

Comments:

The Upper District has NO water system of its own, therefore there is NO system to audit.

CUWCC BMP Coverage Report 2012

Foundational Best Management Practices For Urban Water Efficiency

BMP 1.3 Metering With Commodity

ON TRACK

230 Upper San Gabriel Valley MWD

Numbered Unmetered Accounts	No
Metered Accounts billed by volume of use	No
Number of CII Accounts with Mixed Use Meters	0
Conducted a feasibility study to assess merits of a program to provide incentives to switch mixed-use accounts to dedicated landscape meters?	No
Feasibility Study provided to CUWCC?	No

Date: 1/1/0001

Uploaded file name:

Completed a written plan, policy or program to test, repair and replace meters	No

At Least As effective As Yes

The Upper District does not own or operate any meters nor does it own or operate any treatment facilities. Imported water is metered by the entity providing the water and exported water is metered by the end users who purchase the water.

Exemption No

Comments:

The Upper District does not own or operate any meters nor does it own or operate any treatment facilities. Imported water is metered by the entity providing the water and exported water is metered by the end users who purchase the water.

CUWCC BMP Coverage Report 2012

Foundational Best Management Practices For Urban Water Efficiency

BMP 2.1 Public Outreach

ON TRACK

230 **Upper San Gabriel Valley MWD** **Wholesale**

Does your agency perform Public Outreach programs? Yes

The list of retail agencies your agency assists with public outreach

California American Water - Los Angeles Service Area,City of Covina,Golden State Water Company - San Gabriel Valley,San Gabriel Valley Water Company - LA,Suburban Water Systems
The list of Upper District's Agency contacts that Upper District assists is uploaded in the ALAEA upload area.

The name of agency, contact name and email address if not CUWCC Group 1 members

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

Public Outreach Program List	Number
Website	12
Flyers and/or brochures (total copies), bill stuffers, messages printed on bill, information packets	5
General water conservation information	6
Total	**23**

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

Number Media Contacts	Number
News releases	11
Articles or stories resulting from outreach	2
Total	**13**

Did at least one website update take place during each quater of the reporting year? Yes

Public Information Program Annual Budget

Annual Budget Category	Annual Budget Amount
Public Outreach	268000
Total Amount:	**268000**

Public Outreah Additional Programs
Information Tables/Booths
WaterFest
Watershed Restoration Events
Presentations
Tours

Description of all other Public Outreach programs

CUWCC BMP Coverage Report 2012

Foundational Best Management Practices For Urban Water Efficiency

BMP 2.1 Public Outreach

ON TRACK

Partners Listed in Comments Section Below

Comments:

Partners w/: Cal Poly Pomona's JohnT. Lyle Center for Regenerative Studies, California Native Plant Society, Theodore Payne Foundation, Council for Watershed Health, LA County Arboretum, and Irrigation Association.

At Least As effective As	Yes

The list of Upper District's Agency contacts that Upper District assists is uploaded in the ALAEA upload area.

Exemption	No	0

CUWCC BMP Coverage Report 2012

Foundational Best Management Practices For Urban Water Efficiency

BMP 2.2 School Education Programs

ON TRACK

230 Upper San Gabriel Valley MWD **Wholesale**

Does your agency implement School Education programs? Yes

The list of retail agencies your agency assists with public outreach

California American Water - Los Angeles Service Area,City of Covina,City of West Covina,Golden State Water Company - San Gabriel Valley,San Gabriel Valley Water Company - LA,Suburban Water Systems

The list of Upper District's Agency contacts that Upper District assists is uploaded in the ALAEA upload area.

Materials meet state education framework requirements? Yes

Brochures, activity booklets and educational posters that cover the hydrological cycle, water conservation, wastewater treatment and keeping our water clean.

Materials distributed to K-6? Yes

Activity booklets and educational posters that cover the hydrological cycle, water conservation, wastewater treatment and keeping our water clean.

Materials distributed to 7-12 students? Yes (Info Only)

Activity booklets and educational posters that cover the hydrological cycle, water conservation, wastewater treatment and keeping our water clean.

Annual budget for school education program: 220500.00

Description of all other water supplier education programs

Water Awareness Art Contests, sponsorship of high school teams for Solar Cup competition, Water Education Grant Program, and educational posters offered.

Comments:

At Least As effective As Yes

The list of Upper District's Agency contacts that Upper District assists is uploaded in the ALAEA upload area.

Exemption No 0

Upper San Gabriel Valley Municipal Water District
BMP 1.1 Operation Practices for Wholesalers
BMP Report Year 2012 (FY 11-12)

PROGRAMMATIC: RESIDENTIAL ~

High Efficiency Toilets (HETS) ~
The HET giveaway program utilizes local schools and/or community groups to assist in implementing the program. The HET Retrofit Program enables eligible residents, living within the Upper District boundaries, to receive up to two (2) HETs per household free of charge. High Efficiency Toilets are distributed for free to qualifying residents. 1,999 High Efficiency Toilets (HETs) were distributed during the 2012 BMP report year which will result in an estimated annual water savings of approximately 85.16 acre feet and a lifetime water savings of 983.51 acre feet.

Residential Rebate Program ~
The Residential Water Efficiency Rebate Program offers rebates to residents retrofitting several types of high water-use fixtures/equipment with water efficient devices. Rebate items include: High Efficiency Clothes Washers (HECWs), High-Efficiency Toilets (HETs), Weather-Based Irrigation Controllers (WBICs), Rotating Sprinkler Nozzles and Turf Removal. Rebates were provided for 3,275 devices during the 2012 BMP report year that are estimated to result in an annual water savings of 67.69 acre feet with a lifetime water savings of 927.85 acre feet. $124,477.65 was provided in co-funding for residential rebates.

PROGRAMMATIC: COMMERCIAL, INDUSTRIAL & INSTITUTIONAL ~

CII Water Conservation Rebate Program ~ The CII Water Conservation Rebate Program offers commercial, industrial, and institutional facilities, within District boundaries, rebates for retrofitting numerous types of high water-use fixtures/equipment with efficient water-use fixtures/equipment. Rebates for 3,453 fixtures conducted during the 2012 BMP report year are estimated to result in an annual water savings of 75.93 acre feet and a lifetime water savings of 677.38 acre feet. $30,799.79 was provided in co-funding for CII rebates.

Commercial, Industrial and Institutional (CII) Water Use Efficiency (WUE) Survey Program ~ The CII WUE Survey Program includes a CII conservation expert touring participating CII facilities, analyzing water use efficiency at each site and developing recommendations for improvements. All recommendations provided to CII site owners will be tailored toward the BMPs and the District's CII rebate program. During BMP report year 2012 WUE surveys were conducted for 2 CII sites within Upper District's area.

PROGRAMMATIC: LANDSCAPE ~

Turf Removal Program ~ The Upper District's Turf Removal Program provides grant funding in the amount of $1 per sq. for large landscape CII sites to remove existing, irrigated natural turf and replace it with water efficient landscape, synthetic turf, and/or permeable hardscape. A total of $185,730 was provided in grant funding for the removal of 185,730 sq. feet of live turf during the 2012 BMP report year which, is estimated to result in an annual water savings of 20.79 acre feet with a lifetime water savings of 207.95 acre feet.

TECHNICAL ASSISTANCE ~

Conservation Action Roundtable (CAR) ~
Meetings are focused toward staff of the Upper District's purveyors. Meetings include an overview of the Upper District's conservation efforts as well as relevant conservation topics/issues. The meetings also encourage attendees to share what conservation efforts are occurring at their own agencies and provide input regarding ways the Upper District can support its purveyors' efforts. One CAR was held during the 2012 BMP year.

PARTNERSHIPS ~

WaterSense ~
Upper District continued to be a WaterSense partner in BMP report year 2012. The mission of the partnership is to promote the value of water and help Americans make smart decisions regarding water use and water-using products. To increase the adoption of water-efficient products and services by consumers and organizations. WaterSense approved HETs were utilized

for the HET distribution events. The WaterSense website is linked with the Upper District's website and the Upper District produced an ad campaign for "Fix A Leak" Week, which takes place in mid-March.

CLCA ~
The Upper District continued its partnership with the Los Angeles/San Gabriel Valley Chapter of the California Landscape Contractors Association (CLCA) to develop water efficient landscape ads.

USDA Forest Service ~
The Upper District continued its long-standing partnership with the US Forest Service (USFS) to conduct watershed restoration programs to increase reforestation efforts, improve native vegetation, root, and soil health as well reduce non-point source pollution in the local watershed. $8,000 in funding was provided to the USFS as part of the Upper District's Watershed Restoration Program partnership.

CUWCC ~
The Upper District continued its long-standing membership in the CUWCC during the 2012 BMP report year. Upper District continued its participation at plenaries as well as representation at the CUWCC's 20th anniversary celebration in 2011. An email was also sent to Upper District's purveyors explaining the purpose of CUWCC, membership benefits, and urge Upper District purveyors to join the CUWCC.

Retailers ~
Suburban Water Systems, San Gabriel Valley Water Company, and Golden State Water Company have partnered with the District to provide supplemental co-funding for their customers that participated in some of the Upper District's conservation programs.

Metropolitan ~
As a member agency of the Metropolitan Water District of Southern California's (Metropolitan), Upper District is able to combine Metropolitan's programs and services with its own conservation programs to provide effective Wholesale Agency Assistance for local water retailers. Metropolitan offers staff, resources and workshops to assist with technical, programmatic, strategic or other pertinent issues and developments associated with water conservation activities and supplement Upper District's conservation efforts for the region as well as to its various retailers.

Other Partnerships ~

Partnerships - Partner	Type of Partnership	Amount (if applicable)
Cal Poly Pomona's JohnT. Lyle Center for Regenerative Studies	Sponsor - Waste-to-Energy Summit	$ 1,000.00
California Native Plant Society	CNPS membership/supporting activities of CNPS	$ 600.00
Theodore Payne Foundation	Sponsor - 9th Annual Theodore Payne Native Plant Garden Tour	$ 2,500.00
Council for Watershed Health	Sponsor - Landscaping Lightly Workshop	$ 500.00
LA County Aroboretum	Sponsor - GROW! - A Garden Festival	$ 1,000.00
Irrigation Association	Hosted Certified Irrgation Auditor Workshop and Certification Test	$ -

BMP 2.1
Public Outreach
FY 11-12 Report Year 2012

Describe the program and how it's organized:

The Upper District has a Community and Government Affairs Coordinator on staff that maintains the Upper District's active public information program in an effort to promote and educate the public about water conservation and relevant water issues.

The Upper District offers an array of conservation brochures, activity booklets, public outreach displays, oral presentations and workshops. Numerous press releases, advertisements and presentations are also used to highlight water efficient projects and to raise awareness about water conservation efforts and local water issues. The Upper District also has a website that provides information about the agency, projects, conservation, local water issues and educational materials.

The Upper District's annual WaterFest drew approximately 5,000 attendees of all ages for the 2012 BMP report year. The Upper District utilizes the festival to reach out to the community and raise public awareness about water conservation, water quality, and other relevant water issues.

Upper District informational booths were staffed at 12 other events during the 2012 BMP report year that drew over 14,793 attendees.

The focus and/or topic of conservation was part of 6 presentations conducted by the Upper District during the report year that involved approximately 741 audience participants. 3 tours were also sponsored that provided information to members of the general public as well as policymakers and business owners. 11 press releases and 13 ads were published in newspapers and printed publications as well as 12 website updates were made throughout the 4 quarters.

