

A PUBLIC DRAFT

2015 Urban Water Management Plan for **Palmdale Water District**



May 2016

Prepared by

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Palmdale Water District
2015 Urban Water Management Plan

Public Review Draft

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Prepared for

Palmdale Water District
2029 East Avenue Q
Palmdale, CA 93550

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Acronym List

°F	Fahrenheit
Act	Urban Water Management Planning Act
AF	Acre Feet
AFY	Acre Feet per Year
ARDWP	Annual Reports to the Drinking Water Program
AVEK	Antelope Valley East Kern Water Agency
AVSWCA	Antelope Valley State Water Contractors Association
AWWA	American Water Works Association
Cal OES	California Office of Emergency Services
CCR	Consumer Confidence Report
cfs	Cubic Feet per Second
CII	Commercial, Industrial, Institutional
cm	Centimeter
CUWCC	California Urban Water Conservation Council
CWC	California Water Code
DAC	Disadvantaged Community
DCR	Delivery Capability Report
DDW	Division of Drinking Water
District	Palmdale Water District
DMM	Demand Management Measure
DWR	California Department of Water Resources
ETo	Evapotranspiration
GAMA	Groundwater Ambient Monitoring and Assessment
GIS	Geographic Information System
GPCD	Gallons Per Capita per Day
gpm	Gallons per Minute
GSA	Groundwater Sustainability Agency
HET	High Efficiency Toilet
LACSD	Sanitation Districts of Los Angeles County
LCID	Littlerock Creek Irrigation District
MCL	Maximum Contaminant Level
mg	Milligrams
mgd	Million Gallons per Day
PBP	Priority Basin Project
PRGRRP	Palmdale Regional Groundwater Recharge and Recovery Project
PRWA	Palmdale Recycled Water Authority
PWD	Palmdale Water District
PWS	Public Water System
SBX7-7	Senate Bill 7 of Special Extended Session 7
SCAG	Southern California Association of Governments
SGMA	Sustainable Groundwater Management Act
SNMP	Salt and Nutrient Management Plan
SWP	State Water Project
SWRCB	State Water Resources Control Board
SWRCB	State Water Resources Control Board
TDS	Total Dissolved Solids
ULFT	Ultra-Low-Flush Toilet
USEPA	United States Environmental Protection Agency

UWMP	Urban Water Management Plan
WRP	Water Reclamation Plant
WSCP	Water Shortage Contingency Plan
WTP	Water Treatment Plant

Section 1: Introduction

1.1 Overview

This document presents the 2015 Urban Water Management Plan (UWMP, Plan) for the Palmdale Water District (PWD) service area. This section describes the general purpose of the Plan, discusses Plan implementation and provides general information about the PWD and its service area characteristics.

The State of California mandates that all urban water suppliers within the state prepare an UWMP. Detailed information on what must be included in these plans as well as who must complete them can be found in California Water Code Sections 10610 through 10657. According to the Urban Water Management Planning Act (UWMP Act) of 1983, an urban water supplier is defined as a supplier, either public or private, that provides water for municipal purposes either directly or indirectly to more than 3,000 customers or supplies more than 3,000 acre-feet (AF) annually.

1.2 Purpose

An UWMP is a planning tool that generally guides the actions of urban water suppliers. It provides managers and the public with a broad perspective on a number of water supply issues. It is not a substitute for project-specific planning documents, nor was it intended to be when mandated by the State Legislature. For example, the Legislature mandated that a plan include a section which "…describes the opportunities for exchanges or water transfers on a short-term or long-term basis." (Wat. Code, § 10631, subd. [d]). The identification of such opportunities and the inclusion of those opportunities in a plan's general water service reliability analysis neither commits an urban water supplier to pursue a particular water exchange/transfer opportunity, nor precludes it from exploring exchange/transfer opportunities never identified in its plan. Before an urban water supplier is able to implement any potential future sources of water supply identified in a plan, detailed project plans are prepared and approved, financial and operational plans are developed and all required environmental analysis is completed.

"A plan is intended to function as a planning tool to guide broad-perspective decision making by the management of water suppliers." (*Sonoma County Water Coalition v. Sonoma County Water Agency* (2010) 189 Cal. App. 4th 33, 39.) It should not be viewed as an exact blueprint for supply and demand management. Water management in California must address uncertainty. Planning projections may change in response to a number of factors that are associated with uncertainty such as climate change, population growth and water demand. The California Supreme Court has recognized the uncertainties inherent in long-term land use and water planning and observed that the generalized information required . . . in the early stages of the planning process are replaced by firm assurances of water supplies at later stages." (*Id.*,at 41.) From this perspective, it is appropriate to look at the UWMP as a general planning framework, not a specific action plan. It is an effort to generally answer a series of planning questions such as:

- What are the potential sources of supply and what amounts are estimated to be available from them?

- What is the projected demand, given a reasonable set of assumptions about growth and implementation of good water management practices?

- How do the projected supply and demand figures compare and relate to each other?

Using these "framework" questions and resulting answers, the implementing agency or agencies will pursue feasible and cost-effective options and opportunities to develop supplies and meet demands.

As further detailed in this Plan, the PWD will continue to explore enhancing and managing supplies from existing sources such as imported water as well as other options. These may include groundwater extraction, water exchanges and transfers, water conservation, water recycling, brackish water desalination, and water banking/conjunctive use. Additional specific planning efforts may be undertaken in regard to each option, involving detailed evaluations of how each option would fit into the overall supply/demand framework, potential environmental impacts, and how each option would affect customers.

The UWMP Act requires preparation of a plan that, among other things:

- Accomplishes water supply planning over a 20-year period in five year increments (PWD is going beyond the requirements of the Act by developing a plan which spans twenty-five years to 2040).

- Identifies and quantifies existing and projected water supplies and water supply opportunities, including recycled water, for existing and future demands, in normal, single-dry and multiple-dry years.

- Implements conservation and efficient use of urban water supplies.

Additionally, Senate Bill 7 of Special Extended Session 7 (SBX7-7) was signed into law in November 2009, which calls for progress towards a 20 percent reduction in per capita water use statewide by 2020. SBX7-7, otherwise referred to as the Water Conservation Act of 2009, requires each urban retail water supplier to develop and report a water use target in its 2010 UWMP, and to develop and report an interim 2015 water use target, baseline daily per capita use, and 2020 compliance daily per capita use, along with the basis for determining those estimates. Beginning in 2016, retail water suppliers are required to comply with the water conservation requirements in SBX7-7 in order to be eligible for State water grants or loans. Water suppliers have the ability to revisit the SBX7-7 baseline and water use targets determined in the 2010 UWMPs and update them in the 2015 UWMP updates.

SBX7-7 provides four possible methods for a retail water supplier to use to calculate its water use target. The California Department of Water Resources (DWR) has also developed methodologies for calculating base daily per capita water use; baseline commercial, industrial and institutional (CII) water use; compliance daily per capita water use; gross water use; service area population; indoor residential water use and landscape area water use. In addition, if the 2010 census was not utilized for the SBX7-7 calculations in the 2010 UWMP, that data must be used to update the calculations in the 2015 Plan.

In addition to the relatively new requirements of SBX7-7, a number of other changes to the Water Code have been enacted since 2010 which apply to the preparation of the 2015 Plan updates. These changes include:

- Demand Management Measures California Water Code (CWC) Section 10631(f)(1) and (2). (Assembly Bill 2067, 2014)
- Submittal Date CWC Section 10621(d). (Assembly Bill 2067, 2014)
- Electronic Submittal CWC Section 10644(a)(2). (Senate Bill 1420, 2014)
- Standardized Forms CWC Section 10644(1a)(2). (Senate Bill 1420, 2014)
- Water Loss CWC Section 10631(e)(1)(J) and (e)(3)(A) and (B). (Senate Bill 1420, 2014)
- Estimating Future Water Savings CWC Section 10631(e)(4). (Senate Bill 1420, 2014)
- Voluntary Reporting of Energy Intensity CWC Section 10631.2(a) and (b). (Senate Bill 1036, 2014)
- Defining Water Features CWC Section 10632(b). (Assembly Bill 2409, 2014)

A checklist to ensure compliance of this Plan with the UWMP Act requirements is provided in Appendix A.

It is the stated goal of the PWD to deliver a reliable and high quality water supply to its customers, even during dry periods. Based on conservative water supply and demand assumptions over the next twenty-five years in combination with conservation of non-essential demands during normal and dry water years, the 2015 UWMP successfully achieves this goal.

1.3 Basis for Preparing a Plan

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 a UWMP every five years. The 2015 UWMP shall be updated and submitted to DWR by July 1, 2016.

Revisions to the CWC directed DWR to develop standardized tables for the reporting and submittal of UWMP data. Water agencies are required to submit UWMP data electronically to DWR using the standardized tables. The standardized tables were prepared for this Plan and are included as Appendix B.

1.4 Implementation of the Plan

PWD has a contract with the State of California, through DWR, to acquire and distribute State Water Project (SWP) water to customers within the City of Palmdale and adjacent unincorporated areas of Los Angeles County. The entire service area encompasses an area of approximately 140 square miles overlying more than thirty non-contiguous areas scattered throughout the southern Antelope Valley. In addition to the primary service area, there is a federal land area of approximately 65 square miles upstream of Littlerock Dam in the Angeles National Forest. This subsection provides the cooperative framework within which the Plan will be implemented including agency coordination, public outreach and resources maximization.

1.4.1 Public Water Systems

Public water systems (PWSs) provide drinking water for human consumption and are regulated by the State Water Resources Control Board Division of Drinking Water (SWRCB DDW). PWSs are required to electronically file Annual Reports to the Drinking Water Program with the SWRCB DDW, which include water usage and other information.

Table 1-1 provides the name and number of the PWS (drinking water only) that is covered by this UWMP.

TABLE 1-1: RETAIL PUBLIC WATER SYSTEM

Public Water System Number	Public Water System Name	Number of Municipal Connections 2015	Volume of Water Supplied 2015 (AF)
CA1910102	Palmdale Water District	26,508	17,015

1.4.2 Fiscal or Calendar Year

A water supplier may report on a fiscal year or calendar year basis, but must clearly state in its 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. This plan provides data consistent with a calendar year, in acre-feet per year (AFY).

1.5 Cooperative Preparation of the Plan and Public Outreach

The UWMP Act requires that the water agency identify its coordination with appropriate nearby agencies. The PWD's 2015 UWMP is intended to address those aspects of the UWMP Act which are under the control of the PWD, specifically water supply and water use. While preparing the 2015 UWMP, the PWD coordinated its efforts with relevant agencies to ensure data and issues are presented accurately.

The PWD has encouraged community participation in water planning. Interested groups were informed about the development of the Plan along with the schedule of public activities. Notices of public meetings were published in the local press and on the PWD's website. Copies of the draft UWMP were sent to the City of Palmdale, the City of Lancaster, and Los Angeles County for review and comment, in addition to other local water agencies as noted in Table 1-2. Water resource specialists with expertise in water resource management were retained to assist the PWD in preparing the details of its Plan.

Table 1-3 presents a timeline for public participation during the development of the Plan. A copy of the public outreach materials are provided in Appendix C.

TABLE 1-2: AGENCY COORDINATION SUMMARY

	Participated in UWMP Development	Received Copy of Draft	Commented on Draft	Attended Public Meetings	Contacted for Assistance	Sent Notice of Intent to Adopt	Not Involved
City of Palmdale	✓	✓					
City of Lancaster	✓	✓					
Los Angeles County Department of Regional Planning	✓	✓					
Littlerock Creek Irrigation District	✓	✓					
Los Angeles County Sanitation District	✓	✓					
Antelope Valley-East Kern Water Agency	✓	✓					
Quartz Hill Water District	✓	✓					
Rosamond Community Services District	✓	✓					
Los Angeles County Farm Bureau	✓	✓					
Los Angeles World Airports	✓	✓					
Los Angeles County Waterworks District No. 40	✓	✓					

1.5.1 Plan Adoption

The PWD began preparation of this UWMP in November 2015. The final version of the UWMP was adopted by the PWD Board on June 1, 2016 and submitted to DWR, the California State Library, the City of Palmdale, the City of Lancaster, and to Los Angeles County within thirty days of Board approval. This Plan includes all information necessary to meet the requirements of Water Conservation Act of 2009 (Wat. Code, §§ 10608.12-10608.64) and the Urban Water Management Planning Act (Wat. Code, §§ 10610-10656).

TABLE 1-3: PUBLIC PARTICIPATION TIMELINE

Date	Event	Details
Nov. 30, 2015	Kick-off Meeting	Describe UWMP requirements and process
May 18, 2016	Public Draft UWMP	Public Draft released to solicit input
June 1, 2016	Public Hearing	Review contents of Public Draft UWMP and take comments
June 1, 2016	Board Approval	UWMP and WSCP considered for approval by the Board

1.5.2 Resources Maximization

Several documents were developed to enable the PWD to maximize the use of available resources and minimize, including the PWD's 2010 UWMP (RMC 2011), the PWD's Recycled

Water Facilities Plan (RMC 2010), the Palmdale Recycled Water Authority Recycled Water Facilities Master Plan (Carollo 2015), the Antelope Valley Integrated Regional Water Management Plan (2013), DWR's 2015 State Water Project Delivery Capability Report (DWR 2015), PWD's 2015 Draft Water System Master Plan (MWH 2016), Consumer Confidence Reports, the Antelope Valley Salt and Nutrient Management Plan, and personal communication with PWD staff. Section 3 of this Plan describes in detail the water resources available to the PWD for the twenty-five-year period covered by the Plan. A complete reference list is provided in Section 9 of this Plan.

1.6 Water Management within PWD's Service Area

1.6.1 Palmdale Water District

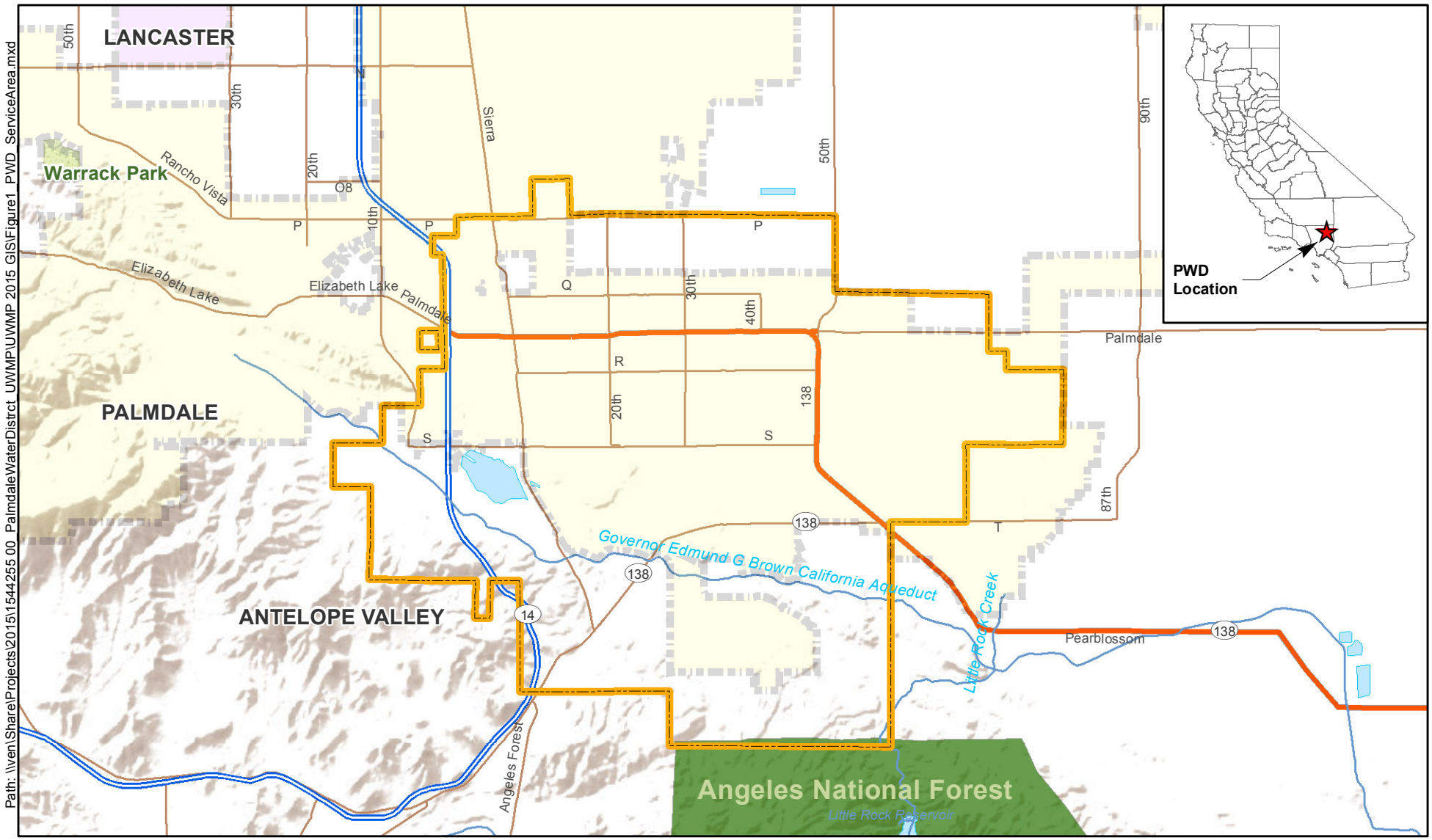
The PWD is located within the Antelope Valley in Los Angeles County, approximately 60 miles north of the City of Los Angeles and includes the central and southern portions of the City of Palmdale and adjacent unincorporated areas of Los Angeles County, as shown in Figure 1-1. The City of Palmdale's nearest neighbor, Lancaster, is approximately 10 miles to the north. The Antelope Valley Freeway (State Highway 14) runs north-south and Pearblossom Highway (State Highway 138) meanders in an east-west direction through the PWD.

The PWD was established in 1918 as the Palmdale Irrigation District. The primary function of the PWD is to provide retail water service within its service area. Under the provisions of the CWC relating to the establishment of irrigation districts, the PWD has the power to carry out any act to provide sufficient water for present and future beneficial uses, including construction and operation of facilities to store, regulate, divert and distribute water for use within its boundaries.

Until the 1950s, the area within Palmdale Irrigation District's boundaries was primarily agricultural. However, with the activation of Air Force Plant 42 and the increased use of Edwards Air Force Base, agricultural water use diminished. As populations grew within the Antelope Valley, the shift to domestic water began. In 1963, the Palmdale Irrigation District entered into an agreement to purchase water from the newly planned State Water Project (SWP). This agreement guarantees the Palmdale Irrigation District will have sufficient imported source water to supply projected population growth well into its future.

To contain the anticipated increased water supply, bonds were sold to rebuild and expand Palmdale Lake (formerly known as Harold Reservoir) to an increased capacity of over 4,100 AF. This bond financing also allowed the construction of a new treatment facility adjacent to the Lake allowing Palmdale Irrigation District to serve a broader area of Palmdale. In 1973 the Palmdale Irrigation District name was changed to the more appropriate PWD. Founded as an irrigation district supplying water mainly to farms for agricultural use, the PWD's boundaries had expanded with Palmdale's rapid population growth and the PWD shifted to providing predominantly municipal and industrial water supply. The PWD now acts as a retailer of water supplies for municipal, residential, irrigation, commercial, industrial, and institutional users.

PWD has continued to improve and add to its water distribution and storage facilities. The PWD's primary service area now covers approximately 29,440 acres (46 square miles). The distribution system encompasses approximately 400 miles of pipeline, multiple well sites, booster pumping stations, and water storage tanks maintaining a total storage capacity of over 50 million gallons.



Legend

- Palmdale Water District (PWD) Boundary
- City of Lancaster Boundary
- City of Palmdale Boundary

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2015 Urban Water Management Plan
Palmdale, California

Palmdale Water District Service Area Boundary

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Figure 1

1.7 Climate

The climate in PWD's service area is characterized by wide temperature fluctuations, hot summers, cold winters, strong winds, low humidity and scant rainfall. Temperatures in the summer months vary between 54 degrees Fahrenheit (°F) and 94 °F. In the winter months, the average temperature extremes vary from 28 to 67 °F, respectively. Most of the precipitation occurs during the winter and spring months. Over the last five years precipitation has averaged less than 1 inch. Table 1-4 shows the average, monthly evapotranspiration (ETo), rainfall, and temperature data for the PWD.

TABLE 1-4: CLIMATE DATA

Monthly Average Climate Data Summary

Month	Standard Monthly Average ETo (inches)	Average Total Rainfall (inches)	Average Temperature (°F)	
			Max	Min
January	2.31	1.07	59.38	28.15
February	3.06	0.89	62.86	31.44
March	4.98	1.00	67.24	35.01
April	6.35	0.37	71.83	39.40
May	8.25	0.20	79.42	46.84
June	9.14	0.01	88.28	53.92
July	9.58	0.10	94.25	61.31
August	8.80	0.32	93.95	59.14
September	6.37	0.23	89.08	52.57
October	4.50	0.33	77.23	42.24
November	2.89	0.36	67.20	33.28
December	1.98	0.82	57.23	28.26

Source: California Irrigation Management System (CIMIS) data provided from Station No. 197, Los Angeles Region, April 2005 – April 2016 http://wwwcimis.water.ca.gov/cimis/welcome.jsp.

1.8 Potential Effects of Climate Change

A topic of growing interest and research for water planners and managers is climate change and the potential impacts it could have on California's future water supplies. DWR's California Water Plan Update 2013 considers how climate change may affect water availability, water use, water quality, and the ecosystem (DWR 2014b).

Volume 1, Chapter 5 of the California Water Plan, "Managing an Uncertain Future," evaluated three different scenarios of future water demand based on alternative but plausible assumptions on population growth, land use changes, water conservation and future climate change. Future updates will test different response packages, or combinations of resource management strategies, for each future scenario. These response packages help decision-makers, water managers, and planners develop integrated water management plans that provide for resource

sustainability and investments in actions with more sustainable outcomes. Further detailed guidance is currently being developed by the State of California and the United States Environmental Protection Agency (USEPA) for use in integrated regional water management planning.

California faces the prospect of additional water management challenges due to a variety of issues including population growth, regulatory restrictions and climate change. Climate change is of particular interest because of the range of possibilities and their potential impacts on essential operations, including operations of the SWP. The most likely scenarios involve increased temperatures, which will reduce the Sierra Nevada snowpack and shift more runoff to winter months, and accelerated sea level rise. These changes can cause major challenges for the maintenance of the present water export system since water supplies are conveyed through the fragile levee system of the Sacramento-San Joaquin Delta. The other much-discussed climate change scenario is an increase in precipitation variability, with more extreme drought and flood events posing additional challenges to water managers (DWR 2014b).

In its 2015 State Water Project Delivery Capability Report (2015 DCR), DWR included the potential effects of climate change in its analysis of SWP delivery capability under future conditions, specifically, the changes to hydrology expected to occur from a 2025 emission level and a 15 centimeter (cm) sea level rise (DWR 2015). The current and projected availability and reliability of SWP supplies, including the potential effects of climate change, are further discussed in Section 3 of this Plan.

Even without population changes, water demand could increase. Precipitation and temperature influence water demand for outdoor landscaping and irrigated agriculture. Outdoor water use is a large component of water demands in the Antelope Valley. Lower spring rainfall increases the need to apply irrigation water. Further, warmer temperatures increase crop evapotranspiration, which increases water demand. These effects and their potential to impact demands are considered in Section 2 of this Plan.

1.9 Climate Change Vulnerability Analysis

Identification of watershed characteristics that could potentially be vulnerable to future climate change is the first step in assessing the climate change vulnerabilities in the Region. In the context of this analysis, vulnerability is defined as the degree to which a system is exposed to, susceptible to, and able to cope with and adapt to, the adverse effects of climate change, consistent with the definition in the recently issued Climate Change Handbook for Regional Water Planning (USEPA and DWR, 2011).

Water-related resources that are considered important in the Region and potentially sensitive to future climate change include water demands, water supplies, water quality, flooding, and ecosystem and habitat. A qualitative assessment of each of these resources with respect to anticipated climate change impacts has been prepared in the 2014 Integrated Regional Water Management Plan for the Antelope Valley Region. The assessment follows the climate change vulnerability checklist assessment as defined in the Climate Change Handbook for Regional Water Planning and highlights those water-related resources that are important to the Region and are sensitive to climate change. That assessment is incorporated herein and the checklist is provided as Appendix H.

Section 2: Water Use

2.1 Overview

This section describes historical and current water usage and the methodology used to project future demands within the PWD's service area. Water usage is divided into sectors such as residential, industrial, commercial, landscape, and other. To undertake this evaluation, existing land use data and population projections were evaluated. This information was then compared to historical trends for new water service connections and customer water usage information. In addition, weather and water conservation effects on historical water usage were considered in the evaluation. Several factors can affect demand projections, including:

- Land use revisions
- New regulations
- Consumer choice
- Economic conditions
- Transportation needs
- Environmental factors
- Conservation programs
- Building and plumbing codes

The foregoing factors affect the amount of water needed, as well as the timing of when it is needed and available. During an economic recession, there is a major downturn in development and a subsequent slowing of the projected demand for water. The projections in this UWMP do not attempt to forecast recessions or droughts. Likewise, no speculation is made about future building and plumbing codes or other regulatory changes. However, the projections do include water conservation consistent with new legislative requirements calling for a 20 percent reduction in per capita demand by 2020 (SBX7-7).

An analysis was performed that combined growth projections with water use data to forecast total water demand in future years. Water uses were broken out into specific categories and assumptions made about each to more accurately project future use. Three separate data sets were collected and included in the assessment; historical water use by land-use type, current population and projected population.