Upper District hosted 27 free workshops that drew approximately 574 participants during the BMP 2012 reporting year. Workshops included a number of residential water efficient landscaping and irrigation classes, as well as workshops covering Irrigation Auditor certification, WUE Waster Plan overview, Conservation Action Roundtable, Healthy Aquifers and Watersheds, and Water Capacity in the San Gabriel Valley.

The District co-hosted, with the US Forest Service, 3 Watershed Restoration events that educate participating volunteers about the link between their forest and local water supply. Approximately 502 volunteers participated in the Watershed Restoration events that took place during the report year.

The Upper District is a member agency of the Metropolitan Water District of Southern California (Metropolitan) and therefore, the public within the Upper District boundaries also receives, and benefits from, the extensive public information materials, outreach, advertisements, programs and efforts regarding conservation that Metropolitan provides.

BMP 2.2
School Education Programs
FY 11-12 Report Year 2012

The Upper District offered the following school and youth education programs and materials:

~ Water Awareness Art Contests: In an effort to raise awareness among children regarding water issues, the Upper District sponsors an annual poster art contest for 4 categories: K-2nd, 3rd-5th, 6th-8th and 9th-12th grade. The five winning posters for each category receive monetary awards. The five winning posters for each category receive monetary awards that total $1,935. The top five winners of the K-2nd, 3rd-5th, 6th-8th categories are printed up as sheets of stickers and the top two 9th-12th grade designs are printed onto t-shirts. The overall top five (5) entries for grades K-5th, 6th-8th and 9th-12th are submitted to Metropolitan Water District of Southern California's (Metropolitan) art contest. A total of 186 entries were received during the 2012 BMP report year for the art contest.

~ Solar Cup Competition: Upper District sponsored four (4) high school teams in Metropolitan's Solar Cup Competition. A total of $10,000 was provided to Upper District's sponsored teams. The event provides high school students the opportunity to build solar powered boats that compete in race and endurance categories. The program offers student participants an opportunity to learn about natural resources, the development/use of alternative fuel sources and protection of water quality.

~ Water Education Grant Program: Upper District sponsors a water education grant program that offers teachers and/or schools within the Upper District boundaries grants of up to $1,000 to fund water-related educational projects. Eleven (11) grants, totaling $9,752 were funded for the BMP 2012 report year. The projects were estimated to involve over 763 students from grades K-12th.

~ Water Resource Library: The Upper District also maintains an onsite library offering a variety of current water education materials for all ages. Resources available for loan include activity books, textbooks, videotapes and computer software. These educational resources are different than the materials offered through Metropolitan's educational program, giving local schools access to a wider range of water education resources.

~ Water Educational Posters: Posters are in English, Spanish and Chinese and cover topics such as: hydrological cycle, recycled water, native plants, watershed, water pollution and water saving tips.

The Upper District is also a member agency of Metropolitan which has an extensive youth education program that offers age and grade-appropriate educational materials that meet the state education framework requirements. These educational materials are available for grade levels K-12th at schools within Metropolitan's territory, including ALL schools within the Upper District's boundaries. Metropolitan provides an active school education program that promotes water conservation and water conservation related benefits. Its educational program includes working with school districts, and both public and private schools within its boundaries to: provide instructional assistance, educational materials, and classroom presentations that identify urban, agricultural, and environmental issues and conditions in the local watershed. Since Upper District is a member agency of Metropolitan, all schools within the Upper District's boundaries are covered under Metropolitan's area and are offered these educational programs and materials. Metropolitan documents and reports on all of these educational efforts in their BMP reports to the CUWCC.

APPENDIX S

Upper District California Urban Water Conservation Council annual Reports and Coverage Reports (2013)

CUWCC BMP Wholesale Coverage Report 2013

Foundational Best Managemant Practices for Urban Water Efficiency

BMP 1.1 Wholesale Agency Assistance Programs

ON TRACK

230 **Upper San Gabriel Valley MWD**

Name: Elena Layugan Email: Elena@usgvmwd.org

a) Financial Investments and Building Partnerships

BMP Section	Monetary Amount for Financial Incentives	Monetary Amount for Equivalent Resources	
BMP 3 Residential	9512.76		
BMP 4 CII	34714.28		
BMP 5 Landscape	100000		
BMP 2.2 School Education Program	100076.43		
BMP 2.1 Public Outreach	75811.79		
BMP 1.1 Operation Practices	76837.1		

b) Technical Support

c) Retail Agency

d) Water Shortage Allocation

Adoption Date: 2/12/2008

File Name: Plan adopted February 2008 and revised June 2009. Hard copy uploaded as filename: USGVMWD_230_Water Shortage Allocation Plan.pdf.

e) Non signatory Reporting of BMP implementation by non-signatory Agencies

f) Encourage CUWCC Membership List Efforts to Recuit Retailers

Continued to explain benefits and urge retailers to join CUWCC. Upper District staff took active role on CUWCC Membership Committee. Further elaboration in uploaded document filename: USGVMWD_230_2013 OperationsPractices BMP 1-1 Comments.doc.

USGVMWD_230_2013 CUWCC Value of Membership 2-21-13.pdf

At Least As effective As Yes

Programmatic efforts are further summarized in the uploaded document filename: USGVMWD_230_2013 OperationsPractices BMP 1-1 Comments.doc.

Exemption No

Comments:

CUWCC BMP Coverage Report 2013

Foundational Best Management Practices For Urban Water Efficiency

BMP 1.2 Water Loss Control **ON TRACK**

230 Upper San Gabriel Valley MWD **Exempt**

Completed Standard Water Audit Using AWWA Software?	No
AWWA File provided to CUWCC?	No
AWWA Water Audit Validity Score?	
Complete Training in AWWA Audit Method	No
Complete Training in Component Analysis Process?	No
Component Analysis?	No
Repaired all leaks and breaks to the extent cost effective?	No
Locate and Repar unreported leaks to the extent cost effective?	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.	No

Provided 7 Types of Water Loss Control Info

Leaks Repairs	Value Real Losses	Value Apparent Losses	Miles Surveyed	Press Reduction	Cost Of Interventions	Water Saved (AF)

At Least As effective As Yes

The Upper District has NO water system infrastructure of its own, therefore there is NO system to audit. Water is delivered via infrastructure owned by MWD or Sanitation Districts.

Exemption No

Comments:

The Upper District has NO water system of its own, therefore there is NO system to audit.

CUWCC BMP Coverage Report 2013

Foundational Best Management Practices For Urban Water Efficiency

BMP 1.3 Metering With Commodity

ON TRACK

230 Upper San Gabriel Valley MWD

Exempt

Numbered Unmetered Accounts	No
Metered Accounts billed by volume of use	No
Number of CII Accounts with Mixed Use Meters	
Conducted a feasibility study to assess merits of a program to provide incentives to switch mixed-use accounts to dedicated landscape meters?	No
Feasibility Study provided to CUWCC?	No
Date:	
Uploaded file name:	
Completed a written plan, policy or program to test, repair and replace meters	No

At Least As effective As Yes

The Upper District does not own or operate any meters nor does it own or operate any treatment facilities. Imported water is metered by the entity providing the water and exported water is metered by the end users who purchase the water.

Exemption No

Comments:

CUWCC BMP Coverage Report 2013

Foundational Best Management Practices For Urban Water Efficiency

BMP 2.1 Public Outreach

ON TRACK

230 **Upper San Gabriel Valley MWD** **Wholesale**

Does your agency perform Public Outreach programs? Yes

The list of retail agencies your agency assists with public outreach

California American Water - Los Angeles Service Area,City of Covina,Golden State Water Company - San Gabriel Valley,San Gabriel Valley Water Company - LA,Suburban Water Systems
The list of Upper District's Agency contacts that Upper District assists is uploaded in the ALAEA upload area.

The name of agency, contact name and email address if not CUWCC Group 1 members

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

Public Outreach Program List	Number
Website	9
Flyers and/or brochures (total copies), bill stuffers, messages printed on bill, information packets	3
Landscape water conservation media campaigns	1
General water conservation information	11
Total	**24**

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

Number Media Contacts	Number
News releases	11
Total	**11**

Did at least one website update take place during each quater of the reporting year? Yes

Public Information Program Annual Budget

Annual Budget Category	Annual Budget Amount
Public Outreach	159200
Total Amount:	**159200**

Public Outreah Additional Programs
Information Tables/Booths
Presentations
Watershed Restoration Events
Tours

Description of all other Public Outreach programs

Tours and Water Forum.

CUWCC BMP Coverage Report 2013

Foundational Best Management Practices For Urban Water Efficiency

BMP 2.1 Public Outreach

ON TRACK

Comments:

Partners w/: California Native Plant Society, Theodore Payne Foundation, Council for Watershed Health, LA County Arboretum, and Irrigation Association.

At Least As effective As	Yes

The list of Upper District's Agency contacts that Upper District assists is uploaded in the ALAEA upload area.

Exemption	No	0

CUWCC BMP Coverage Report 2013

Foundational Best Management Practices For Urban Water Efficiency

BMP 2.2 School Education Programs

ON TRACK

230 Upper San Gabriel Valley MWD **Wholesale**

Does your agency implement School Education programs? Yes

The list of retail agencies your agency assists with public outreach

California American Water - Los Angeles Service Area,City of Covina,City of West Covina,Golden State Water Company - San Gabriel Valley,San Gabriel Valley Water Company - LA,Suburban Water Systems

List of Agency contacts Upper District assists is uploaded in the Exemption upload area as filename: USGVMWD_230_2013_Agency Contacts.pdf

Materials meet state education framework requirements? Yes

Brochures, activity booklets and educational posters that cover the watershed health, hydrological cycle, water conservation, wastewater treatment, and keeping our water clean.

Materials distributed to K-6? Yes

Sustainable Watershed Education student booklet, activity booklets and educational posters that cover the hydrological cycle, water conservation, wastewater treatment and keeping our water clean.

Materials distributed to 7-12 students? Yes (Info Only)

Activity booklets and educational posters that cover sustainability, water conservation, wastewater treatment and keeping our water clean.

Annual budget for school education program: 171000.00

Description of all other water supplier education programs

Sustainable Watershed Education Program, "Water is Life" Art Contests, sponsorship of high school teams for Solar Cup competition, Water Education Grant Program, and educational posters offered.

Comments:

At Least As effective As Yes

Education efforts further summarized in uploaded document filename: USGVMWD_230_2013 School Education Comments.doc

Exemption No 0

Upper San Gabriel Valley Municipal Water District
BMP 1.1 Operation Practices for Wholesalers
BMP Report Year 2013 (FY 12-13)

PROGRAMMATIC: RESIDENTIAL ~

High Efficiency Toilets (HETS) ~
For the 2013 BMP report year, 2,330 High Efficiency Toilets were provided by some of Upper District's purveyors to qualifying residents. $116,500 of funding, derived from Upper District's payment into Metropolitan's stewardship fund, was provided to assist with funding the HETs. The HET retrofits are estimated to have an annual water savings of approximately 99.26 acre feet with a lifetime water savings of 1,146 acre feet.

Residential Rebate Program ~
The Residential Water Efficiency Rebate Program offers rebates to residents retrofitting several types of high water-use fixtures/equipment with water efficient devices. Rebate items include: High Efficiency Clothes Washers (HECWs), High-Efficiency Toilets (HETs), Weather-Based Irrigation Controllers (WBICs), Rotating Sprinkler Nozzles. Rebates were provided for 4,194 devices during the 2013 BMP report year that are estimated to result in an annual water savings of 57.40 acre feet with a lifetime water savings of 762.29 acre feet.