2.2 Demographics

Water service is provided to residential, commercial, industrial, and institutional customers, and for environmental and other uses, such as fire protection and landscaping. The total demand trend on water supplies is expected to continue to rise within the Antelope Valley area (along with most of California) because of population growth, planned development, economic activity, environmental and water quality needs and regulatory requirements.

2.3 Population

The PWD currently serves approximately 26,500 active connections, the majority of which (96 percent) are residential. Commercial connections account for approximately 3 percent, landscape irrigation connections account for about 1 percent.

The PWD has experienced steady population growth, with over 20 percent population increase since 2000. Table 2-1 shows the current and projected service area population in five-year increments to Year 2040. Population projections presented here are based on the PWD Water Master Plan Draft Report (MWH 2016). Projections were determined by using Southern California Association of Governments (SCAG) growth percentages for the City of Palmdale and applying them to the population recorded in the 2010 census within the PWD boundary. The current population (2015) shown below was calculated with the DWR population tool and is only slightly higher than the 2015 value of the Water Master Plan Draft Report.

TABLE 2-1: POPULATION – CURRENT AND PROJECTED

Population Served[(a)]	2015	2020	2025	2030	2035	2040
	118,227[(b)]	131,200	137,700	144,300	150,800	157,300

Notes:
(a) Source of 2020-2040 projections: PWD Draft Water Master Plan, September 2014, Table 2-5, "Adjusted SCAG Population Projections".
(b) 2015 population number is based on the DWR population tool (printout provided in Appendix D).

2.4 Historical Water Use

2.4.1 Historical Water Deliveries

Predicting future water use requires accurate historical water use patterns and water usage records. The PWD has meters on all residential, commercial and landscape service connections in the service area and requires meters on all new connections. The PWD provides potable water service to customers within its service area, and serves supplemental water to several customers outside its primary service area in accordance with agreements made with the Antelope Valley-East Kern Water Agency (AVEK).

The historical use of all water supplies used to meet the PWD's municipal water requirements by water use sector are summarized in Table 2-2 for the year 2010 and 2015.

TABLE 2-2: HISTORICAL WATER DELIVERIES (AF)

Water Use Sector	2010	2015[(a)]
Single family	12,944	10,251
Multi-family	1,831	1,276
Commercial	1,542	863
Industrial	1,697	1,548
Institutional/Governmental	0	0
Landscape	752	744
Other[(b)]	112	41
Total	**18,878**	**14,723**

Note:
(a) Data provided by PWD Staff. 2010 and 2015 values from District "Water Analysis" Database; 2015 values represent consumption. 2015 production was 17,015 AF as shown in Table 1-1.
(b) Other uses include water for street sweeping and other various limited use meters at City and school facilities.

2.4.2 Historical Sales and Deliveries to Other Water Agencies

The PWD currently has arrangements with AVEK and Littlerock Creek Irrigation District (LCID) to provide treatment and delivery of raw water received from those agencies. Specifically, AVEK and LCID provide raw water to the PWD, which is then treated and passed on to AVEK and LCID customers. These deliveries are described in Table 2-3.

As no additional PWD supplies are provided to AVEK or LCID with these treatment and delivery arrangements, those deliveries have no effect on PWD demands or supplies. Therefore, these deliveries are not accounted for in total PWD demands or supplies. No other arrangements for delivery or sales to other agencies currently exist with the PWD.

TABLE 2-3: DELIVERIES TO OTHER AGENCIES (AF)[(a)]

Agency	2010	2011	2012	2013	2014	2015
LCID	2	2	2	2	8	1
AVEK	0	0	168	638	690	431
Total	**2**	**2**	**170**	**640**	**698**	**432**

Notes:
(a) Data provided by PWD staff. As described above, these deliveries do not constitute sales to other agencies and due to the pass through nature of these supplies are not being accounted for in total district demands.

2.4.3 Historical Other Water Uses

In addition to the traditional demand sources, there is another component that impacts the PWD's water resources known as system water losses. This component is typically defined as the difference between water production and water sales. These water losses can come from authorized, but unmetered sources, such as firefighting and main flushing, or unauthorized sources such as leakage, illegal connections, and inaccurate flow meters.

For the 2015 UWMPs, water retailers must use the 'distribution system loss' methodology provided by DWR to calculate these losses. The method is based on American Water Works Association's (AWWA) M36 Manual. The assessment is provided in Appendix E for the year 2014. In 2014, real losses (actual leaks) were calculated to be three percent of water supplied while apparent losses (loss due to meter reading inaccuracies, data handling errors and

unauthorized consumption) were found to be five percent of water supplied. Other non-revenue consumption, which consists of unbilled authorized consumption such as water for firefighting and main and sewer flushing, was found to make up about 1.25 percent of water supplied. The results of the 2014 audit are presented in Table 2-4.

TABLE 2-4: DISTRIBUTION SYSTEM WATER LOSS[(a)]

Water Audit Reporting Year	Real Loss (AF)	% of Supplies	Apparent Loss (AF)	% of Supplies	Other Unbilled Use (AF)	% of Supplies
2014	601	3%	1,045	5%	249	1%

Note:
(a) Based on the most recent 12-month period available (beginning January 2014).

Table 2-5 provides a summary of historical "other" water uses besides metered deliveries and sales to other agencies.

TABLE 2-5: HISTORICAL "OTHER" WATER USES (AF)

Water Use	2010	2015
Groundwater Recharge/Storage/Banking	0	0
Long Term System Storage	0	0
Saline Water Intrusion Barrier	0	0
Agricultural Irrigation	0	0
Other (unbilled authorized)[(a)(b)]	240	180
System Losses (real and apparent losses)[(b)]	1,510	1,180
Total	**1,750**	**1,360**

Notes: Values are rounded
(a) Unbilled authorized consumption is water that is used by customers known to the water system but is not billed (ex., firefighting, street cleaning, etc.).
(b) Unbilled authorized and system losses for 2010 and 2015 are estimated based on average losses from 2013 and 2014 audit reports compared to total deliveries in 2010 and 2015 (Table 2-2). Based on this approach, it is assumed that water deliveries presented in Table 2-2 already capture these non-revenue uses.

2.5 Existing and Targeted Per Capita Water Use

The Water Conservation Act of 2009 (SBX7-7) is one of four policy bills enacted as part of the November 2009 Comprehensive Water Package (Special Session Policy Bills and Bond Summary). The Water Conservation Act of 2009 provides the regulatory framework to support the goal of achieving a statewide reduction in urban per capita water use described in the 20x2020 Water Conservation Plan (DWR, 2010). Consistent with SBX7-7, each water supplier must determine and report its existing baseline water consumption and establish water use targets in gallons per capita per day (GPCD), and compare actual water use against the target. The primary calculations required by SBX7-7 are summarized in Table 2-6.

TABLE 2-6: SBX7-7 CALCULATIONS

	2010 UWMP	2015 UWMP	2020 UWMP
Base Daily Water Use calculation (average GPCD used in past years)	First calculated and reported in 2010 plan	May be revised in 2015 Plan; must be revised if 2010 Census data not used in original calculation	NA
Interim Water Use Target (target GPCD in 2015)	First calculated and reported in 2010 plan	May be revised in 2015 Plan; must be revised if 2010 Census data not used in original calculation	NA
Compliance Water Use Target (target GPCD in 2020)	First calculated and reported in 2010 plan	May be revised in 2015 Plan; must be revised if 2010 Census data not used in original calculation	NA
Actual 2015 Water Use (in GPCD)	NA	In 2015 Plan must compare actual 2015 GPCD against 2015 target	NA
Actual 2020 Water Use (in GPCD)	NA	NA	In 2020 Plan must compare actual 2020 GPCD against 2020 target

In the 2015 UWMP water agencies must demonstrate compliance with the target established for 2015 and demonstrate that the agency is on track to achieve its 2020 target. Compliance is done through review of the SBX7-7 Verification Tables submitted with the 2015 Plan (included as Appendix B).

The PWD first reported its Base Daily Water Use in its 2010 UWMP. At the time the 2010 UWMP was prepared full Census data was not available. The PWD was therefore required to redo the Base Daily Water Use calculation in this UWMP.

The Base Daily Water Use calculation is based on gross water use by an agency in each year and can be based on a ten-year average ending no earlier than 2004 and no later than 2010 or a 15-year average if ten percent of 2008 demand was met by recycled water. Base Daily Water Use must account for all water sent to retail customers, excluding:

- Recycled water
- Water sent to another water agency
- Water that went into storage

It is at an agency's discretion whether or not to exclude agricultural water use from the Base Daily Water Use calculation. If agricultural water use is excluded from the Base Daily Water Use calculation it must also be excluded from the calculation of actual water use in later urban water management plans. The PWD did not supply water to agriculture during the period 1995 to 2010 and so agricultural water does not factor into the revised SBX7-7 calculations.

An urban retail water supplier must set a 2020 water use target (herein called the Compliance Water Use Target) and a 2015 interim target (herein called the Interim Water Use Target). There are four methods for calculating the Compliance Water Use Target:

1. Eighty percent of the urban water supplier's baseline per capita daily water use

2. Per capita daily water use estimated using the sum of the following:
    a. For indoor residential water use, 55 gallons per capita daily water use as a provisional standard. Upon completion of DWR's 2016 report to the Legislature reviewing progress toward achieving the statewide 20 percent reduction target, this standard may be adjusted by the Legislature by statute.
    b. For landscape irrigated through dedicated or residential meters or connections, water use efficiency equivalent to the standards of the Model Water Efficient Landscape Ordinance set forth in section 490 et seq. of Title 23 of the California Code of Regulations, as in effect the later of the year of the landscape's installation or 1992.
    c. For CII uses, a ten percent reduction in water use from the baseline CII water use by 2020.
3. Ninety-five percent of the applicable state hydrologic region target as stated in the 2010 DWR "20x2020 Water Conservation Plan" (February, 2010) (20x2020 Plan). The PWD falls within the South Lahontan Hydrologic Region (95 percent target for this region is 162).

4. Reduce the 10 or 15-year Base Daily Per Capita Water Use a specific amount for different water sectors:
    a. Indoor residential water use to be reduced by 15 GPCD or an amount determined by use of DWR's "BMP Calculator".
    b. A 20 percent savings on all unmetered uses.
    c. A 10 percent savings on baseline CII use.
    d. A 21.6 percent savings on current landscape and water loss uses.

The Interim Water Use Target is set as a halfway point between the Base Daily Water Use GPCD and the 2020 Compliance Water Use Target GPCD.

Finally, the selected Compliance Water Use Target must be compared against what DWR calls the "Maximum Allowable GPCD". The Maximum Allowable GPCD is based on 95 percent of a 5-year average base gross water use ending no earlier than 2007 and no later than 2010. The Maximum Allowable GPCD is used to determine whether a supplier's 2015 and 2020 per capita water use targets meet the minimum water use reduction requirements of SBX7-7. If an agency's Compliance Water Use Target is higher than the Maximum Allowable GPCD, the agency must instead use the Maximum Allowable GPCD as its target. As shown below, the Maximum Allowable GPCD does not apply to the PWD.

2.5.1 Base Daily Per Capita Water Use

Figure 1-1 illustrates the PWD's service area used to estimate the Base Daily Per Capita Water Use. Tables 2-7 and 2-8 summarize the Base Daily Water Use calculation for the PWD. As is shown in these tables, the PWD is not eligible to use a 15-year base period. Years 1995 to 2004 have been selected for calculation of the 10-year base period while years 2004 to 2008 have been selected for calculation of the 5-year base period.

TABLE 2-7: BASELINE PERIOD RANGES

Baseline	Parameter	Value	Units
10 to 15 year baseline period	2008 total water deliveries	25,339	AFY
	2008 total volume of delivered recycled water	0	AFY
	2008 recycled water as a percent of total deliveries	0	Percent
	Number of years in baseline period[(a)]	10	Years
	Year beginning baseline period range	1995	-
	Year ending baseline period range[(b)]	2004	-
5 year baseline period	Number of years in baseline period	5	Years
	Year beginning baseline period range	2003	-
	Year ending baseline period range[(c)]	2007	-

Notes:
(a) If the 2008 recycled water percent is less than 10 percent, then the first baseline period is a contiguous 10-year period. If the amount of recycled water delivered in 2007 is 10 percent or greater, the first baseline period is a contiguous 10 to 15 year period.
(b) The ending year must be between December 31, 2004 and December 31, 2010.
(c) The ending year must be between December 31, 2007 and December 31, 2010.

In order to calculate Base Daily Per Capita Water Use for past years, it was necessary to develop population estimates for past years. The population for the PWD service area was calculated for 1990, 2000, 2010 and 2015 using the DWR online population tool (printout provided in Appendix D).

This was accomplished using a Geographic Information System (GIS) interface to derive population. By adding shape files for the entity service area boundaries or public water system boundary in 1990, 2000, and 2010, population is derived using U.S. Census Bureau census tract data from census years. Then, along with PWD production and service connections, the DWR population tool derives a person's-per-connection number, which is used to determine population in the intervening years between 1990 and 2010.

As shown in the top portion of Table 2-8, the PWD's 10-year Baseline GPCD is estimated to be 231. As shown in the second tier of Table 2-8, the PWD's 5-year Baseline GPCD is 229.

TABLE 2-8: BASELINE DAILY PER CAPITA WATER USE

Year		Service Area Population	Gross Water Use (AFY)	Daily Per Capita Water Use
10 to 15 Year Baseline GPCD				
1	1995	79,578	22,233	249
2	1996	88,785	23,514	236
3	1997	89,675	23,152	230
4	1998	90,540	20,626	203
5	1999	91,375	23,398	229
6	2000	92,172	25,901	251
7	2001	98,516	25,220	229
8	2002	99,649	25,670	230
9	2003	100,788	24,909	221
10	2004	104,237	26,684	229
10 to 15 Year Average Baseline GPCD				**231**
5 Year Baseline GPCD				
Year		**Service Area Population**	**Gross Water Use (AFY)**	**Daily Per Capita Water Use**
1	2003	100,788	24,909	221
2	2004	104,237	26,684	229
3	2005	104,120	26,128	224
4	2006	105,754	27,934	236
5	2007	107,396	28,152	234
5 Year Average Baseline GPCD				**229**
2015 Compliance Year GPCD				
2015		118,227	17,015	**128**

2.5.2 Compliance Water Use Targets

As explained above, SBX7-7 requires that the PWD identify its demand reduction targets for years 2015 and 2020 by utilizing one of four options.

- Option 1: 80% of baseline GPCD water use (i.e., a 20% reduction).
- Option 2: The sum of the following performance standards: indoor residential use (provisional standard set at 55 GPCD); plus landscape use, including dedicated and residential meters or connections equivalent to the State Model Landscape Ordinance (80% ETo existing landscapes, 70% of ETo for future landscapes); plus 10% reduction in baseline commercial, industrial institutional use by 2020.
- Option 3: 95% of the applicable state hydrologic region target as set in the 2010 DWR 20x2020 Plan.
- Option 4: Savings by Water Sector: this provisional method developed by DWR, identifies water savings obtained through identified practices and subtracts

them from the base daily per capita water use value identified for the water supplier.

Options 2 and 4 were considered and not selected because they required data not currently being collected within the PWD's service area.

The PWD service area is located within the South Lahontan Hydrologic Region as defined by DWR and this hydrologic region has been assigned a 2020 water use target of 162 GPCD per the DWR 20x2020 Water Conservation Plan. Therefore, in order to use Option 3, the PWD's daily per capita water use for the 5-year base period would have to be close to 95 percent of the 162 GPCD target, or 154 GPCD. Since the PWDs' 5-year base period is greater than this limit, this option was not chosen as the target method.

The PWD has selected Option 1, a 20 percent reduction of ten-year baseline per capita use. The ten-year baseline per capita use was 231 GPCD, requiring a reduction to 185 GPCD (231 x .80=185) with a 208 GPCD 2015 Interim Target. These calculations are summarized in Table 2-9.

As shown in Table 2-8, the PWD had a 2015 GPCD of 128, which means the PWD has met the 2015 Interim Target, as well as the 2020 Compliance Target.

TABLE 2-9: COMPONENTS OF TARGET DAILY PER CAPITA WATER USE

Period	Value		Unit	
10-year period selected for baseline GPCD	*First Year*	*1995*	*Last Year*	*2004*
5-year period selected for maximum allowable GPCD	*First Year*	*2003*	*Last Year*	*2007*
Highest 10-year Average	231		GPCD	
Highest 5-year Average	229		GPCD	
Compliance Water Use Target (20% Reduction on 10yr)	185		GPCD	
Max Allowable Water Use Target (5% Reduction 5yr)	218		GPCD	
2020 Target	**185**		GPCD	
2015 Interim Target	**208**		GPCD	
Methodology Used	Option #1			

The PWD plans to maintain progress on meeting the 20x2020 water use targets through the continuation of existing methods of conservation that have been proven successful to date, and other methods discussed in Section 7 Demand Management Measures.

2.6 Projected Water Use

2.6.1 Water Delivery Projections

The PWD's projected water deliveries were estimated considering various factors, including historical and current demands, anticipated water conservation bounce-back, and population projections.

Projected water deliveries assume that there will be an increase by 10 percent above current demands (starting in 2020) resulting from a conservation "bounce-back". This bounce-back effect is based on the assumption that drought conditions resulted in greater than usual water

demand reductions, particularly in 2015, which will diminish slightly once water conditions normalize again.

Projections through 2040 assume that water demands will grow at a similar rate to the population projections that are presented in Section 2.3 (approximately 2% over the 20-year planning horizon). Population projections are based on the PWD Water Master Plan Draft Report (MWH 2015). Water delivery projections are presented in Table 2-10.

In addition, recent legislation provides that "if available and applicable" to the PWD, demand 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. If such information is reported, the assessment will provide citations of the various codes, standards, ordinances, or transportation and land use plans utilized in making the projections. This UWMP does not include such savings in the demand projections.

TABLE 2-10: PROJECTED WATER DELIVERIES (AF)

Water Use Sector	2020	2025	2030	2035	2040
Single family	14,500	15,200	15,900	16,600	17,300
Multi-family	1,800	1,900	2,000	2,100	2,200
Commercial	1,200	1,300	1,300	1,400	1,500
Industrial	2,200	2,300	2,400	2,500	2,600
Institutional/Governmental	-	-	-	-	-
Landscape	1,000	1,100	1,200	1,200	1,300
Other	100	100	100	100	100
Total	**20,800**	**21,900**	**22,900**	**23,900**	**25,000**

Note: Values are rounded.

2.6.2 Projected Sales and Other Water Uses

Currently no water sales to other agencies are anticipated for the future. Based on recent water loss analyses, system losses (real and apparent) are assumed to be approximately eight percent of supplied water and other non-revenue water is assumed to account for approximately one percent. These estimated water uses are shown in Table 2-11 and are accounted for in total deliveries shown in Table 2-10.

TABLE 2-11: FUTURE SALES AND "OTHER" WATER USES (AF)

Water Use Type	2020	2025	2030	2035	2040
Sales to Other Agencies	0	0	0	0	0
Groundwater Recharge/Storage/Banking	0	0	0	0	0
Long Term System Storage	0	0	0	0	0
Saline Water Intrusion Barrier	0	0	0	0	0
Agricultural Irrigation	0	0	0	0	0
Other (unbilled authorized)[(a)(b)]	260	270	290	300	310
System Losses (real and apparent losses)[(c)]	1,660	1,740	1,830	1,910	1,990
Total	**1,920**	**2,010**	**2,120**	**2,210**	**2,300**

Notes: Values are rounded.
(a) Unbilled authorized consumption is water that is used by customers known to the water system but is not billed (ex., firefighting, street cleaning, etc.).
(b) Calculated as 1.25% of total deliveries from Table 2-10. It is assumed that these uses are already captured in water delivery projections.
(c) Calculated as 8% of total deliveries from Table 2-10. It is assumed that these uses are already captured in water delivery projections.

2.6.3 Lower Income Projected Water Demands

The UWMP Act requires that water use projections of a UWMP include the projected water use for single-family and multi-family residential housing for lower income households as identified in the housing element of any city, county, or city and county general plan in the service area of the supplier.

Based on a GIS analysis using census data, disadvantaged communities (DACs) made up approximately 50 percent of the PWD service area population in 2010. For purposes of estimating water use projections for the PWD's lower income households, the proportion of lower income households within the PWD's service area is assumed to be 50 percent through 2040. Related demands are presented in Table 2-12 and are accounted for in total water demands described in Section 2.5.

TABLE 2-12: PROJECTIONS OF FUTURE LOW-INCOME HOUSEHOLD WATER USE (AF)

Water Use	2020	2025	2030	2035	2040
Estimated Lower Income Water Use[(a)]	8,100	8,500	8,900	9,300	9,700

Notes: Values are rounded.
(a) Calculated as 50 percent of the single-family and multi-family residential demands presented in Table 2-10.

In addition, the PWD will not deny or condition approval of water services, or reduce the amount of services applied for by a proposed development that includes housing units affordable to lower income households unless one of the following occurs:

- The PWD specifically finds that it does not have sufficient water supply;
- The PWD is subject to a compliance order issued by the SWRCB DDW that prohibits new water connections; or

- The applicant has failed to agree to reasonable terms and conditions relating to the provision of services.

2.7 Weather Effects on Water Usage

A major factor that affects water usage is weather. Historically, when the weather is hot and dry, water usage increases. The amount of increase varies according to the number of consecutive years of hot, dry weather and the conservation activities imposed. During cool, wet years, historical water usage has decreased, reflecting less water usage for exterior landscaping. Even without population changes, water demand could increase. Precipitation and temperature influence water demand for outdoor landscaping; outdoor water use is a large component of water demands in the Antelope Valley. Lower spring rainfall increases the need to apply irrigation water. Further, warmer temperatures increase crop evapotranspiration, which increases water demand.

2.7.1 Conservation Effects on Water Usage

In recent years, water conservation has become an increasingly important factor in water supply planning and management in California. Over the past ten years there have been a number of regulatory changes related to conservation including new standards for plumbing fixtures, a new landscape ordinance, a state universal retrofit ordinance, new Green Building standards, demand reduction goals and more. The California plumbing code has also instituted requirements for new construction that mandate the installation of ultra-low-flow toilets and low-flow showerheads.

During the current drought, Governor Brown issued a January 2014 drought proclamation and April 2014 emergency declaration, calling on urban water suppliers to implement their local water shortage contingency plans. In April 2015, following the lowest snowpack ever recorded, Governor Brown directed the SWRCB to implement mandatory water reductions to reduce water usage by 25 percent. In May 2015, the SWRCB adopted an emergency regulation requiring an immediate 25 percent reduction in overall potable urban water use and began tracking water conservation for each of the state's larger urban retail water suppliers. This statewide reduction target translated into a 32 percent local reduction requirement, which has resulted in PWD -issued emergency restrictions. In February 2016 and again in April 2016, the SWRCB approved updated and extended emergency regulations that continue mandatory reductions through January 2017, unless revised before then. The extended regulation provides more flexibility to urban water suppliers in meeting their conservation requirements and provides credits for certain factors that affect water use such as hotter-than-average climates, population growth, and significant investments in new local drought resilient water sources such as recycled water.

Residential, commercial, and industrial usage can be expected to decrease as a result of the implementation of more aggressive water conservation practices. In Southern California, the greatest opportunity for conservation is in developing greater efficiency and reduction in landscape irrigation. The irrigation demand can typically represent as much as seventy percent of the water demand for residential customers depending on lot size and amount of irrigated turf and plants. Conservation efforts will increasingly target this component of water demand. Details on demand management measures and the PWD's conservation program are provided in Section 7.

Section 3: Water Supply

3.1 Overview

This section describes the water resources available to the PWD for the 25-year period covered by this UWMP. The PWD currently receives water from three sources: groundwater, surface water from Littlerock Dam Reservoir, and imported water from the SWP. Groundwater is obtained from the Antelope Valley Groundwater Basin. This water is treated with chlorine disinfection and pumped directly into the District's potable distribution system. The PWD's imported water is provided by the SWP and is conveyed through the East Branch of the California Aqueduct to Lake Palmdale, which acts as a forebay for the PWD's 35 million gallon per day (MGD) water treatment plant. Lake Palmdale can store approximately 4,129 AF of SWP and Littlerock Dam Reservoir water.

The PWD currently does not have recycled water supplies but is in the process of developing the use of non-potable water to offset potable water demand and to diversify its water supply options. Future recycled water use is discussed in detail in Section 4. Additionally the PWD is developing new sources of supply via groundwater banking and anticipated new supplies from transfer and exchange opportunities, which are discussed in this section. The PWD does not currently nor does it have plans to use stormwater.

These supplies are summarized in Table 3-1 and discussed in more detail below. Both currently available and planned supplies are discussed.

This section also assesses supplies available to the PWD in an average year, a single dry year, and during multiple dry years.

- An average year (also called a normal year) is the average supply over a range of years and represents the median water supply available.
- The single-dry year is the year that represents the lowest water supply available.
- The multiple-dry year period is the lowest average water supply available for three or more consecutive dry years.

The term "dry" is used throughout this section and in subsequent sections concerning water resources and reliability as a measure of supply availability. As used in this Plan, dry years are those years when supplies are the lowest and demands are the highest, which occurs primarily when precipitation is lower than the long-term average precipitation. The impact of low precipitation in a given year on a particular source of supply may differ based on how low the precipitation is, or whether the year follows a high-precipitation year or another low-precipitation year. For the SWP, a low-precipitation year may or may not affect supplies, depending on how much water is in SWP storage at the beginning of the year. Also, dry conditions can differ geographically. For example, a dry year can be local to the Antelope Valley area (thereby affecting local groundwater replenishment and production, and yield from Littlerock Dam Reservoir), local to northern California (thereby affecting SWP water deliveries), or statewide (thereby affecting both local groundwater and the SWP). When the term "dry" is used in this Plan, statewide drought conditions are assumed, affecting both local groundwater and SWP supplies at the same time.