PROGRAMMATIC: COMMERCIAL, INDUSTRIAL & INSTITUTIONAL ~

CII Water Conservation Rebate Program ~ The CII Water Conservation Rebate Program offers commercial, industrial, and institutional facilities, within District boundaries, rebates for retrofitting numerous types of high water-use fixtures/equipment with efficient water-use fixtures/equipment. Rebates for 1,119 fixtures conducted during the 2013 BMP report year are estimated to result in an annual water savings of 36.45 acre feet and a lifetime water savings of 269.94 acre feet.

PROGRAMMATIC: LANDSCAPE ~

Large Landscape Survey and Retrofit Program ~ The Upper District initiated a Large Landscape Survey and Retrofit (LLSR) program which offers free irrigation assessments to large landscaped CII sites in the Upper District's service area aimed at increasing irrigation efficiency. Upper District also funds some of the retrofits based on survey recommendations. Surveys/retrofits conducted during the 2013 BMP report year are estimated to result in an annual water savings of 11.30 acre feet with a lifetime water savings of 22.59 acre feet.

TECHNICAL ASSISTANCE ~

Conservation Action Roundtable (CAR) ~
Meetings are focused toward staff of the Upper District's purveyors. Meetings include an overview of the Upper District's conservation efforts as well as relevant conservation topics/issues. The meetings also encourage attendees to share what conservation efforts are occurring at their own agencies and provide input regarding ways the Upper District can support its purveyors' efforts. One CAR was held during the 2013 BMP year.

Water Use Efficiency (WUE) ~
Adopted in July 2012, the WUE Master Plan was developed to identify specific conservation programs best suited for Upper District's service area that enable Upper District's water producers to meet their 20 percent by 2020 water use efficiency goal. The WUE Master Plan provides a goal-oriented, cost-effective portfolio of water use efficiency measures. The Plan outlines current and future water-use profiles, establishes water use efficiency goals, identifies appropriate conservation measures, and reflects the costs and benefits of conservation.

Water Use Efficiency City Ordinance Assistance ~
Offered technical assistance to help cities within its service area expand their existing water conservation measures to meet federal and state water efficiency standards and also improve Sierra Club scorecard rankings. Six cities (Baldwin Park, South Pasadena, La Puente, Rosemead, San Gabriel, and South El Monte) responded to Upper District's offers for assistance and some expressed interest in further information. As part of Upper District's assistance, an Ordinance Guidance Summary was developed with the objective of assisting cities in developing effective and sensible water conservation ordinances. The ordinance guide was provided to cities that expressed interest and also made available on the Upper District's website for all of the cities to access.

PARTNERSHIPS ~

WaterSense ~

Upper District continued to be a WaterSense partner and incorporated their logo into some of its published conservation ads. WaterSense approved HETs were utilized for the HET distribution events. The WaterSense website is linked with the Upper District's website and the Upper District produced an ad campaign for "Fix A Leak" Week, which takes place in mid-March.

Save Our Water ~

The Upper District became a partner of Save Our Water which is a statewide ACWA program aimed at helping Californians reduce their everyday water use.

USDA Forest Service ~

The Upper District continued its long-standing partnership with the US Forest Service (USFS) to conduct watershed restoration programs to increase reforestation efforts, improve native vegetation, root, and soil health as well reduce non-point source pollution in the local watershed. $8,000 in funding was provided to the USFS as part of the Upper District's Watershed Restoration Program partnership.

California Native Plant Society (CNPS) ~

Upper District became a member of the CNPS to further its support and education of utilizing California native plants in water efficient landscaping.

CUWCC ~

The Upper District continued its long-standing membership in the CUWCC during the 2013 BMP report year and had staff take an active role on the Membership Committee.

Retailers ~

San Gabriel Valley Water Company and Golden State Water Company partnered with the District to provide supplemental co-funding for their customers that participated in some of the Upper District's conservation programs.

Metropolitan ~

As a member agency of the Metropolitan Water District of Southern California's (Metropolitan), Upper District is able to combine Metropolitan's programs and services with its own conservation programs to provide effective Wholesale Agency Assistance for local water retailers. Metropolitan offers staff, resources and workshops to assist with technical, programmatic, strategic or other pertinent issues and developments associated with water conservation activities and supplement Upper District's conservation efforts for the region as well as to its various retailers.

BMP 2.1
Public Outreach
FY 12-13
Report Year 2013

Information Booths

14 Information Booths ***see Info Booths Tab*

Event	Who was the Audience (Public,elected officials, business owners, students, kids, etc.)?	Approx. Attendance	Location	Date
Watershed Restoration Event	General Public	130	Angeles National Forest	October 13, 2012
Watershed Restoration Event	General Public	275	Angeles National Forest	November 3, 2012
Watershed Restoration Event	General Public	75	Angeles National Forest	March 16, 2013
Watershed Restoration Event	General Public	176	Angeles National Forest	April 20, 2013

Presentations	Who was the Audience (Public,elected officials, business owners, students, kids, etc.)?	Approx. Attendance	Location	Date
San Gabriel Water Forum	Elected Officals, Municipal Staff, Policmakers, Businesses		Pomona	October 3, 2013

Tours	Who was the Audience (Public,elected officials, business owners, students, kids, etc.)?	Approx. Attendance	Location	Date
Recycled Water Facilities Tour	Delegates from China	18	San Gabriel Valley	September 11, 2012
San Gabriel River Watershed Upper Area Water Supply Solutions Tour	Policymakers and Elected Officials	21	San Gabriel Valley	April 26, 2013

Workshops	Who was the Audience (Public,elected officials, business owners, students, kids, etc.)?	Approx. Attendance	Location	Date
Sustainable Gardening (English)	Residential	6	Monrovia	5/4/2013
Irrigation Basics (English)	Professional Landscapers and Gardeners	7	El Monte	6/5/2013
Irrigation Basics (Spanish)	Professional Landscapers and Gardeners	4	El Monte	6/5/2013
Irrigation Valve Troubleshooting (English)	Professional Landscapers and Gardeners	7	El Monte	6/12/2013
Irrigation Valve Troubleshooting (Spanish)	Professional Landscapers and Gardeners	6	El Monte	6/12/2013
Water Efficient Plants (English)	Professional Landscapers and Gardeners	7	El Monte	6/19/2013
Water Efficient Plants (Spanish)	Professional Landscapers and Gardeners	5	El Monte	6/19/2013
Horticultural Practices (English)	Professional Landscapers and Gardeners	7	El Monte	6/26/2013
Horticultural Practices (Spanish)	Professional Landscapers and Gardeners	7	El Monte	6/26/2013
Smart Gardening (English)	Residential	9	El Monte	6/6/2013
Smart Gardening (Spanish)	Residential	40	El Monte	6/13/2013

Press Releases/PSAs	Message/Focus	Quarter	Quarter Dates	Date	Source
ACWA Members Participate in Metropolitan's Solar Cup	High school teams sponsored in solar cup competition learn about protecting water resources	1	July 1 - Sept. 30	July 6, 2012	ACWA News
Upper District Awards Duarte High School $100,000 for Turf Removal Project	Turf removal grant awarded to Duarte HS by Upper District	1	July 1 - Sept. 30	August 26, 2012	
Water Supply Challenges, Opportunities and Rising Water Rates: Key Topics at Inaugural San Gabriel Valley Water Forum	Overview of San Gabriel Water Forum that discussed water supply challenges and options such as conservation	1	July 1 - Sept. 30	August 29, 2012	San Gabriel Valley Tribune
Grant aid school programs in Duarte	Turf removal grant awarded to APU by Upper District	1	July 1 - Sept. 30	August 25-26, 2012	San Gabriel Valley Tribune
Upper District Watershed Restoration Tree Planting	Upper District's Fall Watershed Restoration events and the impact on watershed	2	Oct. 1 - Dec. 31	October 24, 2012	ACWA News
Upper District Encourages Consumers to “Shower Better” With WaterSense	Encourage consumers to purchase WaterSense showerheads	3	Jan. 1 - Mar. 31	January 29, 2013	San Gabriel Valley Tribune
Celebrate National Groundwater Awareness Week by Participating in Watershed Restor	Upper District's Watershed Restoration Project	3	Jan. 1 - Mar. 31	March 6, 2013	San Gabriel Valley Tribune
Upper District Invites Participation in 22nd Annual Watershed Restoration Event	Upper District's Watershed Restoration Project	4	Apr. 1- Jun 30	April 11, 2013	San Gabriel Valley Tribune
FREE Sustainable Gardening Workshop for Your Home!	Sustainable gardening workshop	4	Apr. 1- Jun 30	April 24, 2013	San Gabriel Valley Tribune
So. El Monte HS AP Science Students Earn Upper District Water Education Grant	Grant to assist student participation in Mono Lake Committee Program	4	Apr. 1- Jun 30	May 31, 2013	San Gabriel Valley Tribune
Landscape Workshops: Save Water, Beautify Homes and Make Gardeners	Landscape workshops, sponsored by Upper District raise awareness about outdoor water use	4	Apr. 1- Jun 30	June 17, 2013	San Gabriel Valley Tribune

BMP 2.1
Public Outreach

Ads	Message/Focus	Quarter	Quarter Dates	Date	Source
It's Fall… Time to Reduce Outdoor Water Use	Suggestions for using water efficiently during the Fall	1	July 1 - Sept. 30	September 23, 2012	San Gabriel Valley Tribune
Shower Better	Replacing showerhead with WaterSense labeled showerhead	2	Oct. 1 - Dec. 31	December 25, 2012	Pasadena Tournament Magazine - LA Times Supplement
Fix A Leak Week (Spanish)	Raise awareness about water wasted due to leaks and urge repairs	3	Jan. 1 - Mar. 31	March 16, 2013	La Opinion
Fix A Leak Week (Chinese)	Raise awareness about water wasted due to leaks and urge repairs	3	Jan. 1 - Mar. 31	March 16, 2013	Chinese World News
Fix A Leak Week (English)	Raise awareness about water wasted due to leaks and urge repairs	3	Jan. 1 - Mar. 31	March 17, 2013	LA Times
Theodore Payne Foundation 10th Annual Garden Tour	Raising awareness about native plants	4	Apr. 1- Jun 30	April 6-7, 2013	Theodore Payne Foundation Tour Book
This Earth Day, Commit Yourself to Using Water More Efficiently… Everyday! (Engl	Use water more efficiently	4	Apr. 1- Jun 30	April 16, 2013	Mid-Valley News
This Earth Day, Commit Yourself to Using Water More Efficiently… Everyday! (Spar	Use water more efficiently	4	Apr. 1- Jun 30	April 16, 2013	La Opinion
Commit Yourself to Using Everyday!	Raise awareness of outdoor water usage	4	Apr. 1- Jun 30	June 1, 2013	Building Trades News
Free Smart Gardening Workshop	Water efficient gardening	4	Apr. 1- Jun 30	June 9, 2013	
Commit Your to Using Water More Efficiently… Everyday	Use water more efficiently	4	Apr. 1- Jun 30	June 16, 2013	

Website Updates	Date	Quarter	Quarter Dates
Upper District Awards Duarte High School			
$100,000 for Turf Removal Project	August 2012	1	July 1 - Sept. 30
Water Supply Challenges, Opportunities and Rising Water Rates	August 2012	1	July 1 - Sept. 30
Water is Life Art Contest Winners	September 2012	1	July 1 - Sept. 30
Solar Cup 2013	October 2012	1	July 1 - Sept. 30
Watershed Restoration: Good for the Forest, Good for the Water Supply	November 2012	1	July 1 - Sept. 30
Watershed Events for Spring	December 2012	2	Oct. 1 - Dec. 31
Water Use Efficiency Ordinance Assistance	December 2012	2	Oct. 1 - Dec. 31
Smart Gardening Workshops Give "Green Thumbs" A New Meaning	January 2013	3	Jan. 1 - Mar. 31
Watershed Restoration Upcoming Spring 2013 Events	February 2013	3	Jan. 1 - Mar. 31
Free Smart Gardening Workshop	June 2013	4	Apr. 1- Jun 30
This Earth Day, Commit Yourself to Using Water More Efficiently… Everyday! (Engl	June 2013	4	Apr. 1- Jun 30

Partnerships - Partner	Type of Partnership	Amount (if applicable)
Theodore Payne Foundation	Sponsor - 10th Annual Theodore Payne Native Plant Garden Tour	$ 2,500.00
WaterSense	Press Releases/advertisments	
8 sponsorships		
Other Partners w/: California Native Plant Society, Council for Watershed Health, LA County Arboretum, and Irrigation Association.		

Event	UD Particpation	Date	Timeframe	Address
South Pasadena Concert Series	Info. Table / Presentation	July 8, 2012	6:00 p.m. - 8.00 pm	Garfield Park, 815 Mission St., South Pasadena, CA 91030
South Pasadena Clean Air Car Show	Information Table	September 16, 2012	10:00 a.m. - 3:00 p.m.	1414 Mission St. South Pasadena, CA
Baldwin Park Concerts in the Park	Information Table	June 14, 2012	7:00 pm - 9:00 pm	Morgan Park, 4100 Baldwin Park Blvd., Baldwin Park, CA 91706
Baldwin Park Concerts in the Park	Information Table	June 21, 2012	7:00 pm - 9:00 pm	Morgan Park, 4100 Baldwin Park Blvd., Baldwin Park, CA 91706
Baldwin Park Concerts in the Park	Information Table	June 28, 2012	7:00 pm - 9:00 pm	Morgan Park, 4100 Baldwin Park Blvd., Baldwin Park, CA 91706
Arcadia Concerts in the Park	Information Table	July 5, 2012	6:00 pm - 8:00 pm	Arcadia City Hall West Lawn, 240 W. Huntington Dr., Arcadia, CA
South Pasadena Concerts in the Park	Information Table	July 8, 2012	5:00 pm - 7:00 pm	Garfield Park, 815 Mission St., South Pasadena, CA 91030
Baldwin Park Concerts in the Park	Information Table	July 12, 2012	7:00 pm - 9:00 pm	Morgan Park, 4100 Baldwin Park Blvd., Baldwin Park, CA 91706
Baldwin Park Concerts in the Park	Information Table	July 19, 2012	7:00 pm - 9:00 pm	Morgan Park, 4100 Baldwin Park Blvd., Baldwin Park, CA 91706
Baldwin Park Concerts in the Park	Information Table	July 26, 2016	7:00 pm - 9:00 pm	Morgan Park, 4100 Baldwin Park Blvd., Baldwin Park, CA 91706
South Pasadena Concerts in the Park	Information Table	July 8, 2012	5:00 pm - 7:00 pm	Garfield Park, 815 Mission St., South Pasadena, CA 91030
Baldwin Park Concerts in the Park	Information Table	August 2, 2012	7:00 pm - 9:00 pm	Morgan Park, 4100 Baldwin Park Blvd., Baldwin Park, CA 91706
Baldwin Park Concerts in the Park	Information Table	August 9, 2012	7:00 pm - 9:00 pm	Morgan Park, 4100 Baldwin Park Blvd., Baldwin Park, CA 91706
Arcadia Concerts in the Park	Information Table	August 16, 2012	6:00 pm - 8:00 pm	Arcadia City Hall West Lawn, 240 W. Huntington Dr., Arcadia, CA

BMP 2.2
School Education Programs
FY 12-13 Report Year 2013

The Upper District offered the following school and youth education programs and materials:

~ Sustainable Watershed Education Program (SWEP): Upper District worked with the Discovery Science Center (DSC) to develop a customized sustainable watershed curriculum for 4th-6th graders. The free curriculum focuses on water use efficiency and highlights watershed issues like groundwater management and storm water pollution prevention. Offered free to participating schools, SWEP includes interactive assemblies for 4th-5th graders, and in-class hands-on workshops for sixth graders. For the 2013 BMP report year, SWEP had 2,015 participants (843 4th graders, 723 5th graders, and 449 6th graders).

~ Water Awareness Art Contests: In an effort to raise awareness among children regarding water issues, the Upper District sponsors an annual poster art contest for 4 categories: K-2nd, 3rd-5th, 6th-8th and 9th-12th grade. The five winning posters for each category receive monetary awards. The five winning posters for each category receive monetary awards that total $1,935. The top five winners of the K-2nd, 3rd-5th, 6th-8th categories are printed up as sheets of stickers and the top two 9th-12th grade designs are printed onto t-shirts. The overall top five (5) entries for grades K-5th, 6th-8th and 9th-12th are submitted to Metropolitan Water District of Southern California's (Metropolitan) art contest. A total of 132 entries were received during the 2013 BMP report year for the art contest.

~ Solar Cup Competition: Upper District once again sponsored four (4) high school teams in Metropolitan's Solar Cup Competition. A total of $10,000 was provided to Upper District's sponsored teams. The event provides high school students the opportunity to build solar powered boats that compete in race and endurance categories. The program offers student participants an opportunity to learn about natural resources, the development/use of alternative fuel sources and protection of water quality.

~ Water Education Grant Program: Upper District sponsors a water education grant program that offers teachers and/or schools within the Upper District boundaries grants of up to $1,000 to fund water-related educational projects. One (1) grant, totaling $1,000 was funded for the BMP 2013 report year. The projects was estimated to involve 14 students from grades 11-12th.

~ Water Resource Library: The Upper District also maintains an onsite library offering a variety of current water education materials for all ages. Resources available for loan include activity books, textbooks, videotapes and computer software. These educational resources are different than the materials offered through Metropolitan's educational program, giving local schools access to a wider range of water education resources.

~ Water Educational Posters: Posters are in English, Spanish and Chinese and cover topics such as: hydrological cycle, recycled water, native plants, watershed, water pollution and water saving tips.

The Upper District is also a member agency of Metropolitan which has an extensive youth education program that offers age and grade-appropriate educational materials that meet the state education framework requirements. These educational materials are available for grade levels K-12th at schools within Metropolitan's territory, including ALL schools within the Upper District's boundaries. Metropolitan provides an active school education program that promotes water conservation and water conservation related benefits. Its educational program includes working with school districts, and both public and private schools within its boundaries to: provide instructional assistance, educational materials, and classroom presentations that identify urban, agricultural, and environmental issues and conditions in the local watershed. Since Upper District is a member agency of Metropolitan, all schools within the Upper District's boundaries are covered under Metropolitan's area and are offered these educational programs and materials. Metropolitan documents and reports on all of these educational efforts in their BMP reports to the CUWCC.

APPENDIX T

Upper District California Urban Water Conservation Council annual Reports and Coverage Reports (2014)

CUWCC BMP Wholesale Coverage Report 2014

Foundational Best Managemant Practices for Urban Water Efficiency

BMP 1.1 Wholesale Agency Assistance Programs

ON TRACK

230 **Upper San Gabriel Valley MWD**

Name: Elena Layugan Email: Elena@usgvmwd.org

a) Financial Investments and Building Partnerships

BMP Section	Monetary Amount for Financial Incentives	Monetary Amount for Equivalent Resources	
BMP 1.1 Operation Practices	17717.29		
BMP 4 CII	119574.75		
BMP 5 Landscape	245090.02		
BMP 2.1 Public Outreach	190391.81		
BMP 2.2 School Education Program	116200.73		

b) Technical Support

c) Retail Agency

d) Water Shortage Allocation

Adoption Date: 2/12/2008

File Name: Plan adopted February 2008 and revised June 2009. Hard copy uploaded as filename: USGVMWD_230_Water Shortage Allocation Plan.pdf.

e) Non signatory Reporting of BMP implementation by non-signatory Agencies

f) Encourage CUWCC Membership List Efforts to Recuit Retailers

Urged retailers in September 2013 to participate in CUWCC residential and emailed all of them the survey link. Also informed retailers of November 2013 CII workshop and provided memorandum to management giving overview of CUWCC member benefits.

At Least As effective As Yes

Programmatic efforts are further summarized in the uploaded document filename: USGVMWD_230_2014 OperationsPractices BMP 1-1 Comments.doc.

Exemption No

Comments:

CUWCC BMP Coverage Report 2014

Foundational Best Management Practices For Urban Water Efficiency

BMP 1.2 Water Loss Control **ON TRACK**

230 Upper San Gabriel Valley MWD **Exempt**

Completed Standard Water Audit Using AWWA Software?	No
AWWA File provided to CUWCC?	No
AWWA Water Audit Validity Score?	
Complete Training in AWWA Audit Method	No
Complete Training in Component Analysis Process?	No
Component Analysis?	No
Repaired all leaks and breaks to the extent cost effective?	No
Locate and Repar unreported leaks to the extent cost effective?	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.	No

Provided 7 Types of Water Loss Control Info

Leaks Repairs	Value Real Losses	Value Apparent Losses	Miles Surveyed	Press Reduction	Cost Of Interventions	Water Saved (AF)

At Least As effective As Yes

The Upper District has NO water system infrastructure of its own, therefore there is NO system to audit. Water is delivered via infrastructure owned by MWD or Sanitation Districts.

Exemption No

Comments:

The Upper District has NO water system of its own, therefore there is NO system to audit.

CUWCC BMP Coverage Report 2014

Foundational Best Management Practices For Urban Water Efficiency

BMP 1.3 Metering With Commodity

ON TRACK

230 Upper San Gabriel Valley MWD

Exempt

Numbered Unmetered Accounts	No
Metered Accounts billed by volume of use	No
Number of CII Accounts with Mixed Use Meters	
Conducted a feasibility study to assess merits of a program to provide incentives to switch mixed-use accounts to dedicated landscape meters?	No
Feasibility Study provided to CUWCC?	No
Date:	
Uploaded file name:	
Completed a written plan, policy or program to test, repair and replace meters	No

At Least As effective As Yes

The Upper District does not own or operate any meters nor does it own or operate any treatment facilities. Imported water is metered by the entity providing the water and exported water is metered by the end users who purchase the water.

Exemption No

Comments:

CUWCC BMP Coverage Report 2014

Foundational Best Management Practices For Urban Water Efficiency

BMP 2.1 Public Outreach

ON TRACK

230 **Upper San Gabriel Valley MWD** **Wholesale**

Does your agency perform Public Outreach programs? Yes

The list of retail agencies your agency assists with public outreach

California American Water - Los Angeles Service Area,City of Covina,Golden State Water Company - San Gabriel Valley,San Gabriel Valley Water Company - LA,Suburban Water Systems
The list of Upper District's Agency contacts that Upper District assists is uploaded in the ALAEA upload area.

The name of agency, contact name and email address if not CUWCC Group 1 members

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

Public Outreach Program List	Number
Website	13
Flyers and/or brochures (total copies), bill stuffers, messages printed on bill, information packets	6
Landscape water conservation media campaigns	2
General water conservation information	61
Total	**82**

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

Number Media Contacts	Number
News releases	11
Articles or stories resulting from outreach	1
Total	**12**

Did at least one website update take place during each quater of the reporting year? Yes

Public Information Program Annual Budget

Annual Budget Category	Annual Budget Amount
Public Outreach	161000
Total Amount:	**161000**

Public Outreah Additional Programs
Information Tables/Booths
Presentations
Watershed Restoration Events
Tours

Description of all other Public Outreach programs

CUWCC BMP Coverage Report 2014

Foundational Best Management Practices For Urban Water Efficiency

BMP 2.1 Public Outreach

ON TRACK

Tours and Water Forum.