TABLE 3-1: SUMMARY OF CURRENT AND PROJECTED WATER SUPPLIES (AF)

		2015		2020	2025	2030	2035	2040
	Detail	Actual Volume	Level of Treatment	Reasonably Available Volume	Reasonably Available Volume	Reasonably Available Volume	Reasonably Available Volume	Reasonably Available Volume
Existing Supplies								
Groundwater[(a)]	Antelope Valley Groundwater Basin	11,200	Drinking Water	6,280	4,140	2,770	2,770	2,770
Groundwater[(a)]	Return Flow Credit	0	Drinking Water	5,000	5,000	5,000	5,000	5,000
Surface Water[(b)]	Littlerock Reservoir	500	Raw Water	4,000	4,000	4,000	4,000	4,000
Imported Water[(c)]	SWP Table A	5,800	Raw Water	13,200	13,000	13,000	13,000	13,000
Imported Water	Butte Transfer Agreement[(d)]	0	Raw Water	6,200	6,100	6,100	6,100	6,100
Recycled Water	LACSD[(e)]	100	Recycled Water	2,500	5,000	5,500	6,000	6,000
	Total Supplies	**17,600**	**-**	**37,180**	**37,240**	**36,370**	**36,870**	**36,870**

Notes: Values are rounded.
(a) See Section 3.2.1.3 for details.
(b) Projections based on estimated 50 percent of average historical yield (50 percent of 8,000 AFY). See Section 3.2.2.2.
(c) Projections assume Table A availability of 62% for 2020 and 61% thereafter, based on 2015 DCR. See Section 3.2.3.2.
(d) Projections assume Table A availability of 62% for 2020 and 61% thereafter, based on 2015 DCR. See Section 3.3.1.
(e) For details see Section 4.

3.2 Local Water Supplies

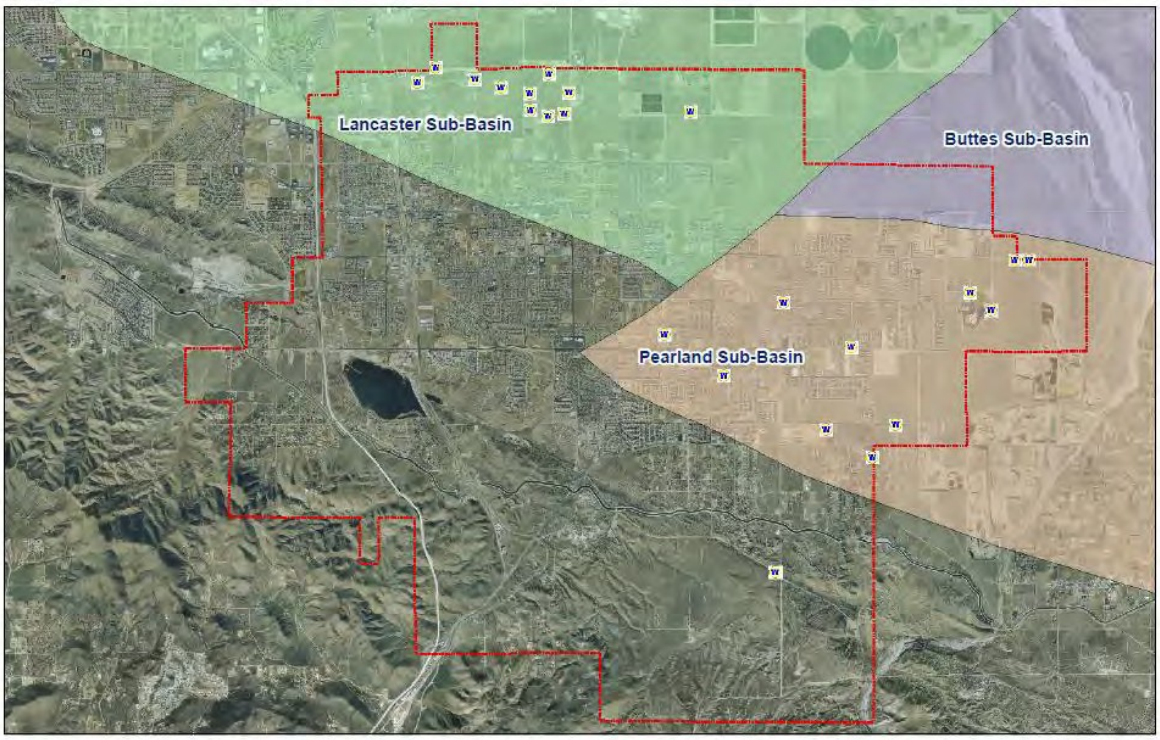
3.2.1 Groundwater

Groundwater pumping currently makes up a significant proportion of the PWD's water supply portfolio, accounting for about 50 percent of supplies over the last five years. The District's groundwater supply is the Antelope Valley Groundwater Basin (DWR Basin No. 6-44, Bulletin 118), where there are 22 active wells currently drawing from the aquifer. This water is treated with chlorine disinfection and pumped directly into the District's potable distribution system. Since 1995, the District has produced on average 9,759 AF of groundwater per year. The availability of groundwater supply for the PWD does not vary throughout the course of a year.

3.2.1.1 Groundwater Subbasins

The U.S. Geological Survey has identified a series of subbasins in the Antelope Valley Groundwater Basin. The PWD service area overlies the Lancaster, Buttes, and Pearland groundwater subbasins as shown in Figure 3-1. The boundaries between the three subbasins are determined by discontinuity or by steepening of the groundwater surface as measured in wells, rather than by surface evidence of faults. Movement of groundwater from the Pearland and Buttes subbasins to the Lancaster subbasin is slowed across these boundaries. The total amount of water transferred between these three subbasins is unknown (RMC 2011).

FIGURE 3-1: GROUNDWATER SUBBASINS



Note: This map does not include the San Andreas Rift Zone groundwater bearing areas

3.2.1.1.1 Lancaster Subbasin

The Lancaster subbasin is located in the center of the Antelope Valley Groundwater Basin with its southernmost portions lying within the PWD service area. It is bounded by bedrock to the south and by the Buttes and Pearland subbasins to the east. Alluvium in this subbasin reaches a thickness of about 1,100 feet in the northern portion of the service area. Two aquifer zones occur in this subbasin. The principal (upper) aquifer is confined and is several hundred feet thick within the PWD service area. The PWD has 12 wells in the Lancaster subbasin. Currently, the PWD operates 10 wells in the Lancaster subbasin, with a pumping capability of approximately 12,500 gallons per minute (gpm).

3.2.1.1.2 Buttes Subbasin

The Buttes subbasin is located southeast of the Lancaster subbasin. A small portion underlies the PWD service area. The PWD does not currently have any wells or pump water from this subbasin. The aquifer zone consists of approximately 150 feet of saturated alluvial deposits.

3.2.1.1.3 Pearland Subbasin

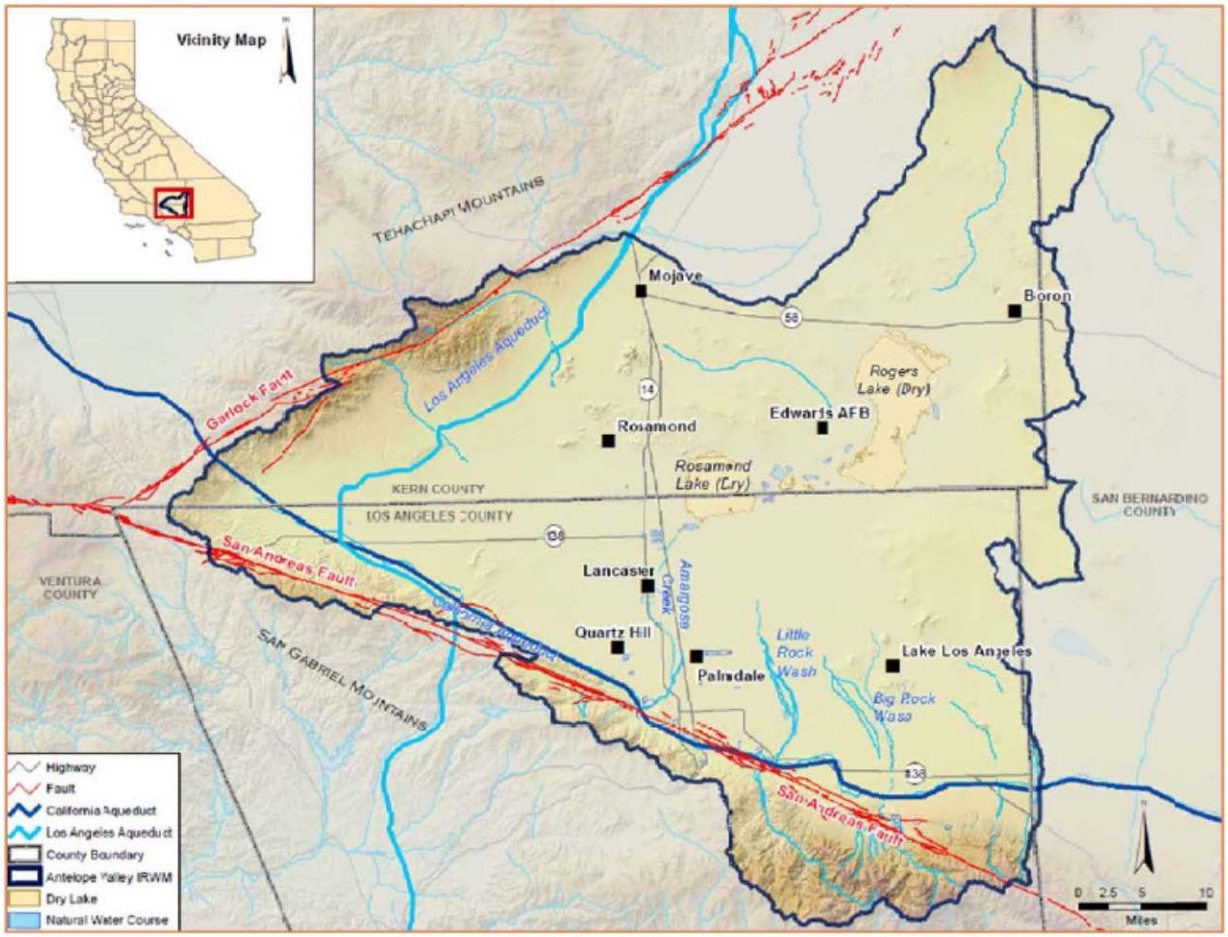
The Pearland subbasin is also located southeast of the Lancaster Subbasin. This subbasin is bounded on the south by bedrock, on the north by a fault separating it from Buttes subbasin and on the West by the basin boundary. The northern most portion of the subbasin lies within the PWD service area. A single aquifer zone occurs within the Pearland subbasin and consists of approximately 250 feet of saturated alluvial deposits. The PWD has 11 wells in the Pearland subbasin. Currently, the PWD operates 10 wells in the Pearland subbasin, with a pumping capability of 3,500 gpm.

3.2.1.1.4 San Andreas Rift Zone

The San Andreas rift zone has two general groundwater-bearing areas. These areas generally lie east and west of the intersection of Pearblossom Highway and Barrel Springs Road. The area to the east is a narrow valley, with poor groundwater production potential. The area to the west is a broader valley with more extensive groundwater-bearing deposits. The PWD has 4 wells in the San Andreas rift zone, 2 in the western area and 2 in the eastern area. Currently, the PWD operates 3 of these wells pumping approximately 150 AF each year.

The depth to water along the San Andreas rift zone is generally about 25 feet below the ground surface, with a seasonal groundwater level fluctuation of 15 feet. Over the long term, groundwater levels in sediments within the fault zone have remained relatively stable, suggesting that the groundwater-bearing sediments have not been overdrawn. The rift zone is shown on Figure 3-2.

FIGURE 3-2: ANTELOPE VALLEY HYDROLOGIC FEATURES



Source: 2013 Antelope Valley Integrated Regional Water Management Plan

3.2.1.2 Historical Groundwater Pumping

Recent total groundwater pumped from the Antelope Valley Groundwater Basin by the PWD is shown in Table 3-2. The PWD's groundwater supplies accounted for 26 to 64 percent of the PWD's water supplies between 2011 and 2015. The projected groundwater pumping volumes are discussed in Section 3.2.1.3. As described in that section, pumping in the Antelope Valley Groundwater Basin will decrease in the future due to the adjudication process.

TABLE 3-2: HISTORICAL PUMPING BY PWD FROM THE ANTELOPE VALLEY GROUNDWATER BASIN (AF)

Basin Name	2011	2012	2013	2014	2015	Average
Antelope Valley	7,000	7,500	9,400	12,400	11,200	9,500

Source: PWD Groundwater and Surface water comparison production spreadsheet; 1994-2016.
Note: Values are rounded.

3.2.1.3 Adjudication and Projected Groundwater Pumping

The PWD is one of the entities involved in the adjudication of groundwater rights for the Antelope Valley Groundwater Basin that began in 2004. As part of an adjudication process, the court determines all the water rights in the basin, and orders either the reduction of groundwater extractions to levels that will stabilize or reverse groundwater level declines, or the purchase of imported water to replace over extraction of groundwater, or both.

In late 2015, the PWD as well as the majority of parties involved agreed to a stipulated judgment for the adjudication of the Antelope Valley Groundwater Basin[1]. This resulted in the PWD receiving a groundwater production right of 2,770 AFY. The judgment is on appeal, but the PWD believes that it is unlikely that its groundwater production right will change significantly as a result of the appeal. Prior to the judgment the PWD had an unquantified right to pump water for beneficial use, and assumed projected pumping volumes at 12,000 AF based on pumping capacity.

The judgment allows the PWD seven years, until 2023, to ramp down pumping and come into compliance with the new groundwater right. For the purpose of this analysis it is assumed that the PWD will be in full compliance by 2025 as shown in Table 3-3.

In addition to its groundwater production right, the PWD is entitled to a share of the unused federal reserved right: The judgment gives the federal government a right to pump 7,600 AFY, but it does not currently pump that much. The amount that the federal government does not pump is allocated among certain public water suppliers. Currently, the average amount of the PWD's share of unused Federal Reserved Water Right Production is 1,370 AFY. Although the federal government has the right to increase its pumping at any time, the PWD believes that it will be able to pump this amount at least until 2025.

The PWD is also entitled to a pumping allocation for return flow credit of imported water used. The return flow credit is equal to 39.1% of all of the SWP water utilized by the PWD either for direct use via the Leslie O. Carter Water Treatment Plant (WTP) or for recharge at the Palmdale Regional Groundwater Recharge and Recovery Project (PRGRRP); described in Section 3.3.3.1). Based on the analyses conducted as part of the Palmdale Regional PRGRRP planning reports (Kennedy/Jenks 2015 and 2016), return flow credits are projected to range between approximately 4,900 AFY and 6,000 AFY through 2040. For purposes of supply projections in this UWMP, 5,000 AFY in return flow credits are assumed to be available through 2040, for all water year types. These projections are shown in Table 3-4.

[1] Judgment, *Antelope Valley Groundwater Cases*, Los Angeles County Superior Court, Judicial Council Coordination Proceeding No. 4408 (filed Dec. 28, 2015) (provided in Appendix J).

Finally, under the adjudication judgment, the PWD is able to purchase or lease groundwater rights from other parties. It is expected that additional rights will be available to the PWD throughout the period covered by this plan, if needed.

TABLE 3-3: PROJECTED PUMPING BY PWD FROM THE ANTELOPE VALLEY GROUNDWATER BASIN (AF)[(a)(b)]

Basin Name	2020	2025	2030	2035	2040
Antelope Valley					
Normal Year	6,280	4,140	2,770	2,770	2,770
Single Dry Year	6,280	4,140	2,770	2,770	2,770
Multiple Dry Year	6,280	4,140	2,770	2,770	2,770

Source: Personal Communication, PWD, April 2016
Note: Values are rounded.
(a) For the purpose of this analysis it is assumed that the PWD will be in compliance with the lowered groundwater right by 2025 as stipulated by the adjudication judgment.
(b) Values include both the PWD's production right and its share of the unused federal reserved right.

TABLE 3-4: PROJECTED GROUNDWATER RETURN FLOW CREDITS (AF)

Water Source	2020	2025	2030	2035	2040
Return Flow Credit[(a)]	5,000	5,000	5,000	5,000	5,000

Note:
(a) Assumes same availability for all water year types.

3.2.1.4 Groundwater Management Plan

The PWD has not adopted a groundwater management plan, and no regional groundwater management plan currently exists for the basin. The adjudication, however, includes a court-ordered physical solution, which is a plan for managing groundwater.

In 2014 the Sustainable Groundwater Management Act (SGMA) was passed. SGMA requires the formation of local groundwater sustainability agencies (GSAs) that must assess conditions in their local groundwater basins and adopt locally-based management plans. For those basins DWR has identified as medium to high priority (the Antelope Valley Groundwater Basin is a high-priority basin), SGMA requires GSA's to implement plans and achieve long-term groundwater sustainability. However, because the superior court issued a final judgment in the adjudication, the Antelope Valley Basin is exempt from the requirements of SGMA..

3.2.1.5 Groundwater Reliability

The most recent version of DWR's Bulletin 118, California's Groundwater (2003), does not characterize the groundwater basin as overdrafted, however it was deemed a 'high-priority' basin by DWR. It is noted that the prior version of Bulletin 118 (1980) identified the Antelope Valley groundwater basin as overdrafted. The court in the ongoing adjudication referred to above made a finding that the basin is overdrafted, and the PWD agrees with that finding. The adjudication judgment and physical solution will eliminate, over time, the long-term overdraft,

either by reduction of pumping or the purchase of replacement water. Additional detail is provided in Section 3.2.1.3.

3.2.2 Local Surface Water

Littlerock Dam Reservoir was built in 1922. This reservoir constitutes the PWD's local surface water supply source and is located in the hills southwest of the PWD service area. Recent renovations to Littlerock Dam Reservoir have increased its storage capacity to 3,500 AF, or 1.1 billion gallons of water.

Littlerock Dam reservoir is fed by natural runoff from snow pack in the local San Gabriel Mountains and from rainfall. The principal tributary streams supply water to the PWD service area are Littlerock and Big Rock Creeks, which flow north from the San Gabriel Mountains along the PWD's southern boundary. Numerous intermittent streams also flow into the service area, however run-off is meager.

The Littlerock Dam Reservoir intercepts flows from Littlerock and Santiago Canyons. Runoff from the 65 square mile watershed in the Angeles National Forest to the reservoir is seasonal and varies widely from year to year.

The water is transferred from Littlerock Dam Reservoir through an eight and a half mile long open ditch to Lake Palmdale. Although Littlerock Creek flows mainly during winter and spring months, this is buffered somewhat by Littlerock Dam Reservoir, allowing this water to be available throughout the year.

3.2.2.1 Local Surface Water Entitlements

Since 1922, the PWD has shared water from this source with LCID. PWD and LCID jointly hold long-standing water rights to divert 5,500 AFY from Littlerock Creek flows. Per an agreement between the two districts, the first 13 cubic feet per second (cfs) of creek flows is available to LCID (with modifications as described below). Any flow above 13 cfs is shared between the two districts with 75 percent going to the PWD and 25 percent to LCID. Each district is entitled to 50 percent of the reservoir's storage capacity. On average, the PWD has taken approximately 4,000 AF per year from Littlerock Dam Reservoir.

In 1992, during renegotiations of the PWDs' agreement, a plan to rehabilitate the existing dam was implemented. The plan involved reinforcing the original multiple-arch construction with roller-compacted concrete buttress, raising the dam by 12 feet to increase capacity, providing recreational facilities around the reservoir, and replacing the historic wooden trestle between the creek and the reservoir with an underground siphon. The entire project was completed by the end of 1995. This revised agreement gives the PWD the authority to manage the reservoir. LCID granted ownership of its water rights to the PWD for the fifty-year term of the agreement in lieu of contributing financial resources for the rehabilitation work. LCID is currently entitled to purchase from the PWD, in any one calendar year, 1,000 AF of water or 25 percent of the yield from Littlerock Dam Reservoir, whichever is less.

3.2.2.2 Historical and Projected Local Surface Water Production

The PWD's historical and current production from Littlerock Dam Reservoir is shown in Table 3-5. Historically the PWD's local surface water production accounts for approximately 1 to 10 percent of its water supplies. The projected local surface water production from Littlerock Dam Reservoir is shown in Table 3-6. It is assumed the PWD will diversify its water supply portfolio and maintain constant production volumes from Littlerock Dam Reservoir.

TABLE 3-5: HISTORICAL SURFACE WATER SUPPLIES (AF)

Water Source	2011	2012	2013	2014	2015	Average
Littlerock Reservoir	2,600	0	1,600	700	500	1,100

Source: PWD Public Water System Statistics.
Note: Values are rounded.

TABLE 3-6: PROJECTED SURFACE WATER SUPPLIES (AF)

Water Source	2020	2025	2030	2035	2040
Littlerock Reservoir					
Normal Year	4,000	4,000	4,000	4,000	4,000
Single Dry Year	4,000	4,000	4,000	4,000	4,000
Multiple Dry Year	4,000	4,000	4,000	4,000	4,000

Source: Personal Communication, PWD, January 2016

3.2.3 Imported Water

In the early 1960s, DWR entered into individual SWP Water Supply Contracts with urban and agricultural public water supply agencies located throughout northern, central and southern California for SWP water supplies. The PWD is one of 29 water agencies (commonly referred to as "contractors") that have an SWP Water Supply Contract with DWR. Each SWP contractor's SWP Water Supply Contract contains a "Table A," which lists the maximum amount of contract water supply, or "Table A water," an agency may request each year throughout the life of the contract. The Table A Amounts in each contractor's SWP Water Supply Contract ramped up over time, based on projections at the time the contracts were signed of future increases in population and water demand, until they reached a maximum Table A Amount. Most contractor's Table A Amounts reached their maximum levels in the early to mid-1990s. Table A Amounts are used in determining each contractor's proportionate share, or "allocation," of the total SWP water supply DWR determines to be available each year.

DWR provides water supply from the SWP to its 29 SWP Contractors in exchange for Contractor payment of all costs associated with providing that supply. DWR and each of the Contractors entered into substantially uniform long-term Water Supply Contracts in the 1960s with initial 75-year terms, which thus would begin to expire in 2035. While the Contracts provide for continued water service to the Contractors beyond the initial term, efforts are currently underway to extend the Contracts to improve financing for the SWP.

The majority of the capital costs associated with the development and maintenance of the SWP is financed using revenue bonds. These bonds have historically been sold with 30-year terms. It has become more challenging in recent years to affordably finance capital expenditures for the SWP because bonds used to finance these expenditures are limited to terms that only extend to the year 2035, less than 30 years from now. To ensure continued affordability of debt service to Contractors, it is necessary to extend the term of the Contracts, which will allow DWR to continue to sell bonds with 30-year terms.

Negotiations on extending the Contracts took place between DWR and the Contractors during 2013 and 2014, and were open to the public. The following terms were agreed to and are currently the subject of analysis under the requirements of the California Environmental Quality Act (CEQA) (Notice of Preparation dated September 12, 2014):

- Extend the term of the 29 Water Supply Contracts to December 31, 2085.
- Provide for increased SWP financial operating reserves during the extended term of the Contracts.
- Provide additional funding mechanisms and accounts to address SWP needs and purposes.
- Develop a revised payment methodology with a corresponding billing system that better matches the timing of future SWP revenues to future expenditures.

It is anticipated that the term of the SWP Contracts will be extended to December 31, 2085 and the data and information contained in this UWMP reflect that assumption to improve coordination between supply and demand projections beyond the year 2035 as provided in the Urban Water Management Planning Act. (CWC Section 10631[b].)

The total planned annual delivery capability of the SWP and the sum of all Contractors' maximum Table A amounts was originally 4.23 million AF. The initial SWP storage facilities were designed to meet Contractors' water demands in the early years of the SWP, with the construction of additional storage facilities planned as demands increased. However, essentially no additional SWP storage facilities have been constructed since the early 1970s. SWP conveyance facilities were generally designed and have been constructed to deliver maximum Table A Amounts to all contractors. After the permanent retirement of some Table A Amount by two agricultural contractors in 1996, the maximum Table A amounts of all SWP contractors now totals about 4.17 million AF. Currently, the PWD's annual Table A Amount is 21,300 AF. Over the last decade, the PWD has received between 41 percent and 77 percent of its 21,300 AF contractual amount.

3.2.3.1 Historical Imported Water Deliveries

The PWD's recent SWP deliveries are shown in Table 3-7. Since 2011, imported water has accounted for approximately 26 to 66 percent of the PWD's water supply.

TABLE 3-7: HISTORICAL IMPORTED WATER SUPPLIES (AF)

Water Source	2011	2012	2013	2014	2015	Average
Imported SWP	17,313	14,695	7,681	4,675	5,800	10,033

Source: 2015 DCR. Values include carryover supplies.

3.2.3.2 Imported Water Reliability

SWP supplies originate in northern California, primarily from the Feather River watershed. The availability of these supplies is dependent on the amount of precipitation in the watershed, the amount of that precipitation that runs off into the Feather River, water use by others in the watershed and the amount of water in storage in the SWP's Lake Oroville at the beginning of the year. Variability in the location, timing, amount and form (rain or snow) of precipitation, as well as how wet or dry the previous year was, produces variability from year to year in the amount of water that flows into Lake Oroville. However, Lake Oroville acts to regulate some of that variability, storing high inflows in wetter years that can be used to supplement supplies in dry years with lower inflows.