Comments:

Partners w/: Cal Poly Pomona's JohnT. Lyle Center for Regenerative Studies, California Native Plant Society, Theodore Payne Foundation, Council for Watershed Health, LA County Arboretum, and Irrigation Association.

At Least As effective As	Yes

The list of Upper District's Agency contacts that Upper District assists is uploaded in the ALAEA upload area.

Exemption	No	0

CUWCC BMP Coverage Report 2014

Foundational Best Management Practices For Urban Water Efficiency

BMP 2.2 School Education Programs

ON TRACK

230 Upper San Gabriel Valley MWD **Wholesale**

Does your agency implement School Education programs? Yes

The list of retail agencies your agency assists with public outreach

California American Water - Los Angeles Service Area,City of Covina,City of West Covina,Golden State Water Company - San Gabriel Valley,San Gabriel Valley Water Company - LA,Suburban Water Systems

List of Agency contacts Upper District assists is uploaded in the Exemption upload area as filename: USGVMWD_230_2014_Agency Contacts.pdf

Materials meet state education framework requirements? Yes

Brochures, activity booklets and educational posters that cover the watershed health, hydrological cycle, water conservation, wastewater treatment, and keeping our water clean.

Materials distributed to K-6? Yes

Sustainable Watershed Education student booklet, activity booklets and educational posters that cover the hydrological cycle, water conservation, wastewater treatment and keeping our water clean.

Materials distributed to 7-12 students? Yes (Info Only)

Activity booklets and educational posters that cover sustainability, water conservation, wastewater treatment and keeping our water clean.

Annual budget for school education program: 176000.00

Description of all other water supplier education programs

Sustainable Watershed Education Program, SWEP After-School Program, "Water is Life" Art Contest, sponsorship of high school teams for Solar Cup competition, Water Education Grant Program, and educational posters offered.

Comments:

At Least As effective As Yes

Education efforts further summarized in uploaded document filename: USGVMWD_230_2014 School Education Comments.doc

Exemption No 0

Upper San Gabriel Valley Municipal Water District
BMP 1.1 Operation Practices for Wholesalers
BMP Report Year 2014 (FY 13-14)

PROGRAMMATIC: RESIDENTIAL ~

High Efficiency Toilets (HETS) ~
For the 2014 BMP report year, 3,472 High Efficiency Toilets were provided by some of Upper District's purveyors to qualifying residents. $214,514 of funding, derived from Upper District's payment into Metropolitan's stewardship fund, was provided to assist with funding the HETs. The HET retrofits are estimated to have an annual water savings of approximately 147.91 acre feet with a lifetime water savings of 1,708.22 acre feet.

Residential Rebate Program ~
The Residential Water Efficiency Rebate Program offers rebates to residents retrofitting several types of high water-use fixtures/equipment with water efficient devices. Rebate items include: High Efficiency Clothes Washers (HECWs), High-Efficiency Toilets (HETs), Weather-Based Irrigation Controllers (WBICs), Rotating Sprinkler Nozzles, and Turf Removal. Rebates were provided for 9,192 devices during the 2014 BMP report year that are estimated to result in an annual water savings of 51.23 acre feet with a lifetime water savings of 713.59 acre feet.

PROGRAMMATIC: COMMERCIAL, INDUSTRIAL & INSTITUTIONAL ~

CII Water Conservation Rebate Program ~ The CII Water Conservation Rebate Program offers commercial, industrial, and institutional facilities, within District boundaries, rebates for retrofitting numerous types of high water-use fixtures/equipment with efficient water-use fixtures/equipment. Rebates for 491 fixtures conducted during the 2014 BMP report year are estimated to result in an annual water savings of 30.43 acre feet and a lifetime water savings of 404.96 acre feet.

PROGRAMMATIC: LANDSCAPE ~

Large Landscape Survey and Retrofit Program ~ The Upper District initiated a Large Landscape Survey and Retrofit (LLSR) program which offers free irrigation assessments to large landscaped CII sites in the Upper District's service area aimed at increasing irrigation efficiency. Upper District also funds some of the retrofits based on survey recommendations. Surveys/retrofits conducted during the 2014 BMP report year are estimated to result in an annual water savings of 59 acre feet with a lifetime water savings of 295 acre feet.

Wireless Soil Moisture Sensor Demonstration Project ~ The Wireless Soil Moisture Sensor Demonstration project is pilot project that involves installing new wireless moisture sensor technology at five school sites to study and evaluate the potential water use savings of such technology. The technology is believed to provide precise soil moisture conditions to the irrigation system smart controller which allows for the application of the exact amount of water needed by each particular irrigation zone. One of the five sites was installed during BMP 2014 report year. A video was made about the installed technology and placed on the Upper District's YouTube channel.

TECHNICAL ASSISTANCE ~

Conservation Action Roundtable (CAR) ~
Meetings are focused toward staff of the Upper District's purveyors. Meetings include an overview of the Upper District's conservation efforts as well as relevant conservation topics/issues. The meetings also encourage attendees to share what conservation efforts are occurring at their own agencies and provide input regarding ways the Upper District can support its purveyors' efforts. Six (6) CARs were held during the 2014 BMP report year.

Water Use Efficiency City Ordinance Assistance ~
Offered technical assistance to help cities within its service area expand their existing water conservation measures to meet federal and state water efficiency standards and also improve Sierra Club scorecard rankings. Six cities (Baldwin Park, South Pasadena, La Puente, Rosemead, San Gabriel, and South El Monte) responded to Upper District's offers for assistance and some expressed interest in further information. As part of Upper District's assistance, an Ordinance Guidance Summary was developed with the objective of assisting cities in developing effective and sensible water conservation ordinances. The ordinance guide was provided to cities that expressed interest and also made available on the Upper District's website for all of the cities to access.

***"Water Conservation and Customer Care"* Workshop ~**
The new workshop was developed by Upper District and geared toward customer service representatives, field staff and, conservation/resource staff. The intent of the workshop is to assist staff with responding to customer water use concerns and saving water. The workshop provides information about the local water supply, recent climate and supply conditions, and basic conservation information that can be offered to concerned customers. 20 attendees participated in the new workshop.

PARTNERSHIPS ~

WaterSense ~
Upper District continued to be a WaterSense partner and incorporated their logo into some of its published conservation ads. WaterSense approved HETs were utilized for the HET distribution events. The WaterSense website is linked with the Upper District's website and the Upper District produced an ad campaign for "Fix A Leak" Week, which takes place in mid-March.

Save Our Water ~
The Upper District continued as a partner of Save Our Water which is a statewide ACWA program aimed at helping Californians reduce their everyday water use.

USDA Forest Service ~
The Upper District continued its long-standing partnership with the US Forest Service (USFS) to conduct watershed restoration programs to increase reforestation efforts, improve native vegetation, root, and soil health as well reduce non-point source pollution in the local watershed. $8,000 in funding was provided to the USFS as part of the Upper District's Watershed Restoration Program partnership.

California Native Plant Society (CNPS) ~
Upper District continued its member in the CNPS to further its support and education of utilizing California native plants in water efficient landscaping.

CUWCC ~
The Upper District continued its long-standing membership in the CUWCC during the 2014 BMP report year and had staff take an active role on the Membership Committee. Urged retailers in September 2013 to participate in CUWCC residential and emailed all of them the survey link. Also informed retailers of November 2013 CII workshop and provided a memorandum for Upper District management that gave an overview of the CUWCC and benefits of being a member.

Retailers ~
Golden State Water Company and South Pasadena partnered with the District to provide supplemental co-funding for their customers that participated in some of the Upper District's conservation programs.

Metropolitan ~
As a member agency of the Metropolitan Water District of Southern California's (Metropolitan), Upper District is able to combine Metropolitan's programs and services with its own conservation programs to provide effective Wholesale Agency Assistance for local water retailers. Metropolitan offers staff, resources and workshops to assist with technical, programmatic, strategic or other pertinent issues and developments associated with water conservation activities and supplement Upper District's conservation efforts for the region as well as to its various retailers.

BMP 2.1
Public Outreach
FY 13-14
Report Year 2014

Event Booths

51 Information Booths ***See Tab Named UD Event Listings*

Event	Who was the Audience (Public,elected officials, business owners, students, kids, etc.)?	Approx. Attendance	Location	Date
Watershed Restoration Event	General Public		Angeles National Forest	October 19, 2013
Watershed Restoration Event	General Public		Angeles National Forest	November 2, 2013
Watershed Restoration Event	General Public		Angeles National Forest	April 5, 2014
Watershed Restoration Event	General Public		Angeles National Forest	May 3, 2014
Covina City Hall Sustainable Landscape Demonstration Project Ribbon Cutting Ceremony	Elected Officials, Water Agency Staff, General Public		Covina City Hall	June-14

Tours	Who was the Audience (Public,elected officials, business owners, students, kids, etc.)?	Approx. Attendance	Location	Date
San Gabriel River Watershed Upper Area Water Supply Solutions Tour	Elected Officials, Policy Makers, Business Owners		San Gabriel Valley	May 22, 2014
San Gabriel River Watershed Upper Area Water Supply Solutions Tour	Elected Officials, Policy Makers, Business Owners		San Gabriel Valley	June 26, 2014

Workshops	Who was the Audience (Public,elected officials, business owners, students, kids, etc.)?	Approx. Attendance	Location	Date
San Gabriel Valley Water Forum - A Balancing Act	General Public, Business Owners, Elected Officials		Pomona, CA	October 3, 2013
California Friendly Landscape Training	General Public	26	Monrovia, CA	February 21, 2014
California Friendly Landscape Training	General Public	39	Monrovia, CA	June 18, 2014

Publications/Brochures	Message/Focus	Quarter	Date
San Gabriel River Watershed Upper Area Water Supply Solutions Tour	Provide stakeholders an overview of San Gabriel River Watershed's water supply challenges and encourage stakeholder involvement in supply solutions	2	December 19, 2013

Articles Related to Upper District	Message/Focus	Quarter	Date	
Diverse Sources Lead to a More Reliable and Less Expensive Water Supply	liance on imported water through increased water conservation, storm water capture and recycled water supply		July 9, 2013	Business Life Magazine

Press Releases/PSAs	Message/Focus	Quarter	Quarter Dates	Date	Source
July is Smart Irrigation Month!	Raise awareness and increase outdoor water use efficiency	1	July 1 - Sept. 30	July 5, 2013	
Water Deliveries Expected to Meet Customer Demands; Upper District Urges Continued Best Practices for Water Efficiency and Conservation	Encourage public to continue conservation practices	2	Oct. 1 - Dec. 31	October 16, 2013	
Water Supply Emergency Declared in Main San Gabriel Basin As Drought Conditions Push Basin Records to Record Lows	Upper District approves a resolution adopting a water supply emergency.	2	Oct. 1 - Dec. 31	October 22, 2014	
er District Urges Residents to Make Water Conservation a Way of Life as Governor Brown Declares Dr	Encourage public to continue conservation practices	3	Jan. 1 - Mar. 31	January 21, 2014	