As discussed in Section 1.8 and in DWR's 2015 DCR, climate change adds another layer of uncertainty in estimating the future availability of SWP source water. Current literature suggests that global warming may change precipitation patterns in California from the patterns that occurred historically. While different climate change models show differing effects, potential changes could include more precipitation falling in the form of rain rather than snow and earlier snowmelt, which would result in more runoff occurring in the winter rather than spread out over the winter and spring.

DWR prepares a biennial report to assist SWP contractors (including PWD) and local planners in assessing the near and long-term availability of supplies from the SWP. DWR issued its most recent update, the 2015 DCR, in July 2015. In the 2015 DCR, DWR provides SWP supply estimates for SWP contractors to use in their planning efforts, including for use in their 2015 UWMPs. The 2015 DCR includes DWR's estimates of SWP water supply availability under both current and future conditions.

In the 2015 DCR, DWR estimates that for all contractors combined, the SWP can deliver on a long-term average basis a total Table A supply of 62 percent of total maximum Table A Amounts under current conditions and 61 percent under future conditions[2]. In the worst-case single critically dry year, DWR estimates the SWP can deliver a total Table A supply of 11 percent of total maximum Table A Amounts under current conditions and 8 percent under future conditions. During multiple-year dry periods, DWR estimates the SWP can deliver a total Table A supply averaging 28 to 33 percent of total maximum Table A Amounts under current conditions and 27 to 34 percent under future conditions. For this 2015 UWMP for the PWD the

[2] DWR's estimates of SWP deliveries in the 2015 DCR are based on a computer model that simulates monthly operations of the SWP and Central Valley Project systems. One of the model studies used to evaluate SWP supply availability under future conditions in the 2015 DCR is the Early Long Term (ELT) scenario, which uses the same model assumptions for current conditions, but also changes expected to occur from climate change, specifically, a 2025 emission level and a 15 cm sea level rise. In this 2015 UWMP, future SWP supply availability is based on the ELT study included in the 2015 DCR.

4-year multiple dry year scenario, assuming a repeat of years 1931 to 1934, was assumed. Given a repeat of hydrologic conditions 1931 to 1934 the SWP is expected to deliver 33 percent of the PWD's Table A allocation. Imported water supply projections are shown in Table 3-8.

The extremely dry sequence from the beginning of January 2013 through the end of 2014 was one of the driest two-year periods in the historical record. Water year 2013 was a year with two hydrologic extremes.[3] October through December 2012 was one of the wettest fall periods on record, but was followed by the driest consecutive 12 months on record. Accordingly, the 2013 SWP supply allocation was a low 35% of SWP Table A Amounts. The 2013 hydrology ended up being even drier than DWR's conservative hydrologic forecast, so the SWP began 2014 with reservoir storage lower than targeted levels and less stored water available for 2014 supplies. Compounding this low storage situation, 2014 also was an extremely dry year, with runoff for water year 2014 the fourth driest on record. Due to extraordinarily dry conditions in 2013 and 2014, the 2014 SWP water supply allocation was a historic low of 5% of Table A Amounts.

The dry hydrologic conditions that led to the low 2014 SWP water supply allocation were extremely unusual, and to date have not been included in the SWP delivery estimates presented in DWR's 2015 DCR.[4] It is anticipated that the hydrologic record used in the DWR model will be extended to include the period through 2014 during the next update of the model, which is expected to be completed prior to issuance of the next update to the biennial SWP Delivery Capability Report. For the reasons stated above, this 2015 UWMP uses a conservative assumption that a 5% allocation of SWP Table A Amounts represents the "worst case" scenario.

[3] A water year begins in October and runs through September. For example, water year 2013 is October 2012 through September 2013.

[4] SWP delivery estimates from DWR's 2015 SWP Delivery Capability Report are from computer model studies which use 82 years of historical hydrologic inflows from 1922 through 2003.

TABLE 3-8: PWD IMPORTED WATER SUPPLY RELIABILITY AVERAGE, SINGLE-DRY YEAR AND MULTIPLE-DRY YEAR CONDITIONS

Imported SWP Supplies	2020	2025	2030	2035	2040
PWD Table A Allocation	**21,300**	**21,300**	**21,300**	**21,300**	**21,300**
Average Water Year[a]					
% of Table A Amount Available	62%	61%	61%	61%	61%
Anticipated Deliveries (AF)[d]	13,200	13,000	13,000	13,000	13,000
Single-Dry Year[b]					
% of Table A Amount Available	11%	10%	9%	9%	8%
Anticipated Deliveries (AF)[d]	2,300	2,100	1,900	1,900	1,700
% of Table A Amount Available	5%	5%	5%	5%	5%
Anticipated Deliveries (AF)[d]	1,065	1,065	1,065	1,065	1,065
Multiple-Dry Year[c]					
% of Table A Amount Available	33%	33%	33%	33%	33%
Anticipated Deliveries (AF)[d]	7,000	7,000	7,000	7,000	7,000

Notes:

(a) Supplies to the PWD are based on DWR analyses presented in its "2015 State Water Project Delivery Capability Report" (2015 DCR), assuming existing SWP facilities and current regulatory and operational constraints.

(b) Based on a repeat of the worst case historic single dry year of 1977 (from 2015 DCR).

(c) Supplies shown are annual averages over four consecutive dry years, based on a repeat of the historic four-year dry period of 1931-1934.

(d) Values are rounded.

The projected imported water deliveries to the PWD are shown in Table 3-9. It is assumed the PWD will diversify its water supply portfolio in the coming years in addition to using available imported SWP supplies.

TABLE 3-9: PROJECTED IMPORTED WATER SUPPLIES (AF)

Water Source	2020	2025	2030	2035	2040
Imported SWP Supplies					
Normal Year	13,200	13,000	13,000	13,000	13,000
Single-Dry Year	2,300	2,100	1,900	1,900	1,700
Multiple-Dry Year	7,000	7,000	7,000	7,000	7,000

Source: See Table 3-8.

3.2.4 Potential Supply Inconsistency

The PWD's supply reliability (discussed in detail in Section 6), can be impacted by many factors, including changes in the availability of supplies due to climatic or infrastructure changes, prolonged drought, as well as the efficient use of those supplies in both average and dry periods. These factors can result in acute impacts (facility failures), short-term impacts (SWP limitations), or long-term (drought) impacts to the reliability of its supplies. The factors resulting in the inconsistency of water supply, by source are identified in Table 3-10.

TABLE 3-10: FACTORS RESULTING IN INCONSISTENCY OF WATER SUPPLY

Water Source	Description	Limitation	Legal	Environmental	Water Quality	Climatic
Groundwater	Antelope Valley Groundwater Basin	Limited by well production capacity and adjudication	X		X	
Surface Water	Littlerock Reservoir	Limited by hydrology and diversion right	X			X
Imported Water	SWP (California Aqueduct)	Limited by Table A allocation and hydrologic conditions and/or regulatory constraints	X	X		X

3.3 Transfers, Exchanges, and Groundwater Banking Programs

In addition to SWP water supplies, local surface water, and groundwater, the PWD is currently exploring opportunities to utilize recycled water, groundwater banking, and other anticipated new sources.

3.3.1 Existing Transfer Agreement

The PWD currently has a long term lease agreement with Butte County for up to 10,000 AFY of their SWP Table A Amount. The amount available through this lease varies primarily on the final annual allotment from DWR to the State Water Contractors and can be roughly calculated by multiplying the final allotment percentage by 10,000 AF. This lease runs through 2019 and has 5 year renewal options through 2035, at which time the agreement will be renegotiated. The District assumes this supply for the purposes of this plan will continue through the planning period, to 2040. Supplies from this agreement are accounted for in PWD planned supplies and are anticipated to be available in future years based on SWP Table A Amounts projected for the PWD under normal, single-dry and multiple-dry year scenarios as described in Section 3.2.3.2. Accordingly, 62% or 6,200 AFY is anticipated to be available in 2020 and 61% or 6,100 AFY thereafter, as shown in Table 3-1.

3.3.2 Transfer and Exchange Opportunities

The PWD has evaluated various transfer and exchange opportunities that could aid in meeting projected water demands and has participated in a number of water transfers over the last several years. The PWD's anticipated new sources consist of additional water supply transfer and exchange opportunities. The PWD will utilize a combination of various transfer and exchange opportunities, as necessary, to meet its projected water demands.

The PWD recently completed and adopted its Strategic Water Plan (PWD 2014b) wherein it identified additional needed surface water acquisitions and transfers as a component of its overall water supply strategy. Table 3-11 describes these potential water transfer and acquisition opportunities.

TABLE 3-11: TRANSFER AND EXCHANGE OPPORTUNITIES

Transfer Agency	Transfer or Exchange	Short Term or Long Term	Proposed Volume (AF)
DWR	Excess Wet Year Water (Article 21)	Short Term	5,000-10,000
SWP	Wet-Year (1 Year)	Short Term	26,000
SWC/DWR	Dry year	Short Term	5,000-10,000
		Subtotal	*36,000-46,000*
SWP	Long-Term Lease	Long Term	10,000
SWP/Central Valley Project (CVP)	Permanent Transfer	Long Term	34,500
		Subtotal	*44,500*
SWP	Table A SWP Water	Short Term/ Permanent	10,000
CVP	CVP Water	Short Term/ Permanent	10,000
PRE-14	Non-SWP Water	Short Term/ Permanent	5,000-10,000
		Subtotal	*25,000-30,000*

For transfer and exchange strategic purposes, the PWD will:

- Establish the ability to bank available imported water and develop supply reliability within the Antelope Valley Groundwater Basin as soon as possible.
- Pursue partners to participate in developing the PWD's storage facilities including other Antelope Valley State Water Contractors Association (AVSWCA) members.
- Consider water banking in locations outside the PWD if they are cost effective and the project produces a value-added benefit (such as additional aqueduct delivery capacity).

3.3.3 Groundwater Banking Programs

3.3.3.1 Palmdale Regional Groundwater Recharge and Recovery Project

The PWD does not operate a banking program but is actively pursuing this future water supply reliability option. Currently the PWD is researching the feasibility of the Palmdale Regional Groundwater Recharge and Recovery Project (PRGRRP). This project would help to meet future water demands and improve water supply reliability. New facilities will be constructed to recharge and recover SWP water as well as recycled water. Infrastructure would include new spreading grounds to recharge water as well as recovery facilities. Recycled water will be augmented with surplus SWP water stored during normal and wet years allowing for the efficient utilization of SWP water when available. The PRGRRP will leverage imported water as a diluent source to recharge recycled water. It is anticipated that the PRGRRP recharge will have a ratio of 20% recycled water to 80% diluent (imported) water blend, which will transition to a 40% recycled water to 60% diluent water in the future.

The recovery of potable groundwater would be continuous as a base potable water supply; production rates will help the PWD meet future water demands during all water types when

combined with existing supply facilities. The project will be developed in three phases in order to meet Title 22 requirements, align with PWD's future water demands and spread capital infrastructure investments over time. The first phase of the project, anticipated to be operational beginning in 2019, is expected to provide on average 7,500 AFY of recharge water available for extraction starting in 2020. As the PRGRRP facilities are expanded through the remaining phases, the anticipated recharge volumes and potential extraction volumes will increase to an average extraction of 10,800 AF. More information can be found in the 2016 Title 22 Engineering Report (Kennedy/Jenks 2016) and the 2015 Feasibility Study (Kennedy/Jenks 2015).

3.3.3.2 Additional Groundwater Banking Opportunities

In addition, there are other water banks operating in a variety of locations throughout the state and in various forms. The PWD is currently exploring banking opportunities within and outside the Antelope Valley. The list below includes the PWD's current groundwater water banking options.

- **Storage North of Delta**: This would consist of an exchange or transfer with agricultural entities north of the Delta in site specific areas for an interim or short-term basis. The PWD could store 5,000 to 10,000 AF and recover 2,500 to 5,000 AF.

- **San Joaquin Valley Storage**: This would consist of purchasing shares in the Semitropic Water Bank, which is currently in operation. The PWD could store over 60,000 AF and recover 10,000 to 20,000 AFY. Other banking programs may also be available.

- **Storage within the Antelope Valley**: This would consist of banking above-average SWP allocations in planned water banking projects in locations within the Antelope Valley. The PWD could store over 60,000 AF and recover 10,000 to 15,000 AFY.

- **Storage South of the PWD**: This would consist of banking above-average SWP allocations by providing these supplies to SWP contractor agencies for groundwater recharge or in-lieu recharge within their service areas and in turn, during dry years, the PWD would receive SWP water from these agencies. This groundwater banking opportunity could store 10,000 to 30,000 AF and recover 5,000 to 15,000 AFY.

- **Storage within the PWD**: This would consist of installing a recharge and recovery facility within the PWD's groundwater basin area to augment supplies. The PWD would store 39,000 to 105,000 AF in the local groundwater basin and would recover 13,000 to 35,000 AFY.

3.3.4 Development of Desalination

3.3.4.1 Brackish Water and/or Groundwater Desalination

The groundwater that underlies the PWD service area is not brackish in nature and does not require desalination. However, the PWD could provide financial assistance to other SWP contractors to construct brackish desalination facilities in exchange for SWP supplies delivered via the East Branch of the Aqueduct. Communities near a brackish desalination plant would

receive the desalinated water and an equivalent volume of SWP supplies would be exchanged and allocated to the PWD. Should the need arise the PWD may consider this option in the future.

3.3.4.2 Seawater Desalination

Since the PWD is not located in a coastal area, it is not practical nor economically feasible to implement a seawater desalination program. However, the PWD could provide financial assistance to other SWP Contractors to construct seawater desalination facilities in a coastal location in exchange for SWP supplies delivered via the East Branch of the Aqueduct.

As of December 2015, there was an estimated 10 active proposals for seawater desalination plants along the California Coast, as well as two additional proposed plants in Baja California, Mexico that would provide water to southern California communities (Pacific Institute, 2015). This is down from an estimated 21 proposals in 2006 and 19 in 2012 (Pacific Institute, 2015).

Most of the existing and proposed seawater desalination facilities are/would be operated by agencies that are not SWP contractors. Thus for an exchange of SWP supplies to take place, a third party would have to be involved.

At this point in time, the PWD has determined that desalination is not a cost-effective solution for water supply needs due to the local project and water resource opportunities that are currently available at a lower cost.

3.3.5 Recycled Water

Currently the PWD is actively working with the Sanitation Districts of Los Angeles County (LACSD) to develop recycled water supplies for its service area customers. Further details on the PWD's recycled water plans can be found in Section 4.

3.4 Anticipated Water Supply Sources in a Normal, Single Dry, and Multiple Dry Years

Tables 3-12, 3-13, and 3-14 provide details on supplies anticipated to be available to the PWD in normal, single-dry, and multiple-dry years. For groundwater, the PWD expects pumping to be consistent in normal, single-dry, and multiple-dry years. For surface water from Littlerock Reservoir, the PWD used the driest year on record of 1951. Thus the PWD expects to use 4,000 AF of its diversion rights under normal, single-dry, and multiple-dry year conditions. This amount is calculated as 50 percent of the average available yield from Littlerock Reservoir (50 percent of 8,000 AF) and is considered to be available for supply in all years. SWP and Butte County transfer supply allocations are variable during single-dry and multiple-dry years, and the PWD relied on the 2015 DCR to project volumes in these hydrologic years. Return flow credits and recycled water are assumed to be available in all hydrologic years.

TABLE 3-12: WATER SUPPLY ESTIMATES – NORMAL YEAR (AF)

	2020	2025	2030	2035	2040
Existing Supplies					
Groundwater (from Table 3-3)	6,280	4,140	2,770	2,770	2,770
Groundwater Return Flow Credits (from Table 3-4)	5,000	5,000	5,000	5,000	5,000
Local Surface Water (from Table 3-6)	4,000	4,000	4,000	4,000	4,000
Imported SWP Water (from Table 3-9)	13,200	13,000	13,000	13,000	13,000
Butte Transfer Agreement[(a)]	6,200	6,100	6,100	6,100	6,100
Recycled Water (from Table 4-4)	2,500	5,000	5,500	6,000	6,000
Total Supplies	**37,180**	**37,240**	**36,370**	**36,870**	**36,870**

Notes: Values are rounded.
(a) For details see Section 3.3.1.

TABLE 3-13: WATER SUPPLY ESTIMATES – SINGLE-DRY YEAR (AF)

	2020	2025	2030	2035	2040
Existing Supplies					
Groundwater (from Table 3-3)	6,280	4,140	2,770	2,770	2,770
Groundwater Return Flow Credits (from Table 3-4)	5,000	5,000	5,000	5,000	5,000
Local Surface Water (from Table 3-6)	4,000	4,000	4,000	4,000	4,000
Imported SWP Water (from Table 3-9)	2,300	2,100	1,900	1,900	1,700
Butte Transfer Agreement[(a)]	1,100	1,000	900	900	800
Recycled Water (from Table 4-4)	2,500	5,000	5,500	6,000	6,000
Total Supplies	**21,180**	**21,240**	**20,070**	**20,570**	**20,270**

Note: Values are rounded.
(a) For details see Section 3.3.1.

TABLE 3-14: WATER SUPPLY ESTIMATES – MULTIPLE-DRY YEARS (AF)

	2020	2025	2030	2035	2040
Existing Supplies					
Groundwater (from Table 3-3)	6,280	4,140	2,770	2,770	2,770
Groundwater Return Flow Credits (from Table 3-4)	5,000	5,000	5,000	5,000	5,000
Local Surface Water (from Table 3-6)	4,000	4,000	4,000	4,000	4,000
Imported SWP Water (from Table 3-9)	7,000	7,000	7,000	7,000	7,000
Butte Transfer Agreement[(a)]	3,300	3,300	3,300	3,300	3,300
Recycled Water (from Table 4-4)	2,500	5,000	5,500	6,000	6,000
Total Supplies	**28,080**	**28,440**	**27,570**	**28,070**	**28,070**

Note: Values are rounded.
(a) For details see Section 3.3.1.

Section 4: Recycled Water

4.1 Overview

This section of the Plan describes the existing and future recycled water opportunities available to the PWD service area. The description includes estimates of potential recycled water supply and demand for 2020 to 2040 in five year increments, as well as the PWD's proposed incentives and implementation plan for recycled water.

4.2 Recycled Water Planning

Due to current and anticipated growth, as well as increasing uncertainty of the PWD's ability to meet local water demands with imported water and groundwater, the PWD is taking proactive steps towards expanding the use of non-potable water to meet a variety of non-potable and indirect potable uses. The PWD has been actively working with the Los Angeles County Waterworks Districts, City of Palmdale, City of Lancaster, and LACSD to develop a regional recycled water system.

The PWD developed a Recycled Water Facilities Plan in 2010 (RMC 2010) as part of the first non-potable reuse phase for the 2007 Antelope Valley Recycled Water Project Facilities Planning Report (Kennedy/Jenks 2006).

In 2012, the Palmdale Recycled Water Authority (PRWA) was established to manage recycled water generated and used within the PWD service area, which coincides with the PRWA boundaries. PRWA is a joint entity comprised of the PWD and City of Palmdale which manages all aspects of recycled water use, including agreements to obtain recycled water from sanitation districts, planning for, designing and constructing supporting facilities, and financing these efforts. Among the initial efforts of the PRWA, existing master planning documents were updated and consolidated within the 2015 PRWA Recycled Water Facilities Master Plan (Carollo 2015).

Implementation of the Recycled Water Facilities Master Plan, which is still in the planning phase, would include expansion of the existing non-potable distribution system. Projected recycled water supplies would be provided to PWD customers, primarily for landscape irrigation at parks, schools, and golf courses, as well as for recharge in the Lancaster subbasin, as described in more detail below.

4.3 Existing Wastewater Treatment Facilities

Wastewater collection and treatment for the cities of Palmdale and Lancaster are provided by LACSD, which provides service to the Antelope Valley through its Districts No. 14 and 20. The two districts serve a combined wastewater service area of approximately 76 square miles and approximately 310,000 people. Collection is provided through a network of 104 miles of trunk sewers, which are all designed to provide wastewater conveyance through gravity flow.

The Palmdale Water Reclamation Plant (WRP) is located in the City of Palmdale and currently provides tertiary treatment for approximately 12,000 AFY of wastewater generated in and around the City of Palmdale. In 2012, the Palmdale WRP was expanded to reach its current treatment capacity of 12 MGD. The Palmdale WRP is operated by the LACSD District No. 20. Currently, the tertiary-treated effluent is disposed of via agricultural irrigation of fodder crops on land leased by the LACSD from the City of Los Angeles World Airports. Table 4-1 presents influent and effluent flows at the Palmdale WRP in 2015.

TABLE 4-1: 2015 WASTEWATER FLOWS AT PALMDALE WRP (AF)

Palmdale WRP Flows	2015
Influent	12,140
Effluent	10,770

Source: Palmdale WRP Annual Monitoring Report 2015.

All wastewater treated at the Palmdale WRP is treated to tertiary level and is used, discharged or stored within the PWD service boundaries, as described further in Section 4.4.

The Antelope Valley is a closed basin without an outlet to the ocean, and so treated wastewater either evaporates, is reused, or infiltrates into the Antelope Valley Groundwater Basin. LACSD anticipates reducing the amount of recycled water that it provides for agriculture as other beneficial uses are developed. However, until these alternative uses become effective, the recycled water must still be disposed of via agricultural irrigation (Carollo 2015, ESA 2014).

4.3.1 Proposed Recycled Water System

A Recycled Water Backbone System has been proposed for the Antelope Valley that would connect the Lancaster WRP and Palmdale WRP, allowing recycled water from both plants to be used throughout the region. The Lancaster WRP, operated by the LACSD District No. 14, provides tertiary treatment for, on average, 12 MGD of wastewater generated in each of the cities of Lancaster and Palmdale. The PWD does not currently receive recycled water from the Lancaster WRP and there are no plans to use effluent from the Lancaster WRP within the PWD service area.

Portions of the Recycled Water Backbone System have already been constructed by the City of Lancaster, City of Palmdale, and Los Angeles County Waterworks District No. 40. The City of Palmdale has partnered with Waterworks No. 40 to design and construct a portion of the Recycled Water Backbone System that will complete the connection of the Lancaster WRP and Palmdale WRP and serve the proposed Palmdale Hybrid Power Plant and the Antelope Valley Country Club. The portions of the Recycled Water Backbone System that have been designed or constructed are all located outside of the District's service area. The primary benefit to the PRWA of these portions is the potential ability to move recycled water between the Lancaster WRP and Palmdale WRP. The tertiary treated water that will be used in the PWD service area will originate at the Palmdale WRP (Carollo 2015, ESA 2014).

4.4 Recycled Water Supply

Recycled water available for use within the PWD service area can be supplied from the LACSD Palmdale WRP. The City of Palmdale has an existing agreement with the LACSD for 2,000 AFY of recycled water to provide to customers throughout the City's service area (Carollo 2015, ESA 2014). However, as noted above, uses for this recycled water are still being developed.

Currently the Palmdale WRP produces about 10,700 AFY of Title 22 recycled water on average. For future recycled water supply projections, it was assumed that recycled water production would grow linearly at the same rate as potable demands, which were estimated at approximately 0.9 percent per year on average for the period 2020 to 2040. As a result, the total recycled water supply is estimated to grow up to about 13,500 AFY by 2040, as shown in Table 4-2.

TABLE 4-2: EFFLUENT FLOW PROJECTIONS FOR PALMDALE WRP (AF)

	2015[(a)]	2020	2025	2030	2035	2040
PWRP Effluent Flows	10,770	11,300	11,800	12,300	12,900	13,500
Total Recycled Water Available to PWD	10,770	11,300	11,800	12,300	12,900	13,500

Notes:
(a) 2015 Effluent flows as reported in Palmdale WRP 2015 Annual Report.

4.5 Recycled Water Demand – Current and Projected

Primary existing recycled water customers served by the Palmdale WRP include growers and the City of Palmdale. The primary City demand is for landscape irrigation at McAdam Park, which makes up a small portion of total recycled water produced at the Palmdale WRP. The remaining major portion of Palmdale WRP recycled water is agricultural irrigation at agronomic rates on an agricultural site leased by the LACSD from Los Angeles World Airports. Seasonal storage ponds are used when more effluent water is produced than demanded. The stored recycled water is typically used in spring and summer months when agronomic crop needs exceed recycled water production from the Palmdale WRP.

Actual recycled water use in 2015 is summarized in Table 4-3.

TABLE 4-3: ACTUAL RECYCLED WATER USE IN 2015 (AF)

Water Use	2015
PRWA/City of Palmdale Direct Reuse[(a)]	110
Total Recycled Water Use[(b)]	**110**

Notes:
(a) Based on correspondence from PWD and LACSD.
(b) Total recycled water demand within PWD service area. Values are rounded.

Market assessments by the PRWA have identified numerous potential recycled water customers including schools, parks, landscape maintenance districts, and others. Total annual

demands of these customers were estimated at 2,392 AFY (Carollo 2015, ESA 2014). It is anticipated that the recycled water use for landscape irrigation will not exceed 2,000 AFY at buildout (Kennedy/Jenks 2015).

Additional major future recycled water uses include direct groundwater recharge, described as follows.