Public Outreach
FY 13-14

Ads	Message/Focus	Quarter	Quarter Dates	Date	Source
July is Smart Irrigation Month - What is the Best Time to Water?	Water landscape early in the morning	1	July 1 - Sept. 30	July 7, 2013	Pasadena Star-News
July is Smart Irrigation Month - What is the Best Time to Water?	Water landscape early in the morning	1	July 1 - Sept. 30	July 7, 2013	San Gabriel Tribune
Keep more of your hard-earned MONEYevery month… Save Water	Reduce outdoor water use	1	July 1 - Sept. 30	August 1, 2013	Building Trades News
Commit Yourself to Using Everyday! (Spanish)	Raise awareness of outdoor water usage	1	July 1 - Sept. 30	August 2, 2013	La Opinion
It's Fall… Time to Reduce Outdoor Wataer Use	Reduce Outdoor Wataer Use	2	Oct. 1 - Dec. 31	October 203	LA Times Civiv Publications - Southern California Sustainable Living
Congratulate Theodore Payne on 10th Annual Native Plant Garden Tour	Acknowledge Support of Theodore Payne Native Plant Garden Tour	3	Jan. 1 - Mar. 31	March 25, 2013	Theodore Payne Garden Tour Booklet
Sustainable Gardening for the Home	Sustainable Gardening for the Home Free Workshop	4	Apr. 1- Jun 30	April 28, 2013	San Gabriel Valley Tribune

Website Updates	Date	Quarter	Quarter Dates
New Website Layout Launched	July 2013	1	July 1 - Sept. 30
Morris Dam upgrades improve L.A. County's water preservation, management efforts	July 2013	1	July 1 - Sept. 30
Video - San Gabriel Valley Water Wise: Where Your Water Comes From	September 2013	1	July 1 - Sept. 30
Fall 2013 Watershed Restoration Events	September 2013	1	July 1 - Sept. 30
Another dry year could be bad news for California	October 2013	2	Oct. 1 - Dec. 31
Video - Upper District's Water Conservation & Education Programs	November 2013	2	Oct. 1 - Dec. 31
State water officials considering drought declaration	January 2014	3	Jan. 1 - Mar. 31
California Gov. Jerry Brown proclaims drought emergency	January 2014	3	Jan. 1 - Mar. 31
er District Urges Residents to Make Water Conservation a Way of Life as Governor Brown Declares Drc	January 2014	3	Jan. 1 - Mar. 31
California Drought: Preparation, conservation help some businesses profit	April 2014	4	Apr. 1- Jun 30
West Covina High School takes first at Solar Cup	May 2014	4	Apr. 1- Jun 30
Report: California has a long way to go on water conservation	June 2014	4	Apr. 1- Jun 30

Partnerships - Partner	Type of Partnership	Amount (if applicable)
Theodore Payne Foundation	Sponsor - 10th Annual Theodore Payne Native Plant Garden Tour	$ 2,500.00
Watermaster, Water Quality Authority, SGVMWD, Three Valleys MWD	Co-Sponsors of San Gabriel Valley Water Forum	
Watermaster, SGV Water Assoc., Water Quality Authority, SGVMWD, Three Valleys MWD, LA Co. Public Works, LA Co. Sanitation Districts, MWD, USBR, Army Corps of Engineers, DWR, LA Co. Flood District, SWRCB	San Gabriel River Watershed Upper Area Water Supply Solutions Tour	

Date	Day	Time	Event	Activity	Audience	Event Staffed by:	City Event Held	Location	Address
March 8, 2014	Saturday	9:00 am - 2:00 pm	City of Rosemead City Wide Yard Sale	Staff Outreach booth	General Public	Ruben, Frank, Nancy	Rosemead	SCE International	2244 Walnut Grove Ae. Rosemead, CA 91770
July 15, 2014	Tuesday	8:00 am - 4:30 pm	LA County Arboretum FREE Admission Day	Staff Outreach Booth	General Public	Manuel	Arcadia	LA County Arboretum	Baldwin Ave. Arcadia, CA
July 17, 2014	Thursdays	6:30pm - 8pm	Tommy Tassi & The Authentics - Classic Oldies	Concerts in the Park	General Public	Manuel	Arcadia	City Hall West Lawn	City Hall West Lawn, 240 W. Huntington Drive, Arcadia 91007
July 31, 2014	Thursdays	6:30pm - 8pm	Play The Groove - Modern & Contemporary JAZZ	Concerts in the Park	General Public	Manuel	Arcadia	City Hall West Lawn	City Hall West Lawn, 240 W. Huntington Drive, Arcadia 91007
August 7, 2014	Thursdays	6:30pm - 8pm	The First Marine Division Band - Patriotic	Concerts in the Park	General Public	Jenna	Arcadia	City Hall West Lawn	City Hall West Lawn, 240 W. Huntington Drive, Arcadia 91007
August 14, 2014	Thursdays	6:30pm - 8pm	Gregory Wolfe as Rod Stewart	Concerts in the Park	General Public	Ruben	Arcadia	City Hall West Lawn	City Hall West Lawn, 240 W. Huntington Drive, Arcadia 91007
August 19, 2014	Tuesday	8:00 am - 4:30 pm	LA County Arboretum FREE Admission Day	Outreach event	General Public	Manuel	Arcadia	LA County Arboretum	Baldwin Ave. Arcadia, CA
August 21, 2014	Thursdays	6:30pm - 8pm	Cold Duck	Concerts in the Park	General Public	Frank	Arcadia	City Hall West Lawn	City Hall West Lawn, 240 W. Huntington Drive, Arcadia 91007
October 21, 2014	Tuesday	8:00 am - 4:30 pm	LA County Arboretum FREE Admission Day	Outreach event	General Public	Manuel	Arcadia	LA County Arboretum	Baldwin Ave. Arcadia, CA
April 5, 2014	Saturday	8:00 am - 12:00 pm	Watershed Restoration Project	Watershed restoration: collective native seeds, plant saplings, pick up trash	General Public	Elena	Azusa	Angeles National Forest	Meet at San Gabriel Canyon Environmental Education Center. Go Northbound on Highway 39 (Asuza Ave. which becomes San Gabriel Canyon Rd) for approximately 12.5 miles from the 210 Freeway exit. Center is on the west (left) side of the road, shortly after passing the ORV (Off Road Vehicle) access area. Latitude: 34°14'13.71"N, Longitude: 117°51'42.50"W. Parking permit provided at event.
May 3, 2014	Saturday	8:00 am - 12:00 pm	Watershed Restoration Project	Watershed restoration: collective native seeds, plant saplings, pick up trash	General Public	Elena	Azusa	Angeles National Forest	Meet at San Gabriel Canyon Environmental Education Center. Go Northbound on Highway 39 (Asuza Ave. which becomes San Gabriel Canyon Rd) for approximately 12.5 miles from the 210 Freeway exit. Center is on the west (left) side of the road, shortly after passing the ORV (Off Road Vehicle) access area. Latitude: 34°14'13.71"N, Longitude: 117°51'42.50"W. Parking permit provided at event.
July 24, 2014	Thursdays	7pm - 9pm	Chico	Concerts in the Park	General Public	Ruben	Azusa	Memorial Park	Memorial Park, 320 N. Orange Place, Azusa, CA 91702
March 22, 2014	Saturday	9:30 am - 11:30 am	U.S. Congresswoman Grace F. Napolitano San Gabriel Valley Superfund site and Water Qulaity Discussion	Staff Outreach booth	General Public	Ruben	Baldwin Park	Esther Snyder Community Center	4100 Bladwin Park Boulevard, Baldwin Park, CA 91706
April 22, 2014	Tuesday	8:00 am - 1:30pm	Kaiser Permanente Earth Day	Staff Outreach booth	General Public	Ruben	Baldwin Park	Kaiser Permanente Medical Center	1011 Baldwin Park Blvd., Baldwin Park, CA 91706
April 26, 2014	Saturday	10:00 am - 1:00pm	Arbor Day Celebration and Environmental Awareness Fair	Staff Outreach booth	General Public	Ruben	Baldwin Park	Morgan Park	4100 Bladwin Park Boulevard, Baldwin Park, CA 91706
May 31, 2014	Saturday	10:00 am - 1:00 pm	Water Awareness	Staff Outreach booth	General Public	Manuel	Baldwin Park	Valley County Water District	14233 Joanbridge Baldwin Park, CA 91706
July 24, 2014	Thursdays	7pm - 9pm	Adiccion	Concerts in the Park	General Public	Frank	Baldwin Park	Morgan Park	Morgan Park, 4100 Baldwin Park Blvd., Baldwin Park, CA 91706
September 25, 2014	Thursday	5pm - 9pm	Street Market	Baldwin Park's Street Market	General Public	Frank / Jenna	Baldwin Park	Maine Avenue	Between Ramona Blvd and Palm Ave.
October 9, 2014	Thursday	5pm - 9pm	Street Market	Baldwin Park's Street Market	General Public	Frank / Jenna	Baldwin Park	Maine Avenue	Between Ramona Blvd and Palm Ave.
July 7, 2014	Monday	7:30pm - 9pm	La Sirena y Orquestra de Mar Ashe - Latin	Concerts in the Park	General Public	Frank	Covina	Covina Park	Covina Park, 301 N. Fourth Ave., Covina, CA
July 14, 2014	Monday	7:30pm - 9pm	Creedence Relived - Tribute to CCR	Concerts in the Park	General Public	Frank	Covina	Covina Park	Covina Park, 301 N. Fourth Ave., Covina, CA
July 28, 2014	Monday	7:30pm - 9pm	Scot Bruce is Elvis	Concerts in the Park	General Public	Frank	Covina	Covina Park	Covina Park, 301 N. Fourth Ave., Covina, CA
May 17, 2014	Saturday	10:00 am - 2:00 pm	Mayday Emergency EXPO	Staff Outreach booth /	General Public	Patty, Nancy	Duarte	Royal Okas Elementary School	2499 Royal Oaks Drive, Duarte, CA
May 21, 2014	Wednesday	5:00 pm - 8:00 pm	Taste Of Duarte	Staff Outreach booth	Business Org.	Ruben / Patty	Duarte	Westminster Gardens	1900 Huntington Drive, Duarte, CA
September 20, 2014	Saturday	9:00 am - 3:00 pm	Health & Wellness EXPO	Staff Outreach booth	General Public	Frank	Duarte	Northview Middle School	1401 Highland Ave., Duarte, CA 91706
September 27, 2014	Saturday	9:00 am - 4:00 pm	Route 66 Parade and City Picnic	Staff Outreach booth	General Public	Jenna / Frank	Duarte	Royal Oaks Park	2627 Royal Oaks Dr., Duarte, CA 91706
March 21, 2014	Friday	9:00 am - 12:30 pm	Arbor Day Celebration	Staff Outreach booth	City delegates and children ages 8-18	Ruben	El Monte	El Monte Grace Auditorium lawn	3130 Tyler Ave. El Monte, CA 91731
April 12, 2014	Saturday	9:00 am - 1:00 pm	City of El Monte Earth Day Celebration	Staff Outreach booth	General Public	Ruben	El Monte	Arceo Park	3125 Tyler Ave. El Monte, CA 91731
July 16, 2014	Wednesday	6:30pm - 8:30pm	Ray Carreon and The Latin All Stars	Concerts in the Park	General Public	Frank/Jenna	El Monte	Arceo Park	Arceo Park, 3125 Tyler Ave. El Monte, Ca
July 23, 2014	Wednesday	6:30pm - 8:30pm	Neon Nation The Ultimate 80's Experience	Concerts in the Park	General Public	Frank	El Monte	Arceo Park	Arceo Park, 3125 Tyler Ave. El Monte, Ca
July 30, 2014	Wednesday	6:30pm - 8:30pm	Los Pistoleros	Concerts in the Park	General Public	Ruben	El Monte	Arceo Park	Arceo Park, 3125 Tyler Ave. El Monte, Ca
August 6, 2014	Wednesday	6:30pm - 8:30pm	Tease & El Monte Police National Night Out	Concerts in the Park	General Public	Frank	El Monte	Arceo Park	Arceo Park, 3125 Tyler Ave. El Monte, Ca
October 18, 2014	Saturday	10:30 am - 1:30 pm	El Monte Children's Parade and Harvest Festival	Parade and Festival	General Public	Frank	El Monte	Arceo Park	Arceo Park, 3125 Tyler Ave. El Monte, Ca
July 17, 2014	Thursdays	7pm - 9pm	Suave	Concerts in the Park	General Public	Frank	Irwindale	Irwindale Park	5050 N. Irwindale Ave., Irwindale, CA
July 24, 2014	Thursdays	7pm - 9pm	Susie Hanson Latin Band	Concerts in the Park	General Public	Manuel	Irwindale	Irwindale Park	5050 N. Irwindale Ave., Irwindale, CA
July 31, 2014	Thursdays	7pm - 9pm	Chico	Concerts in the Park	General Public	Ruben	Irwindale	Irwindale Park	5050 N. Irwindale Ave., Irwindale, CA
August 7, 2014	Thursdays	7pm - 9pm	Bumptown	Concerts in the Park	General Public	Frank	Irwindale	Irwindale Park	5050 N. Irwindale Ave., Irwindale, CA
August 14, 2014	Thursdays	7pm - 9pm	Los Pistoleros	Concerts in the Park	General Public	Jenna	Irwindale	Irwindale Park	5050 N. Irwindale Ave., Irwindale, CA
September 18, 2014	Thursday	7:00 am - 3:00pm	Vendor's Fair	Vendor Fair	Water Utility Employees	Ruben/Jenna	Iwindale	Irwindale Speedway	500 Speedway Dr. Irwindale, CA 91706
July 9, 2014	Wednesday	6:30pm - 8:30pm	Latin Rock	Concerts in the Park	General Public	Frank	La Puente	La Puente Park	La Puente Park, 501 N. Glendora Ave., La Puente, CA 91744
July 23, 2014	Wednesday	6:30pm - 8:30pm	Suave	Concerts in the Park	General Public	Jenna	La Puente	La Puente Park	La Puente Park, 501 N. Glendora Ave., La Puente, CA 91744
July 30, 2014	Wednesday	6:30pm - 8:30pm	Mariachi Divas	Concerts in the Park	General Public	Frank	La Puente	La Puente Park	La Puente Park, 501 N. Glendora Ave., La Puente, CA 91744
August 5, 2014	Tuesday	6:30pm - 8:30pm	National Night out	Concerts in the Park	General Public	Frank	La Puente	Mary Van Dyke Park	Mary Van Dyke Park, 1818 Centrral Avenue, South El Monte

May 10, 2014	Saturday	7:00 am - 11:00 am	YMCA Monrovia	Staff Outreach booth /	General Public	Manuel	Monrovia	Old Town Monrovia	Myrtle Ave., Monrovia, CA
July 13, 2014	Sunday	7pm - 8:30pm	Jumpin' Joz Band - Jazz	Concerts in the Park	General Public	Ruben	Monrovia	Library Park	Library Park, 321 S. Myrtle Ave., Monrovia, CA 91018
July 27, 2014	Sunday	7pm - 8:30pm	The Answer - Classic Rock	Concerts in the Park	General Public	Ruben	Monrovia	Library Park	Library Park, 321 S. Myrtle Ave., Monrovia, CA 91018
August 3, 2014	Sunday	7pm - 8:30pm	Maricahi Divas - Mariachi	Concerts in the Park	General Public	Ruben	Monrovia	Library Park	Library Park, 321 S. Myrtle Ave., Monrovia, CA 91018
August 9, 2014	Saturday	9:00 am - 3:00 pm	MAP Neighborhood Conference	Staff Outreach booth	General Public	Manuel	Monrovia	Monrovia High School	845 W. Colorado, Ave., Monrovia, CA 91016
August 10, 2014	Sunday	7pm - 8:30pm	Person to Person - Top 40	Concerts in the Park	General Public	Jenna	Monrovia	Library Park	Library Park, 321 S. Myrtle Ave., Monrovia, CA 91018
August 17, 2014	Sunday	7pm - 8:30pm	The Yari More Latin Band - Salsa	Concerts in the Park	General Public	Ruben	Monrovia	Library Park	Library Park, 321 S. Myrtle Ave., Monrovia, CA 91018
August 24, 2014	Sunday	7pm - 8:30pm	The Undercover Girls - 80's	Staff Outreach booth	General Public	Jenna	Monrovia	Library Park	Library Park, 321 S. Myrtle Ave., Monrovia, CA 91018
August 31, 2014	Sunday	7pm - 8:30pm	Doo Wah Riders - Country	Concerts in the Park	General Public	Manuel	Monrovia	Library Park	Library Park, 321 S. Myrtle Ave., Monrovia, CA 91018
May 31, 2014	Saturday	10:00 am - 3:00 pm	2014 San Gabriel Valley Youth Boy Scouts EXPO	Staff Outreach booth	General Public	Ruben, Frank	Pasadena	Rose Bowl Stadium	1001 Rose Bowl Drive, Pasadena, CA 91103
May 10, 2014	Saturday	9:00 am - 1:00 pm	City of Rosemead / Rosemead Blvd. GO FESTIVAL	Staff Outreach booth /	General Public	Frank	Rosemead	Rosemead Blvd	Rosemead, CA
July 11, 2014	Friday	7pm - 9pm	Stone Soul	Concerts in the Park	General Public	Ruben	Rosemead	Rosemead Park	7933 Emerson Place., Rosemead, CA 91770
July 18, 2014	Friday	7pm - 9pm	Fresh	Concerts in the Park	General Public	Frank	Rosemead	Rosemead Park	7933 Emerson Place., Rosemead, CA 91770
July 25, 2014	Friday	7pm - 9pm	Hard Days Night	Concerts in the Park	General Public	Frank	Rosemead	Rosemead Park	7933 Emerson Place., Rosemead, CA 91770
August 1, 2014	Friday	7pm - 9pm	Bumptown	Concerts in the Park	General Public	Jenna	Rosemead	Rosemead Park	7933 Emerson Place., Rosemead, CA 91770
May 21, 2014	Wednesday	5:30 pm - 8:00 pm	San Gabriel Chamber 9th Annual Business EXPO	Staff Outreach Booth	General Public	Frank	San Gabriel	San Gabriel Hilton	225 W. Valley Blvd, San Gabriel, CA 91776
July 31, 2014	Thursdays	6pm - 9pm	Smooth Response	Concerts in the Park	General Public	Jenna	South El Monte	Mary Van Dyke Park	Mary Van Dyke Park, 1818 Centrral Avenue, South El Monte
August 5, 2014	Tuesday	6:00pm - 9:00pm	National Night out	Concerts in the Park	General Public	Jenna/Ruben	South El Monte	La Puente Park	La Puente Park, 501 N. Glendora Ave., La Puente, CA 91744
August 14, 2014	Thursdays	6pm - 9pm	Steel Rod	Concerts in the Park	General Public	Frank	South El Monte	Mary Van Dyke Park	Mary Van Dyke Park, 1818 Centrral Avenue, South El Monte
August 28, 2014	Thursdays	6pm - 9pm	Suave	Concerts in the Park	General Public	Frank	South El Monte	Mary Van Dyke Park	Mary Van Dyke Park, 1818 Centrral Avenue, South El Monte
July 20, 2014	Sunday	2:00 pm - 7:00 pm	City of South Pasadena Green Living EXPO and Concert	Staff Outreach booth	General Public	Ruben/Frank/Alondr	South Pasadena	Garfield Park	Mission Street and Fair Oaks Drive
July 20, 2014	Sunday	5pm - 7pm	Retro Soul (FUNK)	Concerts in the Park	General Public	Ruben/Frank/Alondr	South Pasadena	Garfied Park	Garfied Park, 1000 Park Ave., South Pasadena, CA
October 18, 2014	Saturday	9am - 1pm	Nature Park 10th Anniversary	10th Year Anniversary	General Public	Jenna / Alondra	South Pasadena	1 Block North of Pasadena Ave.	Pasadena, ca
December 6, 2014	Saturday	6:00 am - 11:00am	South Pasadena TIGER Run	Staff Outreach booth	General Public	Frank	South Pasadena	South Pasadena High School	1401 Fremont Avenue, South Pasadena 91030
July 23, 2014	Wednesday	7pm - 9pm	Captain Cardiac & The Coronaries	Concerts in the Park	General Public	Manuel	Temple City	Temple City Park	Temple City Park, 9701 Las Tunas, CA 91780
August 13, 2014	Wednesday	7pm - 9pm	The Catillacs - Vintage Rock & Roll	Concerts in the Park	General Public	Frank	Temple City	Temple City Park	Temple City Park, 9701 Las Tunas, CA 91780
August 20, 2014	Wednesday	7pm - 9pm	Raymond Micheal - Tribute to Elvis	Staff Outreach Booth	General Public	Ruben	Temple City	Temple City Park	Temple City Park, 9701 Las Tunas, CA 91780
July 31, 2014	Thursdays	6pm - 9pm	Cold Duck	Concerts in the Park	General Public	Frank	West Covina	Civic Center Courtyard	Civic Center Courtyard, 1444 W. Garvey Ave. West Covina, CA
August 7, 2014	Thursdays	6pm - 9pm	Mariachi Divas	Concerts in the Park	General Public	Ruben	West Covina	Civic Center Courtyard	Civic Center Courtyard, 1444 W. Garvey Ave. West Covina, CA
August 23, 2014	Saturday	10:00 am - 7:00 pm	GWC 2014 Business EXPO	Concerts in the Park	General Public	Ruben/Frank	West Covina	Civic Center Courtyard	Civic Center Courtyard, 1444 W. Garvey Ave. West Covina, CA
April 12, 2014	Saturday	10:00 am - 2:00 pm	Los Angeles County Sanitation Districts Earth day	Staff Outreach booth	General Public	Frank, Nancy	Whittier	Sanitation Districts parking lot	1955 Workman Mill Road, Whittier, CA 90601
May 16,17,18, 2014	Fri, Sat, Sun	8:00 am - 5:00 pm	Solar Cup	Solar Boat Racing	General Public	Ruben, Elena	Winchester	Lake Skinner	37701 Warren Road, Winchester, CA 92596

Giveaways

Showerheads, Sponges, Hoze Nozzles, Pencils, Gloves
Bags, Aerators, Rain Gauges, Shower Timers, Magnets
goodies (misc)
goodies (misc)
goodies (misc)
goodies (misc)
Bags, Showerheads, Rain Gauges, Shower Timers,
goodies (misc)
Brochures, blue bags
Watershed Pins
Watershed Pins
goodies (misc)
Pens (blue & Purple), Blue Water Bottles, Magnets, Hoze Nozzles, Gloves
Aerators, Pens, Pencils, Magnets, Blue Bottles,
Bottles, Coolers, Aerators, Pens, Pencils
goodies (misc) High Efficiency Washer
goodies (misc)
1/2 case Blue bags, Showertimers, 1 box Aerators, Stickers, brochures, 2 cases Showerheads NEED CANOPY/TABLE/CHAIRS
2 cases showerheads, Rain Gauges, Brochures, stickers NEED CANOPY/TABLE/CHAIRS
goodies (misc)
goodies (misc)
goodies (misc)
goodies (misc)
goodies (misc)
goodies (misc) NEED CANOPY/TABLE/CHAIRS
1 case back packs,1 case Blue bags, 1 box Aerators, Stickers, brochures, 3 cases Showerheads, 1 case Rain Gauges NEED TABLE/CHAIRS
Pencils, Magnets, Blue Water Bottles
Hose Nozzles, Gloves, Aerators, Beach Balls
goodies (misc)
goodies (misc)
goodies (misc)
goodies (misc)
goodies (misc)
goodies (misc)
goodies (misc)
goodies (misc)
goodies (misc)
goodies (misc)
goodies (misc)
goodies (misc)
goodies (misc)
goodies (misc)
goodies (misc)
goodies (misc)

Coolers, Blue Bottles, Magnets, Hose Nozzles, Gloves
goodies (misc)
goodies (misc)
goodies (misc)
goodies (misc)
goodies (misc)
goodies (misc)
goodies (misc)
goodies (misc)
Aerators, Magnets, Pencils, Blue Bottles
Coolers, Blue Bottles, Magnets
goodies (misc)
goodies (misc)
goodies (misc)
goodies (misc)
goodies (misc)
goodies (misc)
goodies (misc)
goodies (misc)
goodies (misc)
goodies (misc)
goodies (misc)
goodies (misc)
Brochures, blue bags
Brochures, blue bags, stickers, showerheads, rain gauges
goodies (misc)
goodies (misc)
goodies (misc)
goodies (misc)
goodies (misc)
goodies (misc)
Showerheads, Aerators, Beach Balls, Hose Nozzles, Gloves, Pens, Pencils, Magnets
Not Applicable

BMP 2.2
School Education Programs
FY 13-14 Report Year 2014

The Upper District offered the following school and youth education programs and materials:

~ Sustainable Watershed Education Program (SWEP): Upper District worked with the Discovery Science Center (DSC) to develop a customized sustainable watershed curriculum for 4th-6th graders. The free curriculum focuses on water use efficiency and highlights watershed issues like groundwater management and storm water pollution prevention. Offered free to participating schools, SWEP includes interactive assemblies for 4th-5th graders, and in-class hands-on workshops for sixth graders. For the 2014 BMP report year, SWEP had 4,527 participants (1,688 4th graders, 1,807 5th graders, and 1,032 6th graders).