Palmdale Regional Groundwater Recharge and Recovery Project (PRGRRP)

Among the potential options to augment water supplies with local recycled water, there is potential to use a blend of imported and recycled water to recharge the Lancaster subbasin within the Antelope Valley Groundwater Basin. The PWD is leading the project and is seeking partnership from AVEK, LACSD, and other agencies. The project entails construction of recharge basins to spread a blend of untreated SWP water and recycled water from LACSD's Palmdale WRP. Extraction wells surrounding the recharge basins will provide groundwater for treatment and delivery to PWD's service area or to partner agencies. As the project comes online and recharge with recycled water increases (with regulatory approvals), delivery of LACSD tertiary water to agricultural users will be reduced.

Projected Recycled Water Uses are shown in Table 4-4.

TABLE 4-4: PROJECTED RECYCLED WATER DEMANDS (AF)

Water Use	2020	2025	2030	2035	2040
Palmdale Regional GRRP[(a)]	2,000	4,000	4,000	4,000	4,000
Direct Reuse[(b)]	500	1,000	1,500	2,000	2,000
Total Recycled Water Demands	**2,500**	**5,000**	**5,500**	**6,000**	**6,000**

Source: Data from Littlerock Creek Groundwater Recharge and Recovery Project (2015) and Title 22 Engineering Report (2016).

(a) Volume available for PRGRRP recharge. Maximum possible recharge would be lower due to blending ratio requirements.

(b) Includes City direct demands and other potential landscape irrigation demands.

4.5.1 Recycled Water Use Comparisons

The 2010 UWMP anticipated 2015 recycled water use at 1,000 AF, and assumed it would be used only for landscape and agricultural irrigation. Actual recycled water use within the PWD service area totaled 110 AFY in 2015, as shown in Table 4-5.

TABLE 4-5: RECYCLED WATER USE PROJECTIONS COMPARED TO ACTUAL USE (AF)

User Type	2010 Projected for 2015[(a)]	2015 Actual
Municipal and Industrial, and Agricultural Irrigation	1,000	110
Groundwater Recharge	0	0
Total	**1,000**	**110**

Note:
(a) From 2010 PWD UWMP.

4.5.2 Encouraging Recycled Water Use

Future recycled water projects have the potential to use all available recycled water supplies through 2040, as described above. As necessary, the PWD intends to use financial incentives to assist and encourage future users to connect to and utilize recycled water. These financial incentives will consist of recycled water rates that are lower than potable rates (typically 70 to 90 percent). A lower rate provides an incentive for existing or future customers to use recycled water in place of potable water.

Section 5: Water Quality

5.1 Overview

Water quality is an important factor in determining overall supply reliability; if adequate drinking water quality cannot be maintained, then the supply will no longer be available for use. Water quality is dynamic in nature and can vary over the course of a year. This is true for both the SWP and the local groundwater of the Basin. During periods of intense rainfall or snowmelt, routes of surface water movement are changed and new constituents are mobilized and enter the water while other constituents are diluted or eliminated. The quality of water changes over the course of a year. These same basic principles apply to groundwater. Depending on water depth, groundwater will pass through different layers of rock and sediment and potentially leach different materials from those strata. Water depth is a function of recharge from local rainfall and snowmelt and withdrawal from groundwater pumping. During periods of drought, the mineral content of groundwater increases. Water quality is not a static feature of water, and these dynamic variables must be recognized.

The PWD understands the quality of supply sources can change over time and is therefore constantly working to anticipate and mitigate those changes. Water quality regulations also change. This is the result of the discovery of new contaminants, changing understanding of the health effects of previously known as well as new contaminants, development of new analytical technology, and the introduction of new treatment technology. All retail water purveyors are subject to drinking water standards set by the U.S. Environmental Protection Agency (EPA) and the DDW.

The PWD's regular monitoring of its water supply quality and understanding of current and potential regulations allows it to respond readily to any quality induced reliability issues. This section provides a general description of the quality of each of the PWD's three water sources; groundwater from the Antelope Valley Groundwater Basin, imported water from the SWP, and seasonal supply from Littlerock Reservoir. SWP water is conveyed directly from the District turnout into Lake Palmdale, which feeds the Leslie O. Carter Water Treatment Plant (WTP). Flows from Littlerock Reservoir are also conveyed into Lake Palmdale via an eight and a half mile earthen lined canal, referred to as the Palmdale Ditch. The intake for the WTP is located along Lake Palmdale's north shore. All three sources are constantly tested and treated in compliance with all applicable regulations to ensure high water quality and dependability of the water system.
This section provides a general description of the water quality of both imported water and existing groundwater supplies. A discussion of potential water quality impacts on the reliability of these supplies is also provided.

5.2 Groundwater Protection and Quality

The PWD obtains groundwater from the Antelope Valley Groundwater Basin though twenty-two wells. This water is treated with chlorine at the wellhead and pumped directly into the distribution system. Groundwater has proved to be of suitable quality for municipal, irrigation and most industrial uses.

The general goal of groundwater protection activities is to maintain the groundwater and the aquifer to ensure a reliable high quality supply. Activities to meet this goal include continued and increased monitoring, data sharing, education and coordination with other agencies that have local or regional authority or programs. As part of its protection activities, the PWD has been taking the following actions:

- Water quality monitoring
- Wellhead protection
- Participation in the regional salt and nutrient management plan

5.2.1 Water Quality Monitoring

The PWD monitors drinking water constituents consistent with federal and state laws. The PWD annually provides a Consumer Confidence Report (CCR) detailing the water quality of its sources to all of its customers. This Report includes details about the source water, quality of the water, and how it compares to Drinking Water standards. Stringent water quality testing is performed before the water is delivered to consumers. In 2014 (2014a), the PWD tested more than 3,000 samples for over 80 regulated contaminants. Of the primary standard contaminants detected in 2014, all were at levels below the Maximum Contaminant Level (MCL) allowed by the State.

In the Antelope Valley region, the groundwater basin is primarily used for private and public water supply and irrigation. The predominant sources of groundwater are from the recharge of runoff from surrounding mountains, and water from direct infiltration by irrigation, sewer and septic systems. The main discharge sources include pumping wells and evapotranspiration areas near dry lakebeds. Groundwater quality is assessed through the Groundwater Ambient Monitoring and Assessment (GAMA) Priority Basin Project (PBP), which consists of analyzing raw groundwater that provides drinking public water supply in the region. PBP sampled a large distribution of wells in the area and analyzed organic constituents as well as chromium, lead, molybdenum, sulfate and chloride; all were detected at moderate concentrations, and volatile organic compounds were detected at low concentrations.

Two primary constituents that present concerns for groundwater quality in the Antelope Valley Groundwater Basin are Total Dissolved Solids (TDS) and nitrate. Past groundwater sampling data has shown TDS concentrations that range from 150 to 490 milligrams per liter (mg/L) (2014 CCR). Nitrate levels have ranged from non-detect to 28.4 mg/L. Arsenic has also emerged as a potential concern but is still well under the MCL of 0.01 mg/L. Water quality data is regularly reported on in the annual CCR; the most recent is the 2014 CCR.

The PWD's drinking water sources are considered most vulnerable to the following activities associated with contaminants detected in the water supply: illegal activities, such as unauthorized dumping; recreation; highways; railroads; and sewer collection systems. A comprehensive source water protection program can prevent contaminants from entering the public water supply, reduce treatment costs and increase public confidence in the reliability and safety of drinking water.

5.2.2 Wellhead Protection

The PWD has developed a Sanitary Survey of its water sources, including a Source Water Assessment of surface waters, which was updated in 2012 in compliance with State of California regulations. The assessment of surface water sources included Littlerock Reservoir and Palmdale Lake. A Groundwater Assessment and Protection Program was completed in January of 1999, and a Wellhead Protection Plan was completed in November 2000. The goal of local source water protection is to identify, develop and implement local measures that provide protection to the drinking water supply. Wellhead protection provides one more barrier to contamination in a multi-barrier protection treatment train.

5.2.3 Participation in the Antelope Valley Salt and Nutrient Management Plan

In February 2009, the SWRCB adopted the Recycled Water Policy to encourage and provide guidance for the use of recycled water in California. The Recycled Water Policy requires local water and wastewater entities, together with local stakeholders, to develop a Salt and Nutrient Management Plan (SNMP) in a cooperative and collaborative manner for each groundwater basin in California. The SNMPs are intended to help streamline the permitting of new recycled water and stormwater projects while ensuring compliance with water quality objectives. Los Angeles County Department of Public Works (District 40), LACSD (Districts No. 14 and 20), and the Antelope Valley SNMP planning stakeholders group (which includes PWD) prepared the Antelope Valley SNMP in 2014. As a stakeholder in the plan the PWD assisted with provision of water quality data for the plan, reviewed the modeling and other analyses of salt and nutrient assimilative capacity of local groundwater, and helped develop a plan to track the long-term impacts to groundwater quality resulting from past, current, and future land uses.

5.3 Imported Water Quality

Surface water is imported from the SWP. This water source begins in Northern California, flows into the Sacramento-San Joaquin Delta, and is pumped south through the California Aqueduct to Palmdale Lake. The District has a maximum contractual Table A Amount of 21,300 AFY. The annual allocations based on this contractual amount can vary based on the amount of stored water in northern California, demands by other SWP Contractors and various hydrologic factors. Imported water is generally of acceptable quality and receives treatment from the WTP. The District does not currently experience and does not foresee issues with its imported water quality given controls on the incoming water and treatment process.

One important property of SWP water is the mineral content. SWP water is generally low in dissolved minerals, such as calcium, magnesium, sodium, potassium, iron, manganese, and sulfate. Most of these minerals do not have health based concerns. Nitrate is the main exception, as it has significant health effects for infants; however, the nitrate content of SWP water is very low.

Also of significance is the salinity content measured as TDS. Only at very high concentrations is TDS a health hazard, but TDS can be an aesthetic issue, can limit crop productivity, and can shorten the useful life of pipes and water-based appliances in homes and businesses. Although the quality of SWP water varies seasonally, the PWD does not foresee issues with imported water quality as it receives adequate treatment from the WTP.

5.4 Local Surface Water Quality

The PWD's surface water is stored at Littlerock Creek Dam Reservoir and Lake Palmdale. Littlerock Dam Reservoir has a capacity of approximately 3,000 AF and is filled by natural runoff from the local San Gabriel Mountains. Water from Littlerock Reservoir is transferred to Palmdale Lake through an open channel connecting the two reservoirs. This local surface water supply has historically been of very high quality. The PWD does not currently experience and does not foresee issues with local surface water. This water receives treatment at the PWD's Leslie O. Carter WTP.

5.5 Water Quality Impacts on Reliability

Three factors affecting the availability of groundwater are sufficient source capacity (wells and pumps), sustainability of the groundwater resource to meet pumping demand on a renewable basis and protection of groundwater sources (wells) from known contamination, or provisions for treatment in the event of contamination. The quality of water dictates numerous management strategies a retail water purveyor will implement, including, but not limited to, the selection of raw water sources, treatment alternatives, blending options, and modifications to existing treatment facilities. Maintaining and utilizing high quality sources of water simplifies management strategies by increasing water supply alternatives, water supply reliability, and decreasing the cost of treatment. The source water supplies are of generally good quality for the PWD. Maintaining high quality source water allows for efficient management of water resources by minimizing costs.

Maintaining the quality of water supplies increases the reliability of each source by ensuring that deliveries are not interrupted due to water quality concerns. A direct result from the degradation of a water supply source is increased treatment cost before consumption. The poorer the quality of the source water, the greater the treatment cost. Water may degrade in quality to the point that it is not economically feasible for treatment. In this scenario the degraded source water is taken off-line. This in turn can decrease water supply reliability by potentially decreasing the total supply and increasing demands on alternative water supplies.

Overall, the management of water supplies by the PWD will allow it to meet near term and long term demands within the its service area. Therefore, no anticipated change in reliability or supply due to water quality issues is anticipated based on the present data, as shown in Table 5-1.

TABLE 5-1: PROJECTED WATER SUPPLY CHANGES DUE TO WATER QUALITY (PERCENTAGE CHANGE)

Water source	2020	2025	2030	2035	2040
Groundwater	0%	0%	0%	0%	0%
Imported Water	0%	0%	0%	0%	0%
Local Surface Water	0%	0%	0%	0%	0%

Section 6: Water Supply Reliability

6.1 Overview

The UWMP Act requires urban water suppliers to assess water supply reliability that compares total projected water use with the expected water supply over the next twenty years in five year increments. The Act also requires an assessment for a single-dry year and multiple-dry years. This section presents the reliability assessment for the PWD's service area.

The PWD's supply reliability can be impacted by many factors, including changes in the availability of supplies due to climatic or infrastructure changes, as well as the efficient use of those supplies in both average and dry periods. These factors can result in immediate (such as facility failures), short-term (SWP allocation limitations), or long-term (climate change) impacts to reliability and must therefore be considered in future planning.

The impacts of these factors on supply reliability increase under single-dry and multiple-dry year hydrologic conditions. Although not all shortages can be prevented, the PWD's overall goal to further diversify its supply portfolio is the most important factor in improving the immediate, near- and long- term reliability of supplies. If shortages do occur, the PWD has implemented a water shortage contingency plan to manage these situations.

The reliability within the PWD service area is a composite of the reliability of each source of supply as briefly discussed below.

6.1.1 Groundwater Reliability

Groundwater is traditionally considered a highly reliable supply since it is not immediately susceptible to changes in climate and surface flows. However, the two main factors that impact the reliability of groundwater supplies are legal and water quality. See Section 3 for more discussion of the region's groundwater resources.

Legal Factors

On December 23, 2015, the PWD as well as the majority of parties involved agreed to a stipulated judgment for the adjudication of the Antelope Valley Groundwater Basin[5]. This resulted in the PWD receiving a groundwater production right of 2,770 AFY. The judgment is on appeal, but the PWD believes that it is unlikely that its groundwater production right will change significantly as a result of the appeal. Prior to the judgment the PWD had an unquantified right to pump water for beneficial use, and assumed projected pumping volumes at 12,000 AF based on pumping capacity. Additionally, return flow credits will be available to the PWD, as described in Section 3.2.1.3.

[5] Judgment, *Antelope Valley Groundwater Cases*, Los Angeles County Superior Court, Judicial Council Coordination Proceeding No. 4408 (filed Dec. 28, 2015) (provided in Appendix J).

Water Quality Factors

The water quality of groundwater supplies is a factor in the PWD's reliability as it needs to meet drinking water standards. The PWD relies on groundwater to provide a large portion of its water supply and therefore has taken measures to ensure protection of groundwater quality. These measures are discussed in detail in Section 5.

6.1.2 Imported Water Reliability

The PWD receives imported water from the SWP. The factors affecting the reliability of imported water supplies from the SWP include legal, environmental, water quality, and climatic factors.

Legal Factors

Legal factors include policies and contract stipulations from DWR. Any legal actions can impact supplies from SWP water supplies in various ways, such as the various court decisions limiting SWP pumping due to perceived impacts on endangered fish in the Sacramento-San Joaquin Delta (Delta) estuary.

Environmental Factors

Environmental factors such as impacts to endangered species, their habitat, and other related concerns can impact SWP water supplies, as above.

Water Quality Factors

The quality of SWP water sources can impact the treatment processes needed to ensure compliance with drinking water standards, however no impact to water supply availability is projected to occur.

Climatic Factors

Imported water supplies rely heavily on runoff from rainfall and snowpack. If annual snowpack and rainfall amounts change significantly without corresponding investment in infrastructure and/or management practices, the quantity of water available from the SWP in any given year is subject to potential reductions. At this time, the impacts of climate change to imported water supplies are uncertain, and provisions for estimating them is included in the supply reliability section below.

6.1.3 Local Surface Water Reliability

The PWD expects a certain amount of Littlerock Dam Reservoir water to be available for supply in all years. This amount is estimated at 50 percent of the average available historical yield (8,000 AF) such that 4,000 AF is available in all years.

Climatic Factors

The PWD diverts surface water from Littlerock Dam Reservoir, which receives flows from Littlerock Creek. Littlerock Creek flows can be variable given changes in local precipitation and ETo. Most Littlerock Creek flows occur seasonally during the winter months and decrease significantly during the dry months. The PWD recognizes that annual climatic changes can potentially impact the reliability of Littlerock Dam Reservoir.

6.2 Projected Water Supply Reliability

There are two aspects of supply reliability. The first relates to immediate service needs and is primarily a function of the availability and adequacy of supply facilities. The second aspect is climate-related, and involves the availability of water during varying dry periods. This section considers the PWD's water supply reliability during three water scenarios: normal water year, single-dry water year, and multiple-dry water years. These scenarios are defined as follows:

- **Normal Year**: The normal year is a year in the historical sequence that most closely represents median runoff levels and patterns. The supply quantities for this condition are derived from historical average yields.

- **Single-Dry Year**: This is defined as the year with the minimum useable supply. The supply quantities for this condition are derived from the minimum historical annual yield.

- **Multiple-Dry Years**: This is defined as the three consecutive years with the minimum cumulative useable supply. Water systems are more vulnerable to these droughts of longer duration because they deplete water storage reserves in local and state reservoirs and in groundwater basins. The supply quantities for this condition are derived from historical three-year running minimum average yields.

For groundwater, it is assumed the PWD will receive a groundwater allocation of approximately 2,770 AFY effective beginning 2023 (see Section 3.2.1.3). It is expected that these supplies will be consistently available under normal, single-dry year, and multiple-dry years. For Littlerock Dam Reservoir, the PWD used the driest year on record of 1951 to estimate reliable availability. Accordingly, the PWD expects to have up to 4,000 AF of its diversion rights under normal, single-dry year, and multiple-dry years. This amount is calculated as 50 percent of the average available yield from the Littlerock Dam Reservoir (50 percent of 8,000 AF) and is considered to be available for supply in all years.

For SWP water, the PWD used the 2015 SWP DCR to identify its single-dry and multiple-dry water years. A single year drought, such as the one that occurred in 1977, would result in a yield of approximately 8-11 percent of the District's Table A Amount. In an extended drought, such as the one that occurred in 1931-1934, the PWD expects to receive an average of 33 percent of its Table A Amount. Groundwater pumping and Littlerock Dam Reservoir diversions are expected to remain the same during a normal water year, single-dry year, and multiple-dry years. SWP water is the only water supply source the PWD expects to have variability during single-dry and multiple-dry years.

6.3 Normal Water Year

This section summarizes the PWD's water supplies available to meet demands over the 25-year planning period during an average/normal year and compares them to demands for the same period. Assumptions about supplies and demands are provided in Sections 2 and 3. Table 6-1 demonstrates that the PWD anticipates adequate supplies for years 2020 to 2040 under normal hydrologic conditions.

TABLE 6-1: COMPARISON OF SUPPLIES AND DEMANDS – NORMAL YEAR (AF)

	2020	2025	2030	2035	2040
Existing Supplies					
Groundwater (from Table 3-3)	6,280	4,140	2,770	2,770	2,770
Groundwater Return Flow Credits (from Table 3-4)	5,000	5,000	5,000	5,000	5,000
Local Surface Water (from Table 3-6)	4,000	4,000	4,000	4,000	4,000
Imported SWP Water (from Table 3-9)	13,200	13,000	13,000	13,000	13,000
Butte Transfer Agreement[(a)]	6,200	6,100	6,100	6,100	6,100
Recycled Water[((from Table 4-4)	2,500	5,000	5,500	6,000	6,000
Total Supplies	**37,180**	**37,240**	**36,370**	**36,870**	**36,870**
Potable Water Demands	20,800	21,900	22,900	23,900	25,000
Recycled Water Demands	2,500	5,000	5,500	6,000	6,000
Total Demand[(b)]	**23,300**	**26,900**	**28,400**	**29,900**	**31,000**
Difference (Supply-Demand)	***13,880***	***10,340***	***7,970***	***6,970***	***5,870***

Notes: Values are rounded.
(a) For details see Section 3.3.1.
(b) Demands are not expected to change during drought conditions; the region typically receives little rain, and with implementation of DMM's water demands for irrigation do not increase in the PWD under single-dry and multiple-dry year conditions.

6.4 Single-Dry Year

The water supplies and demands for the PWD service area over the 25-year planning period were analyzed in the event that a single-dry year occurs, similar to the drought that occurred in California in 1977. Table 6-2 summarizes the existing and planned supplies available to meet demands during a single-dry year (assuming 8-11% of SWP supply from the 2015 DCR). Table 6-2 shows that the PWD anticipates demands to exceed existing supplies starting in 2020 under single-dry year hydrologic conditions. A discussion on how the PWD anticipates making up for supply deficits is discussed below in Section 6.6.

TABLE 6-2: COMPARISON OF SUPPLIES AND DEMANDS – SINGLE-DRY YEAR (AF)

	2020	2025	2030	2035	2040
Existing Supplies					
Groundwater (from Table 3-3)	6,280	4,140	2,770	2,770	2,770
Groundwater Return Flow Credits (from Table 3-4)	5,000	5,000	5,000	5,000	5,000
Local Surface Water (from Table 3-6)	4,000	4,000	4,000	4,000	4,000
Imported SWP Water (from Table 3-9)	2,300	2,100	1,900	1,900	1,700
Butte Transfer Agreement[(a)]	1,100	1,000	900	900	800
Recycled Water (from Table 4-4)	2,500	5,000	5,500	6,000	6,000
Total Supplies	**21,180**	**21,240**	**20,070**	**20,570**	**20,270**
Potable Water Demands	20,800	21,900	22,900	23,900	25,000
Recycled Water Demands	2,500	5,000	5,500	6,000	6,000
Total Demand[(b)]	**23,300**	**26,900**	**28,400**	**29,900**	**31,000**
Difference (Supply-Demand)	***-2,120***	***-5,660***	***-8,330***	***-9,330***	***-10,730***

Note: Values are rounded.
(a) For details see Section 3.3.1.
(b) Demands are not expected to change during drought conditions; the region typically receives little rain, and with implementation of DMMs water demands for irrigation do not increase in the PWD under single-dry and multiple-dry year conditions.

6.5 Multiple-Dry Year

The water supplies and demands for the PWD service area over the 25-year planning period were analyzed in the event that a four-year multiple-dry year event occurs, similar to the drought that occurred during the years 1931 to 1934. Table 6-3 summarizes the existing and planned supplies available to meet demands during multiple-dry years (assuming 33% SWP supply from the 2015 DCR). Table 6-3 shows that the PWD anticipates demands to exceed existing supplies starting in 2030 under multiple-dry year hydrologic conditions. A discussion on how the PWD anticipates making up for supply deficits is discussed below in Section 6.6.

TABLE 6-3: COMPARISON OF SUPPLIES AND DEMANDS – MULTIPLE-DRY YEAR (AF)

	2020	2025	2030	2035	2040
Existing Supplies					
Groundwater (from Table 3-3)	6,280	4,140	2,770	2,770	2,770
Groundwater Return Flow Credits (from Table 3-4)	5,000	5,000	5,000	5,000	5,000
Local Surface Water (from Table 3-6)	4,000	4,000	4,000	4,000	4,000
Imported SWP Water (from Table 3-9)	7,000	7,000	7,000	7,000	7,000
Butte Transfer Agreement[(a)]	3,300	3,300	3,300	3,300	3,300
Recycled Water (from Table 4-4)	2,500	5,000	5,500	6,000	6,000
Total Supplies	28,080	28,440	27,570	28,070	28,070
Potable Water Demands	20,800	21,900	22,900	23,900	25,000
Recycled Water Demands	2,500	5,000	5,500	6,000	6,000
Total Demand[(b)]	**23,300**	**26,900**	**28,400**	**29,900**	**31,000**
Difference (Supply-Demand)	***4,780***	***1,540***	***-830***	***-1,830***	***-2,930***

Note: Values are rounded.
(a) For details see Section 3.3.1.
(b) Demands are not expected to change during drought conditions; the region typically receives little rain, and with implementation of DMMs water demands for irrigation do not increase in the PWD under single-dry and multiple-dry year conditions.

6.6 Summary of Comparisons

As shown in the analyses above, the PWD projects adequate existing supplies to meet demands during normal years throughout the planning period. However, PWD anticipates that during single-dry year conditions, demands will exceed existing supplies starting in 2020 and that during multiple-dry year conditions, demands will exceed existing supplies starting in 2030. Therefore additional supplies are assumed to be needed to meet demands under those conditions.

As described in Section 3, the PWD is currently in the process of developing the Palmdale Regional Groundwater Recharge and Recovery Project, which is anticipated to provide 7,500 AFY up to potentially 10,800 AF once the project is built-out through the recharge of recycled and imported water supplies, starting in 2020 (see Section 3.3.3.1). In addition, the PWD has identified numerous short-and long-term transfer and exchange opportunities, as described in Section 3.3.3.2, which would provide additional supplies to help overcome supply shortages.

Therefore, it is anticipated that existing supplies in combination with identified future and potential water supply opportunities will enable the PWD to meet all future water demands under all hydrologic conditions through the end of the planning period.

Section 7: Water Demand Management Measures

7.1 Demand Management

This section describes the Demand Management Measures (DMMs) that the PWD is currently implementing, and plans to implement in order to meet its urban water use reduction targets (see Section 2.5).

In addition, Governor Edmund J. Brown's April 2014 emergency declaration requires that all state agencies that distribute funding for projects that impact water resources, including groundwater resources, will require recipients of future financial assistance to have appropriate conservation and efficiency programs in place.

Recent legislation significantly revised the UWMP Act to simplify and clarify the DMM reporting requirements for the 2015 UWMP cycle. Since the PWD is a member of the California Urban Water Conservation Council (CUWCC) it may continue to submit its annual reports as required by Section 6.2 of the Memorandum of Understanding Regarding Urban Water Conservation in California in order to comply with this section of the Act. The PWD has provided its 2013 and 2014 annual reports for inclusion in this 2015 UWMP as Appendix G.

The PWD recognizes that conserving water is an integral component of a responsible water management strategy. The PWD has a uniquely low water use for a high desert area, located in the South Lahontan Hydrologic Region. Based on data reported in the 2010 UWMPs, the South Lahontan Hydrologic Region had a population-weighted baseline 5-year average water use of 258 GPCD with an average population-weighted 2020 target of 207 GPCD (DWR 2014). With a 2015 GPCD of 128 gallons (see Table 2-9 in Section 2), the PWD's water use is significantly lower than the rest of the South Lahontan Hydrologic Region. The District has achieved its goals largely by focusing on system performance, rate increases and a community culture of conservation and small landscapes. It will maintain this level of demand, and possibly reduce demand even further, by continuing to implement the CUWCC BMPs.

For the purposes of this UWMP the DMMs are categorized as "Foundational" and "Other." Foundational DMMs, listed below, are those DMMs that the UWMP Act and Water Code specifically mention for retail water suppliers such as PWD:

1. Water waste prevention ordinances
2. Metering
3. Conservation Pricing
4. Public Education and Outreach
5. Programs to assess and manage distribution system real loss
6. Water conservation program coordination and staff support

Activities outside of the Foundational DMMs that encourage less water use in the PWD's service area fall in the "Other" category.

7.2 Plan to Reduce Water Use

The PWD currently has a water conservation program and will continue to expand this program over the next five years and tis dedicated to water conservation as a vital part of its water supply portfolio. Several water conservation programs have been implemented over the last few decades, including classroom education programs, public outreach, and various rebate programs. The PWD will continue to provide these programs as part of its conservation efforts on a yearly basis.

This section describes the PWD's plan to achieve the water use reductions necessary to meet the per capita water use targets, consistent with the Water Conservation Act of 2009 (SBX7-7). The urban water use targets and calculations are described in Section 2. As mentioned above and in Section 2, the PWD has met its 2015 and 2020 water use reduction targets. While the 2015 water conservation targets substantially reduced the PWD's needed revenues for capital improvement projects, the PWD plans to continue implementing water conservation programs to ensure that the targets continue to be met.

7.2.1 Foundational DMMs

7.2.1.1 Water Waste Prevention Ordinances and Prohibition

In 2001 the Board of Directors adopted the Waste of Water Policy, which outlines actions to be taken by the PWD to prevent and address waste and unreasonable use of water, including penalties for violations. In December 2009, the Board of Directors adopted and approved Resolution No. 09-19 declaring water conservation regulations, with the intent to meet the water use reduction goals of 20 percent by 2020 and ensure adequate water supply for human consumption, sanitation, and fire protection. Both resolutions are included in Appendix F.

7.2.1.2 Metering

The PWD is fully metered with all customers have metered accounts. The PWD is in the process of changing older and outdated meters with new efficient meters to ensure more accurate reading and data capture. This is considered a water conservation initiative, in addition to a financial best management practice.

7.2.1.3 Conservation Pricing

The PWD uses a budget based tiered rate approach for water pricing. The most recent September 17th 2014 Proposition 218 process redistributed the old Tier 1 pricing into a new two-tier approach. Tier 1 now is a customer's Indoor allocation for use of all residential activities inside the home. Tier 2 is a customer's Outdoor water allocation. Pricing varies between the two Tiers. Tier 1 is the least expensive while Tier 2 water increases in price due to increased water usage for irrigation. Four (4) additional tiers remain, with the cost per unit increasing progressively at each tier. See CUWCC BMP reports in Appendix G.

7.2.1.4 Public Education and Outreach

The PWD has school education programs in place that provide educational materials and instructional assistance. This program is intended to reach the youngest water users and emphasize the need to engage them in water conservation.

To provide PWD customers with the tools to maintain water conservation goals, public education efforts have included, radio spots, TV public service announcements, bill inserts, newsletters, press releases, rebate programs including Cash 4 Grass and some indoor high efficiency appliances, booths at local events, parades, public speaking engagements, and school interaction. The PWD is committed to providing its customers with the education and tools to maintain their low use, all of which can be found on the PWD's website at: http://www.palmdalewater.org/conservation/ . See the CUWCC BMP reports in Appendix G.

7.2.1.5 Programs to assess and mange distribution system real loss

The PWD regularly checks and evaluates the mainline piping system to detect leaks. Distribution system loss is discussed in Section 2.4.3 and reported in Appendix E.

7.2.1.6 Water conservation program coordination and staffing support

Water conservation activities include significant public outreach efforts as described earlier. In addition, there are two full-time conservation staff members with a moderate budget. Contact information: Mike McNutt, Water Conservation Director/PIO mmcnutt@palmdalewater.org, 661-456-1041; Linda Garza-Trevino, Water Conservation Aide, ltrevino@palmdalewater.org, 661-456-1001.

7.2.2 Other DMMs

7.2.2.1 Rebate Programs

The PWD started several rebate programs for customers in the later part of 2009; these are detailed in the CUWCC BMP reports in Appendix G. Customers were given rebates as credits on their water bills if they filled out an application after buying the rebated product and returning the original receipt and a copy of the water bill to the PWD. In addition, the PWD implements a number of rebate programs to encourage water conservation:

1. High Efficiency Toilet (HET) Rebate Program: A HET rebate program was instituted in 2009 for residential and commercial customers. The rebate amount for this program is a credit on their water bill of $60.00 per toilet installed. If a customer replaces an Ultra-Low-Flush toilet (ULFT) with an HET, the rebate amount will consist of $30.00.

2. High Efficiency Washing Machines Rebate Program: A washing machine rebate program is available for customers who wish to purchase a water efficient washing machine with a water factor of 5.0 or less. The rebate amount for this program is a credit on the customer's account of $100.00 per washer bought.

3. Cash for Grass: The PWD has been working with the City of Palmdale, the local high school, local elementary schools, and residential customers to substitute grass on large

landscape areas by implementing the cash for grass program. This program encourages the replacement of grass with "water-smart" landscaping to conserve water.

Rebate programs were previously available for sprinkler devices and systems, but the PWD is moving away from incentivizing any outdoor irrigation and no longer offers those programs.

7.2.3 Planned Implementation of DMMs to Achieve Water Use Targets

The PWD will continue to implement the DMMs described in this section. These programs, taken together, will help to maintain progress on meeting 20x2020 water use reduction targets as described in Section 2 of this UWMP.

Section 8: Water Shortage Contingency Planning

For the purposes of this Public Draft Plan, some elements of this Section are still in progress and may be updated (e.g., updated resolutions/ordinances) in the Final Plan.

Water supplies may be interrupted or reduced significantly in a number of ways, such as a drought that limits supplies, an earthquake that damages water delivery or storage facilities, a regional power outage or a toxic spill that affects water quality. This Section describes how the District plans to respond to various stages of shortage.

Since the 1991 drought, the PWD has approved and adopted numerous conservation resolutions from establishing a voluntary water conservation program, to implementing a waste water policy, declaring water shortage emergency conditions, identifying stages of action and response requirements, and establishing emergency water conservation regulations. In addition, due to recent drought conditions and the Governor's emergency declarations that require a 25 percent reduction in overall potable urban water use statewide, the PWD developed ordinances and other planning documents to incentivize individual customer conservation and reduce overall water demands.

PWD updated its Water Shortage Contingency Plan (WSCP) with the details described in this Section, which will be adopted together with the UWMP. The PWD updated its budget-based tiered water rates on January 1, 2016. The PWD Board of Directors may institute water restrictions to limit outdoor water use in conjunction with a drought surcharge to help with fixed cost recovery due to revenue shortages resulting from conservation.

8.1 Stages of Action to Respond to Water Shortages

PWD's WSCP establishes five stages of escalating response to a water shortage caused by droughts and/or emergencies. Each stage may be triggered by a declaration from federal or state authorities, or PWD to address events that result in a water shortage. The stages and applicable water supply conditions are summarized in Tables 8-1 and 8-2.

TABLE 8-1: RATIONING AND REDUCTION GOALS

Deficiency or State Mandated Reduction	Stage	Demand Reduction Goal	Type of Program
1-15%	1	15% reduction	Voluntary
16-25%	2	25% reduction	Mandatory
26-40%	3	40% reduction	Mandatory
41-50%	4	50% reduction	Mandatory
>50%	5	>50% reduction	Mandatory

TABLE 8-2: STAGES OF PWD WATER SHORTAGE CONTINGENCY PLAN

Stage	Percent Supply Reduction	Triggers
I Water Shortage	1 to 15%	• Federal, state or local disaster declaration that may impact water supplies • State declaration due to drought or system maintenance • PWD Board of Directors determination • Unplanned PWD water system maintenance
II Water Shortage	16 to 25%	• Federal, state or local disaster declaration that may impact water supplies • State declaration due to drought or system maintenance • PWD Board of Directors determination • Unplanned PWD water system maintenance requiring more time to repair
III Water Shortage	26 to 40%	• Federal, state or local disaster declaration that may impact water supplies • State determination due to drought or significant system failure • State outdoor irrigation restriction; and/or • PWD Board of Directors determination • Unplanned PWD water system failure or emergency
IV and V Critical Water Shortage	40% or higher	• Federal, state or local disaster declaration that may impact water supplies • Sacramento to Delta/SWP failure • State determination due to drought or significant system failure • PWD Board of Directors determination • Natural or human-caused catastrophe disrupting delivery of water to, or within the service area • Severe PWD water system failure

8.2 Procedures for Water Shortage Level Determination

The PWD General Manager will recommend activation of one or more elements of the WSCP whenever water supplies of the PWD have a reasonable prospect for being inadequate to meet the needs of customers. The recommendation shall be presented to the Board of Directors in the form of a written report, which includes the reasons for the recommendation. The Board will also be presented with a draft resolution for consideration and possible action. The Board shall consider the report at a duly noticed public hearing. In case of emergencies, a special meeting may be called by a majority of the Board on less than twenty-four hour notice and without an agenda to deal with the disruption of service.

If an emergency arises which would ordinarily be brought to the attention of the Board but insufficient time exists, the General Manager has administrative authority to take action as he deems appropriate and reasonable.

PWD uses various public notification forms like media outlets, direct mail, automated voice recording, website, social media, group presentations and public meetings. The form and extent of notification depends on the severity and duration of the emergency condition.

8.3 Prohibition of End Uses and Consumption Reduction Methods

PWD permanently implements general water conservation measures and irrigation practices aimed at increasing everyday water use efficiency. Those measures, plus those to be enacted in the various stages, are presented in Table 8-3.

TABLE 8-3: PROHIBITIONS DURING DIFFERENT SHORTAGE STAGES

Stage	Prohibition/Requirement
In Effect at All Times	Water waste is prohibited at all times. Water waste includes but is not limited to: • Application of potable water to outdoor landscapes in a manner that causes runoff. • Water leaks shall be repaired in a timely manner and sprinklers shall be adjusted to eliminate over-spray. • Hosing of hardscape surfaces, except where health and safety needs dictate, is prohibited. Other • Water for construction purposes, including but not limited to de-brushing of vacant land, compaction of fills and pads, trench backfill and other construction uses shall be in an efficient manner.
Stage I	• Watering of outdoor landscapes within 48 hours of measurable rainfall. • Car washing and outside cleaning activities prohibited except when performed with buckets and automatic hose shutoff devices. • The serving of drinking water other than upon request in eating or drinking establishments is prohibited. • Operators of hotels and motels shall provide guests with the option of choosing not to have towels and linens laundered daily. The hotel or motel shall prominently display notice of this option in each guestroom. • The PWD will expand the public information campaign. • The PWD shall evaluate the implementation of a Drought Surcharge.
Stage II	• All restrictions/prohibitions/initiatives from Stage I are in effect • Landscape watering between the hours of 1000 and 1800 hours is prohibited • Outdoor watering is limited to 3 days per week. • The PWD will increase water waste patrols. • Issuance of potable construction water meters will cease. • Irrigation with potable water outside of newly constructed homes and

Stage	Prohibition/Requirement
	buildings not delivered by drip or microspray is prohibited. • The PWD will evaluate adjustments to applicable water waste fines.
Stage III	• All restrictions/prohibitions/initiatives from Stage I and Stage II are in effect and are mandatory. • Irrigation with potable water of ornamental turf on public street medians is prohibited. • Outdoor watering is limited to 2 days per week. • Potable water cannot be used to maintain fountains, reflection ponds and decorative water bodies for aesthetic or scenic purposes, except where necessary to support aquatic life.
Stage IV	• All restrictions/prohibitions/initiatives from Stage I, Stage II, and Stage III are in effect and are mandatory. • Outdoor watering is limited to 1 day per week. • Filling of new swimming pools, spas, hot tubs or the draining and refilling of existing pools, etc is prohibited. Topping off is allowed to the extent that the designated water allocation is not exceeded. • Meters will only be installed for new accounts where the building permit was issued prior to the declaration of the water shortage.
Stage V	• All restrictions/prohibitions/initiatives from Stage I, Stage II, Stage III, and Stage IV are in effect and are mandatory. • No meters will be installed for new accounts. • Outdoor irrigation is prohibited, with the exception of drip or hand watering to preserve established trees.

According to each water shortage stage enacted, the PWD WSCP outlines actions required by customers and by PWD. These actions are presented in Table 8-4.

TABLE 8-4: CUSTOMER AND PWD WATER SHORTAGE ACTIONS

Stage	District Actions	Customer Actions
Stage I	• Initiate public information campaign • Increase awareness of conservation measures • Commence enforcement of conservation measures • Promote methods to reduce water use • Conduct focused outreach to large water users • Coordinate public outreach with the cities and County	• Voluntary water conservation • Adhere to conservation measures • Consider conversion to more efficient irrigation methods • Consider turf removal and conversion to California-friendly landscaping • Patronize local carwashes that recycle their water
Stage II	• Expand public information campaign • Step up enforcement of conservation measures • Continue previous actions	• Re-double voluntary conservation • Continue previous actions

Stage	District Actions	Customer Actions
Stage III	• Intensify public information campaign • Expand enforcement of conservation measures • Send direct notices to all customers • Provide regular media, city council and County briefings • Activate emergency connections with mutual aid agencies • Continue previous actions	• Continue previous actions • Ensure appropriate programming of irrigation controller
Stages IV and V	• Implement crisis communication plan • Activate Emergency Operations Center • Coordinate actions with regulatory agencies • Coordinate actions with public safety agencies to address enforcement and fire protection issues • Recall all temporary meters and activate water fill stations • Continue previous actions	• Continue previous actions • Terminate outdoor water use for irrigation, pools and fountains • Water may only be used outdoors for public health and safety purposes • Be on alert for Boil Water Orders if they become necessary

Multiple communication channels will be used by PWD staff to communicate water shortage conditions and necessary actions to the PWD Board of Directors, customers, residential homeowners associations, business chambers, inter-governmental bodies, essential facilities (schools, hospitals, fire), and other stakeholders. Among the communication methods to be used are the following:

- Public water conservation forums hosted at PWD headquarters and off-site locations.
- Attendance and agenda presentation at local city council meetings.
- Attendance and agenda presentations at home-owners association and business chamber meetings.
- Direct mailings and bill inserts to customers and account holders.
- Press releases.
- PWD publications, e.g., “The Pipeline”.
- Updated posting of issues and information on PWD website.
- Advertisements in local publications and cable channels.
- Cards, table tents, door hangers and other leave-behind reminders.

8.4 Penalties, Charges, Other Enforcement of Prohibitions

Enforcement actions for violations of water conservation measures are summarized in Table 8-5. PWD customers are encouraged to report water conservation violations through use of the PWD hotline.

TABLE 8-5: ENFORCEMENT ACTIONS

Violation Level	Penalties or Charges
1st Violation	The customer shall be notified in writing. The notice shall include a warning that further violations could result in stricter penalties.
2nd Violation	A 2nd violation is punishable by a fine of up to $50.
3rd Violation	A 3rd violation is punishable by a fine of up to $250.
4th Violation	A 4th violation is punishable by a fine of up to $500.
5th Violation	A 5th violation may result in termination of service.
Violation Assessment Period	Any violations occurring within twelve months of each other will be considered consecutive and result in escalating penalties. The period for assessing consecutive penalties may be extended beyond 12 months by resolution of the Board.

8.5 Determining Water Shortage Reductions

The PWD has meters on all residential, commercial and landscape service connections in the service area and requires meters on all new connections. These meters record the amount of water consumption at each location. These meters in combination with billing information will be used to monitor actual reductions in water use.

8.6 Revenue and Expenditure Impacts

Currently, only about 55 percent of PWD'S fixed costs are covered by fixed revenues. As a result, water conservation efforts can significantly impact revenues. Current drought conditions have presented a reminder of the large fluctuations in water sales volumes that can occur within the PWD service area and statewide, and emphasize the importance of measures to improve revenue stability.

According to the PWD Fiscal Year 2015-16 Adopted Budget, reductions in potable water use due to statewide mandates are anticipated to result in an operating shortfall for the Potable Water Enterprise. While operating expenses are reduced with lower sales, fixed costs cannot be fully recovered for potable water with significant reductions in sales, thereby resulting in a net operating loss. This shortfall will be made up by drawing from PWD's reserves which introduces risk associated with financial stability when a pre-established minimum reserve account is reached.

In the case of future water use reductions resulting from the implementation of the PWD WSCP, PWD would likely experience similar impacts to operating revenue and would draw as necessary and as possible from reserves. In addition, one of the objectives of the budget-based tiered rate structure implemented on January 1, 2016 is to improve revenue stability for PWD. Therefore, while revenue would inevitably fluctuate with water use reductions, PWD has established appropriate means to manage these impacts with use of drought surcharge. Future or continued reductions in consumption would ultimately cause a rate structure adjustment that would generate enough revenue to fund operations without drawing from reserves.

8.7 WSCP Resolution or Ordinance

PWD will adopt the WSCP at the time of the UWMP adoption. A copy of the draft Resolution No. 16-7 is included in Appendix I.

8.8 Actions to Prepare For Catastrophic Supply Interruption

The PWD service area is bound on the west by a major portion of the San Andreas Fault. A major earthquake along the southern portion of the San Andreas Fault would affect the PWD service area. The California Division of Mines and Geology has stated two of the aqueduct systems that import water to southern California (including the California Aqueduct) could be ruptured by displacement on the San Andreas Fault, and supply may not be restored for a three to six-week period. The situation would be further complicated by physical damage to pumping equipment and local loss of electrical power.

DWR has a contingency aqueduct outage plan for restoring the California Aqueduct to service should a major break occur, which it estimates would take approximately four months to repair.

Experts agree it may be at least three days after the earthquake before outside help could get to the area. Extended supply shortages of both groundwater and imported water, due to power outages and/or equipment damage, would be severe until the water supply could be restored.

Power outages could affect the PWD because they own and operate groundwater wells and distribution systems.

The area's water sources are generally of good quality, and no insurmountable problems resulting from industrial or agricultural contamination are foreseen. If contamination did result from a toxic spill or similar accident, the contamination would be isolated and should not significantly impact the total water supply. In addition, such an event would be addressed in PWD's emergency response plans.

8.8.1 SWP Emergency Outage Scenarios

In addition to earthquakes, the SWP could experience other emergency outage scenarios. Past examples include slippage of aqueduct side panels into the California Aqueduct near Patterson in the mid-1990s, the Arroyo Pasajero flood event in 1995 (which also destroyed part of Interstate 5 near Los Banos) and various subsidence repairs needed along the East Branch of the Aqueduct since the 1980s. All these outages were short-term in nature (on the order of weeks), and DWR's Operations and Maintenance Division worked diligently to devise methods to keep the Aqueduct in operation while repairs were made. As a result, the SWP contractors experienced no interruption in deliveries.

One of the SWP's important design engineering features is the ability to isolate parts of the system. The Aqueduct is divided into "pools." Thus, if one reservoir or portion of the California Aqueduct is damaged in some way, other portions of the system can still remain in operation. The principal SWP facilities are shown on Figure 8-1.

FIGURE 8-1: PRIMARY SWP FACILITIES



Other events could result in significant outages and potential interruption of service. Examples of possible nature-caused events include a levee breach in the Delta near the Harvey O. Banks Pumping Plant, a flood or earthquake event that severely damages the Aqueduct along its San Joaquin Valley traverse, or an earthquake event along either the West or East Branches. Such events could impact some or all SWP contractors south of the Delta.

The response of DWR, the PWD, and other SWP contractors to such events would be highly dependent on the type and location of any such event. In typical SWP operations, water flowing through the Delta is diverted at the SWP's main pumping facility, located in the southern Delta, and is pumped into the California Aqueduct. During the relatively heavier runoff period in the winter and early spring, Delta diversions generally exceed SWP contractor demands, and the excess is stored in San Luis Reservoir. Storage in SWP aqueduct terminal reservoirs, such as Pyramid and Castaic Lakes, is also refilled during this period. During the summer and fall, when diversions from the Delta are generally more limited and less than contractor demands, releases from San Luis Reservoir are used to make up the difference in deliveries to contractors. The SWP share of maximum storage capacity at San Luis Reservoir is 1,062,000 AF.

The PWD receives its SWP deliveries through the East Branch of the California Aqueduct. The other contractors receiving deliveries from the East Branch are Metropolitan Water District, Antelope Valley-East Kern Water Agency, Mojave Water Agency, Crestline-Lake Arrowhead Water Agency, Desert Water Agency, San Gabriel Valley Municipal Water District, San Bernardino Valley Municipal Water District, San Gorgonio Pass Water Agency, and Coachella Valley Water District. The East Branch has two terminal reservoirs, Silverwood Lake and Lake Perris, which were designed to provide emergency storage and regulatory storage (i.e., storage to help meet peak summer deliveries) for several of the East Branch contractors. However, the PWD does not have contract rights to storage capacity in those reservoirs.

In addition to SWP storage south of the Delta in San Luis and the terminal reservoirs, a number of contractors have stored water in groundwater banking programs in the San Joaquin Valley, and many also have surface and groundwater storage within their own service areas.

Three scenarios that could impact the delivery to the PWD of its SWP supply or other supplies delivered to it through the California Aqueduct are described below. For each of these scenarios, it was assumed that an outage of six months could occur. The PWD's ability to meet demands during the worst of these scenarios is presented following the scenario descriptions.

8.8.1.1 Scenario 1: Emergency Freshwater Pathway Description (Sacramento-San Joaquin Delta)

DWR has estimated that in the event of a major earthquake in or near the Delta, regular water supply deliveries from the SWP could be interrupted for up to three years, posing a substantial risk to the California business economy. Accordingly, a post-event strategy has been developed which would provide necessary water supply protections. The plan has been coordinated through DWR, the Army Corps of Engineers (Corps), Bureau of Reclamation, California Office of Emergency Services (Cal OES), the Metropolitan Water District of Southern California, and the State Water Contractors. Full implementation of the plan would enable resumption of at least partial deliveries from the SWP in less than six months.

DWR Delta Flood Emergency Management Plan. DWR has developed the Delta Flood Emergency Management Plan to provide strategies for a response to Delta levee failures, which addresses a range of failures up to and including earthquake-induced multiple island failures during dry conditions when the volume of flooded islands and salt water intrusion are large. Under such severe conditions, the plan includes a strategy to establish an emergency freshwater pathway from the central Delta along Middle River and Victoria Canal to the export pumps in the south Delta. The plan includes the pre-positioning of emergency construction materials at existing and new stockpiles and warehouse sites in the Delta, and development of tactical modeling tools (DWR Emergency Response Tool) to predict levee repair logistics, water quality conditions, and timelines of levee repair and suitable water quality to restore exports. The Delta Flood Emergency Management Plan has been extensively coordinated with state, federal and local emergency response agencies. DWR, in conjunction with local agencies, the Corps and Cal OES, regularly conduct simulated and field exercises to test and revise the plan under real time conditions.

DWR and the Corps provide vital Delta region response to flood and earthquake emergencies, complementary to an overall Cal OES structure. Cal OES is preparing its Northern California Catastrophic Flood Response Plan that incorporates the DWR Delta Flood Emergency Management Plan. These agencies utilize a unified command structure and response and recovery framework. DWR and the Corps, through a Draft Delta Emergency Operations Integration Plan (2015), would integrate personnel and resources during emergency operations.

8.8.1.2 Scenario 2: Complete Disruption of the California Aqueduct in the San Joaquin Valley

The 1995 flood event at Arroyo Pasajero demonstrated vulnerabilities of the California Aqueduct (the portion that traverses the San Joaquin Valley from San Luis Reservoir to Edmonston Pumping Plant). Should a similar flood event or an earthquake damage this portion of the aqueduct, deliveries from San Luis Reservoir could be interrupted for a period of time. DWR has informed the SWP contractors that a four-month outage could be expected in such an event. The PWD's assumption is a six-month outage.

Arroyo Pasajero is located downstream of San Luis Reservoir and upstream of the primary groundwater banking programs in the San Joaquin Valley. Assuming an outage at a location near Arroyo Pasajero that resulted in the California Aqueduct being out of service for six months, supplies from San Luis Reservoir would not be available to those SWP contractors located downstream of that point. This would include the PWD.

8.8.1.3 Scenario 3: Complete Disruption of the East Branch of the California Aqueduct

The East Branch of the California Aqueduct begins at a bifurcation of the Aqueduct south of Edmonston Pumping Plant, which pumps SWP water through and across the Tehachapi Mountains. From the point of bifurcation, the East Branch is an open canal. Water is conveyed through the canal to the Pearblossom Pumping Plant, where the first of four turnouts to the PWD service area is located at the Sheep Creek (mile marker 346.98 in Reach 20B), which is essentially a stub out in Phelan area and not used at this time.