~ SWEP After-School Program: At the direction of Upper District, DSC also developed content and training offered to program leaders of the THINKTogether after-school programs offered within the San Gabriel Valley. The training focused on providing after-school activities that highlight water conservation, watershed/urban runoff, pollution prevention, and encouraging positive behaviors that may reduce negative impacts on water supply sources. 26 program leaders each received 36 hours of training through this program.

~ "*Water is Life*" Art Contest: In an effort to raise awareness among children regarding water issues, the Upper District sponsors an annual poster art contest for 4 categories: K-2nd, 3rd-5th, 6th-8th and 9th-12th grade. The five winning posters for each category receive monetary awards and are highlighted on the Upper District's website. The five winning posters for each category receive monetary awards that total $1,935. The top five winners of the K-2nd, 3rd-5th, 6th-8th categories are printed up as sheets of stickers and the top two 9th-12th grade designs are printed onto t-shirts. The overall top five (5) entries for grades K-5th, 6th-8th and 9th-12th are submitted to Metropolitan Water District of Southern California's (Metropolitan) art contest. A total of 132 art entries were received during BMP report year 2014.

~ Solar Cup Competition: Upper District continued to sponsor four (4) high school teams in Metropolitan's Solar Cup Competition during the BMP 2014 report year. A total of $10,000 was provided to Upper District's sponsored teams. The event provides high school students the opportunity to build solar powered boats that compete in race and endurance categories. The program offers student participants an opportunity to learn about natural resources, the development/use of alternative fuel sources and protection of water quality.

~ Water Education Grant Program: Upper District sponsors a water education grant program that offers teachers and/or schools within the Upper District boundaries grants of up to $1,000 to fund water-related educational projects. Ten (10) grants, totaling $8,893 was funded for the BMP 2014 report year. The projects was estimated to involve 722 students from grades 4-12th.

~ Water Resource Library: The Upper District also maintains an onsite library offering a variety of current water education materials for all ages. Resources available for loan include activity books, textbooks, videotapes and computer software. These educational resources are different than the materials offered through Metropolitan's educational program, giving local schools access to a wider range of water education resources.

~ Water Educational Posters: Posters are in English, Spanish and Chinese and cover topics such as: hydrological cycle, recycled water, native plants, watershed, water pollution and water saving tips.

The Upper District is also a member agency of Metropolitan which has an extensive youth education program that offers age and grade-appropriate educational materials that meet the state education framework requirements. These educational materials are available for grade levels K-12th at schools within Metropolitan's territory, including ALL schools within the Upper District's boundaries. Metropolitan provides an active school education program that promotes water conservation and water conservation related benefits. Its educational program includes working with school districts, and both public and private schools within its boundaries to: provide instructional assistance, educational materials, and classroom presentations that identify urban, agricultural, and environmental issues and conditions in the local watershed. Since Upper District is a member agency of Metropolitan, all schools within the

Upper District's boundaries are covered under Metropolitan's area and are offered these educational programs and materials. Metropolitan documents and reports on all of these educational efforts in their BMP reports to the CUWCC.

APPENDIX U

NOTICE OF PUBLIC HEARING



UPPER SAN GABRIEL VALLEY MUNICIPAL WATER DISTRICT

NOTICE OF PUBLIC HEARING

Please take notice that:

Upper San Gabriel Valley Municipal Water District
and
San Gabriel Valley Water Company

will hold a public hearing to review and adopt their respective Urban Water Management Plan 2015 Update at 6:30 PM on June 7, 2016 in the office of the Upper San Gabriel Valley Municipal Water District:

602 E. Huntington Drive, Suite B
Monrovia, CA 91016

Upper San Gabriel Valley Municipal Water District's final Draft Urban Water Management Plan is available for review at www.upperdistrict.org and at the office of the Upper San Gabriel Valley Municipal Water District located at the above address.

San Gabriel Valley Water Company's final Draft Urban Water Management Plan is available for review at www.sgvwater.com and at the offices of the San Gabriel Valley Water Company located at:

11142 Garvey Avenue, El Monte, CA 91733
11579 Hadley Street, Whittier, CA 90606
14404 Valley Boulevard, Industry, CA 91746

Shane Chapman, General Manager
Upper San Gabriel Valley Municipal Water District
602 E. Huntington Drive, Suite B
Monrovia, CA 91016

Publish Dates: May 24, 2016 and May 31, 2016

Adams Ranch Mutual Water Company
Mr. Victor Ybarra
P.O. Box 6841
Rosemead, CA 91770

Amarillo Mutual Water Company
Mr. John Holzinger
3404 North Burton Ave.
Rosemead, CA

City of Arcadia
Mr. Tom Tait
P.O. Box 60021
11800 Gold Ring Road
Arcadia, CA 91006-6021

City of Azusa Light & Water
Mr. George Marrow
Ms. Melissa Barbosa
729 N. Azusa Ave.
Azusa, CA 91702

California American Water Company
Mr. Joe Marcinko
8657 Grand Avenue
Rosemead, CA 91770

California Domestic Water Company
Mr. Jim Byerrum
P.O. Box 1338
Whittier, CA 90609

City of Covina
Mr. Kalieh Honish
125 East College Street
Covina, CA 91723

Covina Irrigating Company
Mr. David de Jesus
125 East College Street
Covina, CA 92428

Del Rio Mutual Water Company
Mr. Dario Herrera
12417 Clinton
El Monte, CA 91734

East Pasadena Water Co., Ltd.
Mr. Larry Morales
3725 East Mountainview Ave.
Pasadena, CA 91107

City of El Monte
Mr. Victor Jimenez
3527 Santa Anita Ave.
El Monte, CA 91731

City of Glendora
Mr. Steve Patton
116 E. Foothill Blvd.
Glendora, CA 91741

Hemlock Mutual Water Company
Ms. Blanca Becerra
12066 Celine Street
El Monte, CA 91732

La Puente Valley County Water District and
Industry Public Works
Mr. Greg Galindo
112 North First Street
La Puente, CA 91744

City of Monrovia
Ms. Tina Cherry
415 South Ivy Avenue
Monrovia, CA 91016

Rurban Homes Mutual Water Company
Mr. Victor Jimenez
5044 No. Cogswell
El Monte, CA 91732

San Gabriel County Water District
Mr. Jim Prior
P.O. Box 2227
San Gabriel, CA 91778-2227

San Gabriel Valley Water Company
Mr. Dan Arrighi
P.O. Box 6010
El Monte, CA 91734

City of South Pasadena
Mr. Anteneh Tesfaye
825 Mission Street
South Pasadena, CA 91030

Golden State Water Company
San Gabriel District
Mr. Ben Lewis
401 South San Dimas Canyon Rd.
San Dimas, CA 91773

Sterling Mutual Water Company
Ms. Joy Ann Burt
11922 Lambert Ave.
El Monte, CA 91732

Suburban Water Systems
Mr. Richard Rich
2235 E. Garvey Ave. N #A
West Covina, CA 91791

Sunny Slope Water Company
Mr. Ken Tcheng
1040 El Campo Drive
Pasadena, CA 91107

Valencia Heights Water Company
Mr. Dave Michalko
3009 Virginia Ave.
West Covina, CA 91791

Valley County Water District
Ms. Lynda Noriega
14521 E. Ramona Blvd.
Baldwin Park, CA 91706

Valley View Mutual Water Company
Ms. Sukie Madrid
13730 E. Los Angeles St.
Baldwin Park, CA 91706

City of Whittier
Ms. Hye Lee
13230 Penn Street
Whittier, CA 90601

Main San Gabriel Basin Watermaster
Tony Zampiello
725 N. Azusa Avenue
Azusa, CA 91702

San Gabriel River Watermaster
101 N. Brand Blvd, Ste 1780
Glendale, CA 91203

County of Los Angeles
Attn: Registrar – Recorder / County Clerk
12400 Imperial Highway
Norwalk, CA 90650

City of Baldwin Park
Attn: City Clerk
1440 E. Pacific Ave.
Baldwin Park, CA 91706

City of Bradbury
Attn: City Clerk
600 Winston Ave.
Bradbury, CA 91010

City of Duarte
Attn: City Clerk
1600 Huntington Drive
Duarte, CA 91010

City of Industry
Attn: City Clerk
15625 Stafford St #100
Industry, CA 91744

City of Irwindale
Attn: City Clerk
5050 North Irwindale Ave.
Irwindale, CA 91706

City of La Puente
Attn: City Clerk
15900 E. Main Street
La Puente, CA 91744

City of Rosemead
Attn: City Clerk
8838 E. Valley Blvd.
Rosemead, CA 91770

City of San Gabriel
Attn: City Clerk
425 S. Mission Drive
San Gabriel, CA 91776

City of South El Monte
Attn: City Clerk
1415 Santa Anita Ave.
South El Monte, CA 91733

City of Temple City
Attn: City Clerk
9701 Las Tunas Drive
Temple City, CA 91780

City of West Covina
Attn: City Clerk
1444 W. Garvey
West Covina, CA 91790

Los Angeles County Department of Regional Planning
320 West Temple St. 13th Floor
Los Angeles, CA 90012

APPENDIX V

RESOLUTION ADOPTING PLAN

STATE OF CALIFORNIA)
)
COUNTY OF LOS ANGELES)
)
UPPER SAN GABRIEL VALLEY)
)
MUNICIPAL WATER DISTRICT)

I, Shane Chapman, General Manager of Upper San Gabriel Valley Municipal Water District (Upper District), do hereby certify that at a public hearing and regular meeting of the Board of Directors of said District held on June 7, 2016, the following action was taken:

> "Director Treviño moved to approve staff's recommendation that the Board of Directors adopt Upper District's 2015 Urban Water Management Plan as presented and instructed staff to file copies of the adopted plan with: State of California Department of Water Resources; California State Library; and Cities within the Upper District service area. Secretary/Treasurer Touhey seconded the motion. The motion was approved 3-0-2.

Shane Chapman
General Manager

Dated this 14th day of
June, 2016, at
Monrovia, California

(SEAL)