If a major earthquake were to damage a portion of the East Branch, deliveries could be interrupted. The exact location of such damage along the East Branch would be key to

determining emergency operations by DWR and the East Branch SWP contractors. It should be noted that the East Branch is bounded by and in some places traverses the San Andreas Fault Zone. For this scenario, it was assumed that the East Branch would suffer a single-location break and deliveries of SWP water from north of the Tehachapi Mountains or of contractor water stored in groundwater banking programs in the San Joaquin Valley would not be available. It was also assumed that Silverwood and Perris dams would not be damaged by the event and that water in Silverwood and Perris Lakes would be available to the three East Branch SWP contractors that have capacity rights in them.

In any of these three SWP emergency outage scenarios, DWR and the SWP contractors would coordinate operations to minimize supply disruptions. Depending on the particular outage scenario or outage location, some or all of the SWP contractors south of the Delta might be affected. But even among those contractors, potential impacts would differ given each contractor's specific mix of other supplies and available storage. During past SWP outages, the SWP contractors have worked cooperatively to minimize supply impacts among all contractors. Past examples of such cooperation have included certain SWP contractors agreeing to rely more heavily on alternate supplies, allowing more of the outage-limited SWP supply to be delivered to other contractors; and exchanges among SWP contractors, allowing delivery of one contractor's SWP or other water to another contractor, with that water being returned after the outage was over.

Of these three SWP outage scenarios, the East Branch outage scenario presents the worst-case scenario for the PWD. In this scenario, the PWD would rely solely on local supplies. An assessment of the supplies available to meet demands in the PWD's service area during a six-month East Branch outage and the additional levels of conservation projected to be needed are presented in Table 8-6 for 2020 through 2040.

During an outage, the local supplies available would consist of groundwater and surface water. It was assumed that local well production would be unimpaired by the outage and that the outage would occur during a year when average/normal supplies would be available. Note that adequate well and aquifer capacity exists to pump at levels higher than those assumed in this assessment, particularly during a temporary period such as an outage. However, to be conservative, groundwater production was assumed to be one-half of annual supplies.

Table 8-6 shows that, for a six-month emergency outage, the PWD will be in a good position to handle the emergency outage due to the planned PRGRRP program and the long term buffering capacity of local aquifers. Additionally, it is likely that potential cooperation among SWP contractors and/or temporarily increased groundwater production during such an outage could increase supplies so that lower amounts, or even no amount, of additional conservation would be needed and the banked water could be saved for future emergency. In an emergency such as this, these levels of additional conservation would likely be achieved through voluntary conservation, but mandatory measures would be enacted by the PWD if needed.

TABLE 8-6: PROJECTED SUPPLIES AND DEMANDS DURING SIX-MONTH DISRUPTION OF IMPORTED SUPPLY SYSTEM (AF)

Source	2020	2025	2030	2035	2040
Imported SWP Supply[(a)]	0	0	0	0	0
Local Groundwater[(b)]	3,140	2,070	1,385	1,385	1,385
Groundwater Return Flow Credits[(b)]	2,500	2,500	2,500	2,500	2,500
Local Surface Water[(c)]	2,000	2,000	2,000	2,000	2,000
Recycled Water[(d)]	1,250	2,500	2,750	3,000	3,000
Palmdale Regional GRRP[(e)]	7,500	7,500	7,500	7,500	7,500
Total Supplies	**16,390**	**16,570**	**16,135**	**16,385**	**16,385**
Total Estimated Demands[(f)]	**11,650**	**13,450**	**14,200**	**14,950**	**15,500**

Notes:
(a) Assumes complete disruption in SWP supplies and in deliveries through the California Aqueduct for six months; inclusive of Butte Transfer Agreement.
(b) See Table 3-1. Projected annual groundwater supplies, including return flow credits, have been divided by 2 to represent 6 months of supply.
(c) See Table 3-1. Projected surface water supplies have been divided by 2 to represent 6 months of supply.
(d) Projected recycled water supplies have been divided by 2 to represent 6 months of supply.
(e) It is assumed that the PRGRRP will be in operation and will make 7,500 AFY available from recharged supplies. (f) Total demands include potable and recycled water demands. Demands are assumed to be one-half of average/normal year demands.

8.8.2 Regional Power Outage Scenarios

For a major emergency such as an earthquake, Southern California Edison (Edison) has declared that in the event of an outage, power would be restored within a 24 hour period. For example, following the 1994 Northridge earthquake, Edison was able to restore power within 19 hours. Edison experienced extensive damage to several key power stations, yet was still able to recover within a 24-hour timeframe.

The PWD has developed alternatives for providing its own electrical generation using portable and fixed emergency generation units to respond to potential outages. PWD utilizes wind, solar, and hydro generation to offset power costs. The PWD also works closely with electricity and natural gas providers to ensure energy efficiency and the best possible rates.

8.9 Minimum Supply Next Three Years

The minimum water supply available during the next three years would occur during a three-year multiple-dry year event between the years 2016 and 2018. As shown in Table 8-7, the total water supply available during each of the next three years is around 20,000 AFY.

TABLE 8-7: ESTIMATE OF MINIMUM SUPPLY FOR THE NEXT THREE YEARS

	2016	2017	2018
Source			
Local Groundwater[(a)]	10,500	9,200	8,100
Groundwater Return Flow Credits[(b)]	5,000	5,000	5,000
Local Surface Water[(c)]	4,000	4,000	4,000
Imported SWP Water[(d)]	1,100	1,100	1,100
Butte Transfer Agreement[(d)]	500	500	500
Recycled Water	100	100	100
Total Supplies	**21,200**	**19,900**	**18,800**

Notes: Values are rounded.

(a) Assumes rampdown of historic groundwater rights (12,000 AFY) will occur.
(b) Assumes return flow credits are available in all hydrologic year types.
(c) Based on full availability of projected surface water supplies. See Table 3-1.
(d) Imported supplies, including PWD's Table A amount of 21,300 AF and Butte Transfer agreement of 10,000 AFY, were multiplied by 5% based on the worst-case historic four-year drought (current conditions). See Table 3-8.
(e) Assumes 2015 recycled water deliveries.

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Appendix A: DWR 2015 UWMP Checklist

Appendix A

UWMP Checklist

This checklist is developed directly from the Urban Water Management Planning Act and SB X7-7. It is provided to support water suppliers during preparation of their UWMPs. Two versions of the UWMP Checklist are provided – the first one is organized according to the California Water Code and the second checklist according to subject matter. The two checklists contain duplicate information and the water supplier should use whichever checklist is more convenient. In the event that information or recommendations in these tables are inconsistent with, conflict with, or omit the requirements of the Act or applicable laws, the Act or other laws shall prevail.

Each water supplier submitting an UWMP can also provide DWR with the UWMP location of the required element by completing the last column of eitherchecklist. This will support DWR in its review of these UWMPs. The completed form can be included with the UWMP.

If an item does not pertain to a water supplier, then state the UWMP requirement and note that it does not apply to the agency. For example, if a water supplier does not use groundwater as a water supply source, then there should be a statement in the UWMP that groundwater is not a water supply source.

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	**Section 2.5.2. Table 2-9.**
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	**Section 2.5.2. Table 2-9.**
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 if the suppliers base GPCD is at or below 100.	Baselines and Targets	Section 5.7.2	**Section 2.5.2. Table 2-9.**
10608.24(a)	Retail suppliers shall meet their interim target by December 31, 2015.	Baselines and Targets	Section 5.8 and App E	**Section 2.5.2. Table 2-8**
10608.24(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	**Not applicable**
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	**Section 1.5.1. Table 1-3.**
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	**Section 2.5.2.**
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	**Section 2.5.1. Table 2-8.**
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	**Section 1.5.1. Appendix C.**
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	Plan Preparation	Section 2.5.2	**Section 1.5. Table 1-2**

	agencies, and relevant public agencies, to the extent practicable.			
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	**Section 1.5.2.**
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	**Section 1.5. Table 1-2. Appendix C.**
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	**Section 1.3.**
10631(a)	Describe the water supplier service area.	System Description	Section 3.1	**Section 1.6.1.**
10631(a)	Describe the climate of the service area of the supplier.	System Description	Section 3.3	**Section 1.7. Table 1-4.**
10631(a)	Indicate the current population of the service area.	System Description and Baselines and Targets	Sections 3.4 and 5.4	**Section 2.3. Table 2-1.**
10631(a)	Provide population projections for 2020, 2025, 2030, and 2035.	System Description	Section 3.4	**Section 2.3. Table 2-1.**
10631(a)	Describe other demographic factors affecting the supplier's water management planning.	System Description	Section 3.4	**Section 2.2.**
10631(b)	Identify and quantify the existing and planned sources of water available for 2015, 2020, 2025, 2030, and 2035.	System Supplies	Chapter 6	**Section 3.1. Table 3-1.**
10631(b)	Indicate whether groundwater is an existing or planned source of water available to the supplier.	System Supplies	Section 6.2	**Section 3.2.1.**
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	**Section 3.2.1.4.**
10631(b)(2)	Describe the groundwater basin.	System Supplies	Section 6.2.1	**Section 3.2.1.1.**
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	**Section 3.2.1.3. Appendix J.**
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	System Supplies	Section 6.2.3	**Not Applicable**

	condition.			
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	**Section 3.2.1.2. Table 3-2.**
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	**Section 3.2.1.3. Table 3-3.**
10631(c)(1)	Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage.	Water Supply Reliability Assessment	Section 7.1	**Sections 6.1.2. and 6.1.3.**
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	**Sections 6.3, 6.4 and 6.5. Tables 6-1, 6-2 and 6-3.**
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	**Section 3.2.4. Table 3-10.**
10631(d)	Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.	System Supplies	Section 6.7	**Section 3.3. Table 3-11.**
10631(e)(1)	Quantify past, current, and projected water use, identifying the uses among water use sectors.	System Water Use	Section 4.2	**Sections 2.4.1. and 2.6.1. Tables 2-2 and 2-10.**
10631(e)(3)(A)	Report the distribution system water loss for the most recent 12-month period available.	System Water Use	Section 4.3	**Section 2.4.3. Table 2-4. Appendix E.**
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	**Section 7.2.1.**
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	**Section 7.2.2.**
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	**Section 6.6**
10631(h)	Describe desalinated water project opportunities for long-term supply.	System Supplies	Section 6.6	**Section 3.3.4.**

10631(i)	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	**Section 7.1. Appendix G.**
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	**Not Applicable**
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	**Not Applicable**
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	**Section 2.6.3. Table 2-12.**
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	**Section 8.1. Table 8-1.**
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	**Section 8.9. Table 8-7.**
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	**Section 8.8.**
10632(a)(4)	Identify mandatory prohibitions against specific water use practices during water shortages.	Water Shortage Contingency Planning	Section 8.2	**Section 8.3. Table 8-3.**
10632(a)(5)	Specify consumption reduction methods in the most restrictive stages.	Water Shortage Contingency Planning	Section 8.4	**Section 8.3. Table 8-4.**
10632(a)(6)	Indicated penalties or charges for excessive use, where applicable.	Water Shortage Contingency Planning	Section 8.3	**Section 8.4.**
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	**Section 8.6.**
10632(a)(8)	Provide a draft water shortage contingency resolution or ordinance.	Water Shortage Contingency Planning	Section 8.7	**Appendix I.**

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	**Section 8.5.**
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	**Section 4.3. Table 4-1.**
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	**Section 4.3. Table 4-1.**
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	**Section 4.3**
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	**Section 4.3. Table 4-1.**
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	**Section 4.5. Table 4-3.**
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	**Section 4.5. Table 4-4.**
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	**Section 4.5.2.**
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	**Section 4.5.**
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	**Section 5.5**
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	**Sections 6.3, 6.4 and 6.5. Tables 6-1, 6-2 and 6-3.**

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	**Section 1.5.1. Appendices C and I.**
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	**Section 1.5. Table 1-2.**
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	**Section 1.5.1. Table 1-3. Appendix C.**
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	**Appendix C.**
10642	Provide supporting documentation that the plan has been adopted as prepared or modified.	Plan Adoption, Submittal, and Implementation	Section 10.3.1	**Section 1.5.1. Appendix C.**
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	**Appendix C.**
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	**Section 1.5. Table 1-2. Appendix C.**
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	**Section 1.3**
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	**Section 1.5.1. Table 1-3. Appendix C.**

Appendix B: DWR Standardized Tables

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
CA1910102	Palmdale Water District	26,508	17,015
	TOTAL	26,508	17,015

NOTES: See UWMP Table 1-1: Retail Public Water System

Table 2-2: Plan Identification			
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 Urban Water Management Plan (RUWMP)**		
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 Date that the Fiscal Year Begins (mm/dd)	
Units of Measure Used in UWMP (select from Drop down)	
Unit	AF
NOTES: See UWMP Section 1.4.2.	

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 *(Add additional rows as needed)*
NOTES: Not applicable, PWD does not receive water from a wholesale supplier.

Table 3-1 Retail: Population - Current and Projected						
Population Served	2015	2020	2025	2030	2035	2040*(opt)*
	118,227	131,200	137,700	144,300	150,800	157,300

Notes: See UWMP Table 2-1: Population - Current and Projected
(a)Source of 2020-2040 projections: Palmdale Water District Draft Water Master Plan, September 2014, Table 2-5, “Adjusted SCAG Population Projections”.
(b) 2015 population number is based on the DWR population tool.

Table 4-1 Retail: Demands for Potable and Raw Water - Actual			
Use Type *(Add additional rows as needed)*	2015 Actual		
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)*	Level of Treatment When Delivered *Drop down list*	Volume
Single Family		Drinking Water	10,251
Multi-Family		Drinking Water	1,276
Commercial		Drinking Water	863
Industrial		Drinking Water	1,548
Institutional/Governmental		Drinking Water	0
Landscape		Drinking Water	744
Other		Drinking Water	41
		TOTAL	14,723
NOTES: See UWMP Table 2-2: Historical Water Deliveries (AF)			

Table 4-2 Retail: 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
Single Family		14,500	15,200	15,900	16,600	17,300
Multi-Family		1,800	1,900	2,000	2,100	2,200
Commercial		1,200	1,300	1,300	1,400	1,500
Industrial		2,200	2,300	2,400	2,500	2,600
Institutional/Governmental		-	-	-	-	-
Landscape		1,000	1,100	1,200	1,200	1,300
Other		100	100	100	100	100
	TOTAL	20,800	21,900	22,900	23,900	25,000
NOTES: See UWMP Table 2-10: Current and Projected Water Deliveries (AF). Non-revenue water uses are accounted for in total projected water use values (see UWMP Table 2-11).						

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*	14,723	20,800	21,900	22,900	23,900	25,000
Recycled Water Demand* *From Table 6-4*	110	2,500	5,000	5,500	6,000	6,000
TOTAL WATER DEMAND	14,833	23,300	26,900	28,400	29,900	31,000
**Recycled water demand fields will be blank until Table 6-4 is complete.*						
NOTES:						

Table 4-4 Retail: 12 Month Water Loss Audit Reporting	
Reporting Period Start Date (mm/yyyy)	Volume of Water Loss*
01/2014	1646 AF
** Taken from the field "Water Losses" (a combination of apparent losses and real losses) from the AWWA worksheet.*	
NOTES: See UWMP Table 2-4: Distribution System Water Loss and Appendix D.	

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)*	No
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)*	Yes
NOTES:	

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	*1995*	*2004*	*231*	*208*	*185*
5 Year	*2003*	*2007*	*229*		

*All values are in Gallons per Capita per Day (GPCD)

NOTES: See UWMP Table 2-7: Baseline Period Ranges, Table 2-8: Baseline Daily Per Capita Water Use and Table 2-9: Components of Target Daily Per Capita Water Use.

Table 5-2: 2015 Compliance

Retail Agency or Regional Alliance Only

Actual 2015 GPCD*	2015 Interim Target GPCD*	Optional Adjustments to 2015 GPCD *From Methodology 8*					2015 GPCD* *(Adjusted if applicable)*	Did Supplier Achieve Targeted Reduction for 2015? Y/N
		Extraordinary Events*	Economic Adjustment*	Weather Normalization*	TOTAL Adjustments*	Adjusted 2015 GPCD*		
128	208				0	128	128	Yes

**All values are in Gallons per Capita per Day (GPCD)*

NOTES: See UWMP Table 2-7: Baseline Period Ranges, Table 2-8: Baseline Daily Per Capita Water Use and Table 2-9: Components of Target Daily Per Capita Water Use.

Table 6-1 Retail: 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
Add additional rows as needed						
Alluvial Basin	Antelope Valley Basin	7000	7500	9400	12400	11200
	TOTAL	7,000	7,500	9,400	12,400	11,200
NOTES: See UWMP Table 3-2: Historical Pumping by PWD from the Antelope Valley Groundwater Basin (AFY)						

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						
County Sanitation District No. 20 of Los Angeles County	Metered	12,140	County Sanitation District No. 20 of Los Angeles County	Palmdale Water Reclamation Plant	Yes	
Total Wastewater Collected from Service Area in 2015:		12,140				
NOTES: See UWMP Table 4-1: 2015 Wastewater Flows at Palmdale WRP (AF)						

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										
Palmdale Water Reclamation Plant	Palmdale Water District	Effluent is used, discharged, or stored within Palmdale Water District boundaries		Other	No	Tertiary	10,770	0	110	10,660
						Total	10,770	0	110	10,660
NOTES: "Wastewater Treated" here refers to recycled water produced. See UWMP Table 4-1: 2015 Wastewater Flows at Palmdale WRP (AF)										

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:		Palmdale Water Reclamation Plant						
Name of Agency Operating the Recycled Water Distribution System:		City of Palmdale						
Supplemental Water Added in 2015		0						
Source of 2015 Supplemental Water		N/A						
Beneficial Use Type	General Description of 2015 Uses	Level of Treatment *Drop down list*	2015	2020	2025	2030	2035	2040 (opt)
Agricultural irrigation		Tertiary	0	0	0	0	0	0
Landscape irrigation (excludes golf courses)	Urban irrigation; minimal construction use	Tertiary	110	500	1,000	1,500	2,000	2,000
Golf course irrigation								
Commercial use								
Industrial use								
Geothermal and other energy production			0					
Seawater intrusion barrier								
Recreational impoundment								
Wetlands or wildlife habitat								
Groundwater recharge (IPR)*	Palmdale Regional Groundwater Recharge and Recovery Project	Tertiary	0	2,000	4,000	4,000	4,000	4,000
Surface water augmentation (IPR)*								
Direct potable reuse								
Other *(Provide General Description)*								
		Total:	110	2,500	5,000	5,500	6,000	6,000
**IPR - Indirect Potable Reuse*								
NOTES: See Table 4-3: Actual Recycled Water Use in 2015 and Table 4-4: Projected Recycled Water Demands								

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		**2010 Projection for 2015**	**2015 Actual Use**
Agricultural irrigation			
Landscape irrigation (excludes golf courses)			110
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	*Municipal, industrial, agricultural irrigation*	1,000	
	Total	1,000	110
NOTES: See UWMP Table 4-5: Recycled Water Use Projections Compared to Actual 2015 Use (AFY). Uses include municipal and industrial agricultural irrigation.			

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.		
Page 4-5	Provide page location of narrative in UWMP		
Name of Action	Description	Planned Implementation Year	Expected Increase in Recycled Water Use
Add additional rows as needed			
Indirect Potable Reuse	Palmdale Regional Groundwater Recharge and Recovery Project	2018	2,000
Direct Potable Reuse	City of Palmdale	2020	500
		Total	2,500
NOTES: Water use projected to be realized by 2040 is 4,000 AF and 2,000 AF for the above programs, respectively. See UWMP Table 4-4 and Section 4.5.2.			

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						
Palmdale Regional Groundwater Recharge and Recovery Project	Yes	City of Palmdale, Los Angeles County Sanitation District	New facilities will be constructed to recharge and recover SWP water as well as recycled water.	2020	All Year Types	7,500
NOTES: UWMP Section 3.3.3						

Table 6-8 Retail: 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				
Groundwater	Antelope Valley Groundwater Basin	11,200	Drinking Water	
Surface water	Littlerock Reservoir	500	Raw Water	
Purchased or Imported Water	State Water Project	5,800	Raw Water	
Recycled Water	Palmdale WRP	100	Recycled Water	
	Total	17,600		0
NOTES: See UWMP Table 3-1: Summary of Current and Projected Supplies				

Table 6-9 Retail: Water Supplies — Projected

Water Supply	Additional Detail on Water Supply	Projected Water Supply *Report To the Extent Practicable*									
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*		**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)*
Add additional rows as needed											
Groundwater		6,280		4,140		2,770		2,770		2,770	
Groundwater	Return Flow Credit	5,000		5,000		5,000		5,000		5,000	
Surface water		4,000		4,000		4,000		4,000		4,000	
Purchased or Imported Water		13,200		13,000		13,000		13,000		13,000	
Transfers		6,200		6,100		6,100		6,100		6,100	
Recycled Water		2,500		5,000		5,500		6,000		6,000	
	Total	37,180	0	37,240	0	36,370	0	36,870	0	36,870	0

NOTES: See UWMP Tables 3-1 and 3-12

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, water year, or range of years, 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	2023		100%
Single-Dry Year	2023		100%
Multiple-Dry Years 1st Year	2023		100%
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: See UWMP Table 6-1: Comparison of Supplies and Demands - Average/Normal Year (AF), Table 6-2: Comparison of Supplies and Demands - Single-Dry Year (AF), Table 6-3: Comparison of Supplies and Demands - Multiple-Dry Year (AF). Multiple versions of Table 7-1 are being used. Groundwater is being reported in this table.

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, water year, or range of years, for example, water year 1999-2000, use 2000*	**Available Supplies if**	
		☑	Quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP. Location : Section 6.2.
		☐	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: See UWMP Table 6-1: Comparison of Supplies and Demands - Average/Normal Year (AF), Table 6-2: Comparison of Supplies and Demands - Single-Dry Year (AF), Table 6-3: Comparison of Supplies and Demands - Multiple-Dry Year (AF). Multiple versions of Table 7-1 are being used. Surface water from Little Rock Reservoir is being reported in this table.

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, water year, or range of years, for example, water year 1999-2000, use 2000*	Available Supplies if: ☐ 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	2003	6200	100%
Single-Dry Year	1977	1100	8%
Multiple-Dry Years 1st Year	1934	3300	33%
Multiple-Dry Years 2nd Year	1934	3300	33%
Multiple-Dry Years 3rd Year	1934	3300	33%
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: See UWMP Table 6-1: Comparison of Supplies and Demands - Average/Normal Year (AF), Table 6-2: Comparison of Supplies and Demands - Single-Dry Year (AF), Table 6-3: Comparison of Supplies and Demands - Multiple-Dry Year (AF). Multiple versions of Table 7-1 are being used. Imported Butte Transfer water is being reported in this table.

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, water year, or range of years, 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 : Tables 6-2,6-3,6-4.
		☐	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: See UWMP Table 6-1: Comparison of Supplies and Demands - Average/Normal Year (AF), Table 6-2: Comparison of Supplies and Demands - Single-Dry Year (AF), Table 6-3: Comparison of Supplies and Demands - Multiple-Dry Year (AF). Multiple versions of Table 7-1 are being used. Groundwater return flow credits are being reported in this table.

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, water year, or range of years, for example, water year 1999-2000, use 2000*	Available Supplies if	
		☐	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	2003	13200	100%
Single-Dry Year	1977	2300	8%
Multiple-Dry Years 1st Year	1934	7000	33%
Multiple-Dry Years 2nd Year	1934	7000	33%
Multiple-Dry Years 3rd Year	1934	7000	33%
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: See UWMP Table 6-1: Comparison of Supplies and Demands - Average/Normal Year (AF), Table 6-2: Comparison of Supplies and Demands - Single-Dry Year (AF), Table 6-3: Comparison of Supplies and Demands - Multiple-Dry Year (AF). Multiple versions of Table 7-1 are being used. Imported State Water Project water is being reported in this table.

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, water year, or range of years, for example, water year 1999-2000, use 2000*	Available Supplies if	
		☑ Quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP. Location: Table 4-4.	
		☐ 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: See UWMP Table 6-1: Comparison of Supplies and Demands - Average/Normal Year (AF), Table 6-2: Comparison of Supplies and Demands - Single-Dry Year (AF), Table 6-3: Comparison of Supplies and Demands - Multiple-Dry Year (AF). Multiple versions of Table 7-1 are being used. Recycled water is being reported in this table.

Table 7-2 Retail: Normal Year Supply and Demand Comparison					
	2020	2025	2030	2035	2040 *(Opt)*
Supply totals *(autofill from Table 6-9)*	37,180	37,240	36,370	36,870	36,870
Demand totals *(autofill from Table 4-3)*	23,300	26,900	28,400	29,900	31,000
Difference	13,880	10,340	7,970	6,970	5,870
NOTES:					

Table 7-3 Retail: Single Dry Year Supply and Demand Comparison					
	2020	2025	2030	2035	2040 (Opt)
Supply totals	21,180	21,240	20,070	20,570	20,270
Demand totals	23,300	26900	28,400	29,900	31,000
Difference	(2,120)	(5,660)	(8,330)	(9,330)	(10,730)
NOTES: See UWMP Table 6-2: Comparison of Supplies and Demands - Single-Dry Year (AF)					

Table 7-4 Retail: Multiple Dry Years Supply and Demand Comparison						
		2020	2025	2030	2035	2040 (Opt)
First year	Supply totals	28,080	28,440	27,570	28,070	28,070
	Demand totals	23,300	26,900	28,400	29,900	31,000
	Difference	4,780	1,540	(830)	(1,830)	(2,930)
Second year	Supply totals	28,080	28,440	27,570	28,070	28,070
	Demand totals	23,300	26,900	28,400	29,900	31,000
	Difference	4,780	1,540	(830)	(1,830)	(2,930)
Third year	Supply totals	28,080	28,440	27,570	28,070	28,070
	Demand totals	23,300	26,900	28,400	29,900	31,000
	Difference	4,780	1,540	(830)	(1,830)	(2,930)
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: See UWMP Table 6-3: Comparison of Supplies and Demands - Multiple-Dry Year (AF)						

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	15%	Voluntary
2	25%	Mandatory
3	40%	Mandatory
4	50%	Mandatory
5	>50%	Mandatory
[1] *One stage in the Water Shortage Contingency Plan must address a water shortage of 50%.*		
NOTES: See UWMP Table 8-1: Rationing and Reduction Goals		

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*
Add additional rows as needed			
All Times	Landscape - Other landscape restriction or prohibition	Application of potable water to outdoor landscapes in a manner that causes runoff.	Yes
All Times	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner	Water leaks shall be repaired in a timely manner and sprinklers shall be adjusted to eliminate over-spray.	Yes
All Times	Other - Prohibit use of potable water for washing hard surfaces	Hosing of hardscape surfaces, except where health and safety needs dictate, is prohibited.	Yes
All Times	Other	Water for construction purposes, including but not limited to de-brushing of vacant land, compaction of fills and pads, trench backfill and other construction uses shall be in an efficient manner.	Yes
1	Landscape - Limit landscape irrigation to specific times	Watering of outdoor landscapes within 48 hours of measurable rainfall.	Yes
1	Other - Require automatic shut of hoses	Car washing and outside cleaning activities prohibited except when performed with buckets and automatic hose shutoff devices.	Yes

1	CII - Restaurants may only serve water upon request	The serving of drinking water other than upon request in eating or drinking establishments is prohibited.	Yes
1	CII - Lodging establishment must offer opt out of linen service	Operators of hotels and motels shall provide guests with the option of choosing not to have towels and linens laundered daily. The hotel or motel shall prominently display notice of this option in each guestroom.	Yes
1	Other	The District will expand the public information campaign.	Yes
1	Other	The District shall evaluate the implementation of a Drought Surcharge.	Yes
2	Other	All restrictions/prohibitions/ initiatives from Stage I are in effect restrictions/prohibitions/ initiatives from Stage I are in effect	Yes
2	Landscape - Limit landscape irrigation to specific times	Landscape watering between the hours of 1000 and 1800 hours is prohibited	Yes
2	Landscape - Limit landscape irrigation to specific days	Outdoor watering is limited to 3 days per week.	Yes
2	Other	The District will increase water waste patrols.	Yes
2	Other	Issuance of potable construction water meters will cease.	Yes

2	Landscape - Other landscape restriction or prohibition	Irrigation with potable water outside of newly constructed homes and buildings not delivered by drip or microspray is prohibited.	Yes
2	Other	The District will evaluate adjustments to applicable water waste fines.	Yes
3	Other	All restrictions/prohibitions/ initiatives from Stage I and Stage II are in effect and are mandatory.	Yes
3	Landscape - Other landscape restriction or prohibition	Irrigation with potable water of ornamental turf on public street medians is prohibited.	Yes
3	Landscape - Limit landscape irrigation to specific days	Outdoor watering is limited to 2 days per week.	Yes
3	Other water feature or swimming pool restriction	Potable water cannot be used to maintain fountains, reflection ponds and decorative water bodies for aesthetic or scenic purposes, except where necessary to support aquatic life.	Yes
4	Other	All restrictions/prohibitions/ initiatives from Stage I, Stage II, and Stage III are in effect and are mandatory.	Yes
4	Landscape - Limit landscape irrigation to specific days	Outdoor watering is limited to 1 day per week.	Yes

4	Other water feature or swimming pool restriction	Filling of new swimming pools, spas, hot tubs or the draining and refilling of existing pools, etc is prohibited. Topping off is allowed to the extent that the designated water allocation is not exceeded.	Yes
4	Other	Meters will only be installed for new accounts where the building permit was issued prior to the declaration of the water shortage.	Yes
5	Other	All restrictions/prohibitions/ initiatives from Stage I, Stage II, Stage III, and Stage IV are in effect and are mandatory.	Yes
5	Other	No meters will be installed for new accounts.	Yes
5	Landscape - Prohibit all landscape irrigation	Outdoor irrigation is prohibited, with the exception of drip or hand watering to preserve established trees.	Yes
NOTES: See UWMP Table 8-3: Prohibitions During Different Shortage Stages			

Table 8-3 Retail Only: Stages of Water Shortage Contingency Plan - 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)*
Add additional rows as needed		
1	Expand Public Information Campaign	Initiate public information campaign
1	Expand Public Information Campaign	Increase awareness of conservation measures
1	Other	Commence enforcement of conservation measures
1	Other	Promote methods to reduce water use
1	Expand Public Information Campaign	Conduct focused outreach to large water users
1	Expand Public Information Campaign	Coordinate public outreach with the cities and County
2	Expand Public Information Campaign	Expand public information campaign
2	Other	Step up enforcement of conservation measures
2	Other	Continue previous actions
3	Expand Public Information Campaign	Intensify public information campaign
3	Other	Expand enforcement of conservation measures
3	Other	Send direct notices to all customers
3	Expand Public Information Campaign	Provide regular media, city council and County briefings
3	Other	Activate emergency connections with mutual aid agencies
3	Other	Continue previous actions
4	Expand Public Information Campaign	Implement crisis communication plan
4	Expand Public Information Campaign	Activate Emergency Operations Center
4	Other	Coordinate actions with regulatory agencies
4	Expand Public Information Campaign	Coordinate actions with public safety agencies to address enforcement and fire protection issues
4	Other	Recall all temporary meters and activate water fill stations
4	Other	Continue previous actions
NOTES: See UWMP Table 8-4: Customer and District Water Shortgae Action Plan		

Table 8-4 Retail: Minimum Supply Next Three Years			
	2016	2017	2018
Available Water Supply	21,200	19,900	18,800
NOTES: See UWMP Table 8-7: Estimate of Minimum Supply for the Next Three Years			

Table 10-1 Retail: Notification to Cities and Counties		
City Name	60 Day Notice	Notice of Public Hearing
Add additional rows as needed		
City of Palmdale	☑	☑
City of Lancaster	☑	☑
	☐	☐
County Name *Drop Down List*	60 Day Notice	Notice of Public Hearing
Add additional rows as needed		
Los Angeles County	☑	☑
	☐	☐
See UWMP Table 1-2: Agency Coordination Summary		

SB X7-7 Table 0: Units of Measure Used in UWMP* *(select one from the drop down list)*
Acre Feet
**The unit of measure must be consistent with Table 2-3*
NOTES:

SB X7-7 Table-1: Baseline Period Ranges			
Baseline	**Parameter**	**Value**	**Units**
10- to 15-year baseline period	2008 total water deliveries	25,339	Acre Feet
	2008 total volume of delivered recycled water	-	Acre Feet
	2008 recycled water as a percent of total deliveries	0.00%	Percent
	Number of years in baseline period[1, 2]	10	Years
	Year beginning baseline period range	1995	
	Year ending baseline period range[3]	2004	
5-year baseline period	Number of years in baseline period	5	Years
	Year beginning baseline period range	2003	
	Year ending baseline period range[4]	2007	

[1] *If the 2008 recycled water percent is less than 10 percent, then the first baseline period is a continuous 10-year period. If the amount of recycled water delivered in 2008 is 10 percent or greater, the first baseline period is a continuous 10- to 15-year period.* [2] *The Water Code requires that the baseline period is between 10 and 15 years. However, DWR recognizes that some water suppliers may not have the minimum 10 years of baseline data.*

[3] *The ending year must be between December 31, 2004 and December 31, 2010.*

[4] *The ending year must be between December 31, 2007 and December 31, 2010.*

NOTES:

SB X7-7 Table 2: Method for Population Estimates	
Method Used to Determine Population (may check more than one)	
☐	**1. Department of Finance** (DOF) DOF Table E-8 (1990 - 2000) and (2000-2010) and DOF Table E-5 (2011 - 2015) when available
☐	**2. Persons-per-Connection Method**
☑	**3. DWR Population Tool**
☐	**4. Other** DWR recommends pre-review
NOTES: Provided in Appendix D.	

SB X7-7 Table 3: Service Area Population		
Year		**Population**
10 to 15 Year Baseline Population		
Year 1	1995	79,578
Year 2	1996	88,785
Year 3	1997	89,675
Year 4	1998	90,540
Year 5	1999	91,375
Year 6	2000	92,172
Year 7	2001	98,516
Year 8	2002	99,649
Year 9	2003	100,788
Year 10	2004	104,237
Year 11		
Year 12		
Year 13		
Year 14		
Year 15		
5 Year Baseline Population		
Year 1	2003	100,788
Year 2	2005	104,237
Year 3	2006	104,120
Year 4	2007	105,754
Year 5	2008	107,396
2015 Compliance Year Population		
2015		118,227
NOTES:		

SB X7-7 Table 4: Annual Gross Water Use *

Baseline Year *Fm SB X7-7 Table 3*		Volume Into Distribution System *This column will remain blank until SB X7-7 Table 4-A is completed.*	Deductions					Annual Gross Water Use
			Exported Water	Change in Dist. System Storage (+/-)	Indirect Recycled Water *This column will remain blank until SB X7-7 Table 4-B is completed.*	Water Delivered for Agricultural Use	Process Water *This column will remain blank until SB X7-7 Table 4-D is completed.*	
10 to 15 Year Baseline - Gross Water Use								
Year 1	1995	22,233			-		-	22,233
Year 2	1996	23,514			-		-	23,514
Year 3	1997	23,152			-		-	23,152
Year 4	1998	20,626			-		-	20,626
Year 5	1999	23,398			-		-	23,398
Year 6	2000	25,901			-		-	25,901
Year 7	2001	25,220			-		-	25,220
Year 8	2002	25,670			-		-	25,670
Year 9	2003	24,909			-		-	24,909
Year 10	2004	26,684			-		-	26,684
Year 11	0	-			-		-	-
Year 12	0	-			-		-	-
Year 13	0	-			-		-	-
Year 14	0	-			-		-	-
Year 15	0	-			-		-	-
10 - 15 year baseline average gross water use								**24,131**
5 Year Baseline - Gross Water Use								
Year 1	2003	24,909			-		-	24,909
Year 2	2005	26,684			-		-	26,684
Year 3	2006	26,128			-		-	26,128
Year 4	2007	27,934			-		-	27,934
Year 5	2008	28,152			-		-	28,152
5 year baseline average gross water use								**26,761**
2015 Compliance Year - Gross Water Use								
2015		17,015	-		-		-	**17,015**

* NOTE that the units of measure must remain consistent throughout the UWMP, as reported in Table 2-3

NOTES:

SB X7-7 Table 4-A: Volume Entering the Distribution System(s)

Complete one table for each source.

Name of Source	All Sources
This water source is:	
☑	The supplier's own water source
☑	A purchased or imported source

Baseline Year *Fm SB X7-7 Table 3*		Volume Entering Distribution System	Meter Error Adjustment* *Optional (+/-)*	Corrected Volume Entering Distribution System
10 to 15 Year Baseline - Water into Distribution System				
Year 1	1995	22,233		22,233
Year 2	1996	23,514		23,514
Year 3	1997	23,152		23,152
Year 4	1998	20,626		20,626
Year 5	1999	23,398		23,398
Year 6	2000	25,901		25,901
Year 7	2001	25,220		25,220
Year 8	2002	25,670		25,670
Year 9	2003	24,909		24,909
Year 10	2004	26,684		26,684
Year 11	0			-
Year 12	0			-
Year 13	0			-
Year 14	0			-
Year 15	0			-
5 Year Baseline - Water into Distribution System				
Year 1	2003	24,909		24,909
Year 2	2005	26,684		26,684
Year 3	2006	26,128		26,128
Year 4	2007	27,934		27,934
Year 5	2008	28,152		28,152
2015 Compliance Year - Water into Distribution System				
2015		17,015		17,015

** Meter Error Adjustment - See guidance in Methodology 1, Step 3 of Methodologies Document*

NOTES: Retailer unable to divide sources.

SB X7-7 Table 5: Gallons Per Capita Per Day (GPCD)				
Baseline Year *Fm SB X7-7 Table 3*		Service Area Population *Fm SB X7-7 Table 3*	Annual Gross Water Use *Fm SB X7-7 Table 4*	Daily Per Capita Water Use (GPCD)
10 to 15 Year Baseline GPCD				
Year 1	1995	79,578	22,233	249
Year 2	1996	88,785	23,514	236
Year 3	1997	89,675	23,152	230
Year 4	1998	90,540	20,626	203
Year 5	1999	91,375	23,398	229
Year 6	2000	92,172	25,901	251
Year 7	2001	98,516	25,220	229
Year 8	2002	99,649	25,670	230
Year 9	2003	100,788	24,909	221
Year 10	2004	104,237	26,684	229
Year 11	0	-	-	
Year 12	0	-	-	
Year 13	0	-	-	
Year 14	0	-	-	
Year 15	0	-	-	
10-15 Year Average Baseline GPCD				**231**
5 Year Baseline GPCD				
Baseline Year *Fm SB X7-7 Table 3*		Service Area Population *Fm SB X7-7 Table 3*	Gross Water Use *Fm SB X7-7 Table 4*	Daily Per Capita Water Use
Year 1	2003	100,788	24,909	221
Year 2	2005	104,237	26,684	229
Year 3	2006	104,120	26,128	224
Year 4	2007	105,754	27,934	236
Year 5	2008	107,396	28,152	234
5 Year Average Baseline GPCD				**229**
2015 Compliance Year GPCD				
2015		118,227	17,015	**128**
NOTES:				

SB X7-7 Table 6: Gallons per Capita per Day *Summary From Table SB X7-7 Table 5*	
10-15 Year Baseline GPCD	231
5 Year Baseline GPCD	229
2015 Compliance Year GPCD	128
NOTES:	

SB X7-7 Table 7: 2020 Target Method *Select Only One*		
Target Method		Supporting Documentation
☑	Method 1	SB X7-7 Table 7A
☐	Method 2	SB X7-7 Tables 7B, 7C, and 7D *Contact DWR for these tables*
☐	Method 3	SB X7-7 Table 7-E
☐	Method 4	Method 4 Calculator
NOTES:		

SB X7-7 Table 7-A: Target Method 1 20% Reduction	
10-15 Year Baseline GPCD	**2020 Target GPCD**
231	**185**
NOTES:	

SB X7-7 Table 7-F: Confirm Minimum Reduction for 2020 Target			
5 Year Baseline GPCD *From SB X7-7 Table 5*	Maximum 2020 Target[1]	Calculated 2020 Target[2]	**Confirmed 2020 Target**
229	217	185	**185**

[1] Maximum 2020 Target is 95% of the 5 Year Baseline GPCD *[2] 2020 Target is calculated based on the selected Target Method, see SB X7-7 Table 7 and corresponding tables for agency's calculated target.*

NOTES:

SB X7-7 Table 8: 2015 Interim Target GPCD		
Confirmed 2020 Target *Fm SB X7-7 Table 7-F*	10-15 year Baseline GPCD *Fm SB X7-7 Table 5*	**2015 Interim Target GPCD**
185	231	**208**
NOTES:		

SB X7-7 Table 9: 2015 Compliance

Actual 2015 GPCD	2015 Interim Target GPCD	Optional Adjustments *(in GPCD)* Enter "0" if Adjustment Not Used: Extraordinary Events	Weather Normalization	Economic Adjustment	TOTAL Adjustments	Adjusted 2015 GPCD	2015 GPCD *(Adjusted if applicable)*	**Did Supplier Achieve Targeted Reduction for 2015?**
128	208	*From Methodology 8 (Optional)*	*From Methodology 8 (Optional)*	*From Methodology 8 (Optional)*	-	128	128	**YES**

NOTES:

Appendix C: Public Outreach Materials

THIS APPENDIX WILL CONTAIN ADDITIONAL PUBLIC OUTREACH MATERIALS WITH THE FINAL UWMP.

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ALESHIRE & WYNDER LLP
Attorneys

January 20, 2016

Los Angeles County Sanitation District No. 20
1955 Workman Mill Road
Whittier, CA 90607

RE: 2015 URBAN WATER MANAGEMENT PLAN FOR THE PALMDALE WATER DISTRICT

To Whom It May Concern:

The Palmdale Water District (PWD) is undertaking the review, update, and revision of its Urban Water Management Plan. PWD is located in Los Angeles County and serves the residents of the City of Palmdale. The Urban Water Management Planning Act requires every "urban water supplier" of a certain size to prepare and adopt an Urban Water Management Plan (UWMP) at least once every five years. The UWMP is a planning document in which water suppliers evaluate and compare their water supply and reliability to their existing and projected demands. A complete UWMP is necessary for PWD to remain eligible for state drought water bank assistance and is a requirement of state grant and loan funding programs.

The 2015 UWMP will include an update of anticipated water demands in the PWD service area. Concurrent with the UWMP update, PWD will also revise its Water Shortage Contingency Plan (WSCP). PWD is encouraging participation by land use agencies, water use agencies, and other interested parties in the UWMP and WSCP and would like to extend to your agency an opportunity to meet with us and review the various elements of the UWMP and WSCP including assumptions about future population, future water demand, future water supplies, and upcoming water conservation programs.

We anticipate that a draft UWMP and WSCP will be available for public review starting in April 2016. PWD will hold a public hearing in June 2016, prior to adoption of the UWMP and WSCP. Hence, we would like to solicit your input in the near future.

If your agency would like to learn more about the Urban Water Management Plan and Water Shortage Contingency Plan, please contact me at 661-947-4111 ext. 1042 or pthompsonII@palmdalewater.org, no later than February 12, 2016.

Sincerely,

PETER THOMPSON II,
Deputy Water and Energy Resource Director

PT/dh

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ALESHIRE & WYNDER LLP
Attorneys

January 20, 2016

City of Lancaster, Planning
Attn: Planning Manager
44933 Fern Avenue
Lancaster, CA 93534

RE: 2015 URBAN WATER MANAGEMENT PLAN FOR THE PALMDALE WATER DISTRICT

Dear Planning Manager:

The Palmdale Water District (PWD) is undertaking the review, update, and revision of its Urban Water Management Plan. PWD is located in Los Angeles County and serves the residents of the City of Palmdale. The Urban Water Management Planning Act requires every "urban water supplier" of a certain size to prepare and adopt an Urban Water Management Plan (UWMP) at least once every five years. The UWMP is a planning document in which water suppliers evaluate and compare their water supply and reliability to their existing and projected demands. A complete UWMP is necessary for PWD to remain eligible for state drought water bank assistance and is a requirement of state grant and loan funding programs.

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Sincerely,

PETER THOMPSON II,
Deputy Water and Energy Resource Director

PT/dh

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ALESHIRE & WYNDER LLP
Attorneys

January 20, 2016

AVEK
Attn: Dan Flory
6500 W. Avenue N
Palmdale, CA 93551

RE: 2015 URBAN WATER MANAGEMENT PLAN FOR THE PALMDALE WATER DISTRICT

Dear Mr. Flory:

The Palmdale Water District (PWD) is undertaking the review, update, and revision of its Urban Water Management Plan. PWD is located in Los Angeles County and serves the residents of the City of Palmdale. The Urban Water Management Planning Act requires every "urban water supplier" of a certain size to prepare and adopt an Urban Water Management Plan (UWMP) at least once every five years. The UWMP is a planning document in which water suppliers evaluate and compare their water supply and reliability to their existing and projected demands. A complete UWMP is necessary for PWD to remain eligible for state drought water bank assistance and is a requirement of state grant and loan funding programs.

The 2015 UWMP will include an update of anticipated water demands in the PWD service area. Concurrent with the UWMP update, PWD will also revise its Water Shortage Contingency Plan (WSCP). PWD is encouraging participation by land use agencies, water use agencies, and other interested parties in the UWMP and WSCP and would like to extend to your agency an opportunity to meet with us and review the various elements of the UWMP and WSCP including assumptions about future population, future water demand, future water supplies, and upcoming water conservation programs.

We anticipate that a draft UWMP and WSCP will be available for public review starting in April 2016. PWD will hold a public hearing in June 2016, prior to adoption of the UWMP and WSCP. Hence, we would like to solicit your input in the near future.

If your agency would like to learn more about the Urban Water Management Plan and Water Shortage Contingency Plan, please contact me at 661-947-4111 ext. 1042 or pthompsonII@palmdalewater.org, no later than February 12, 2016.

Sincerely,

PETER THOMPSON II,
Deputy Water and Energy Resource Director

PT/dh

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MARCO HENRIQUEZ
Division 3

KATHY MAC LAREN
Division 4

VINCENT DINO
Division 5

ALESHIRE & WYNDER LLP
Attorneys

January 20, 2016

Littlerock Creek Irrigation District
Attn: Travis Berglund
35141 87th St. East
Littlerock, CA 93543

RE: 2015 URBAN WATER MANAGEMENT PLAN FOR THE PALMDALE WATER DISTRICT

Dear Mr. Berglund:

The Palmdale Water District (PWD) is undertaking the review, update, and revision of its Urban Water Management Plan. PWD is located in Los Angeles County and serves the residents of the City of Palmdale. The Urban Water Management Planning Act requires every "urban water supplier" of a certain size to prepare and adopt an Urban Water Management Plan (UWMP) at least once every five years. The UWMP is a planning document in which water suppliers evaluate and compare their water supply and reliability to their existing and projected demands. A complete UWMP is necessary for PWD to remain eligible for state drought water bank assistance and is a requirement of state grant and loan funding programs.

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If your agency would like to learn more about the Urban Water Management Plan and Water Shortage Contingency Plan, please contact me at 661-947-4111 ext. 1042 or pthompsonII@palmdalewater.org, no later than February 12, 2016.

Sincerely,

PETER THOMPSON II,
Deputy Water and Energy Resource Director

PT/dh

Since 1918

PALMDALE WATER DISTRICT

2029 East Avenue Q • Palmdale, California 93550 • Telephone (661) 947-4111
Fax (661) 947-8604
www.palmdalewater.org
Facebook: palmdalewaterdistrict
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ALESHIRE & WYNDER LLP
Attorneys

January 20, 2016

Quartz Hill Water District
Attn: Chad Reed
42141 50th St. SW
Quartz Hill, CA 93536

RE: 2015 URBAN WATER MANAGEMENT PLAN FOR THE PALMDALE WATER DISTRICT

Dear Mr. Reed:

The Palmdale Water District (PWD) is undertaking the review, update, and revision of its Urban Water Management Plan. PWD is located in Los Angeles County and serves the residents of the City of Palmdale. The Urban Water Management Planning Act requires every "urban water supplier" of a certain size to prepare and adopt an Urban Water Management Plan (UWMP) at least once every five years. The UWMP is a planning document in which water suppliers evaluate and compare their water supply and reliability to their existing and projected demands. A complete UWMP is necessary for PWD to remain eligible for state drought water bank assistance and is a requirement of state grant and loan funding programs.

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Sincerely,

PETER THOMPSON II,
Deputy Water and Energy Resource Director

PT/dh

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ALESHIRE & WYNDER LLP
Attorneys

January 20, 2016

Rosamond Community Services District
Attn: General Manager
3179 35th St. W
Rosamond, CA 93560

RE: 2015 URBAN WATER MANAGEMENT PLAN FOR THE PALMDALE WATER DISTRICT

Dear General Manager:

The Palmdale Water District (PWD) is undertaking the review, update, and revision of its Urban Water Management Plan. PWD is located in Los Angeles County and serves the residents of the City of Palmdale. The Urban Water Management Planning Act requires every "urban water supplier" of a certain size to prepare and adopt an Urban Water Management Plan (UWMP) at least once every five years. The UWMP is a planning document in which water suppliers evaluate and compare their water supply and reliability to their existing and projected demands. A complete UWMP is necessary for PWD to remain eligible for state drought water bank assistance and is a requirement of state grant and loan funding programs.

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Sincerely,

PETER THOMPSON II,
Deputy Water and Energy Resource Director

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ALESHIRE & WYNDER LLP
Attorneys

January 20, 2016

Southern California Association of Governments
Intergovernmental Review
818 West 7th St, 12th floor
Los Angeles, CA 90017

RE: 2015 URBAN WATER MANAGEMENT PLAN FOR THE PALMDALE WATER DISTRICT

To Whom It May Concern:

The Palmdale Water District (PWD) is undertaking the review, update, and revision of its Urban Water Management Plan. PWD is located in Los Angeles County and serves the residents of the City of Palmdale. The Urban Water Management Planning Act requires every "urban water supplier" of a certain size to prepare and adopt an Urban Water Management Plan (UWMP) at least once every five years. The UWMP is a planning document in which water suppliers evaluate and compare their water supply and reliability to their existing and projected demands. A complete UWMP is necessary for PWD to remain eligible for state drought water bank assistance and is a requirement of state grant and loan funding programs.

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Sincerely,

PETER THOMPSON II,
Deputy Water and Energy Resource Director

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ALESHIRE & WYNDER LLP
Attorneys

January 20, 2016

Building Industry Association
Los Angeles/Ventura Chapter
350 S. Bixel Street, Suite 100
Los Angeles, CA 90017

RE: 2015 URBAN WATER MANAGEMENT PLAN FOR THE PALMDALE WATER DISTRICT

To Whom It May Concern:

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Deputy Water and Energy Resource Director

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ALESHIRE & WYNDER LLP
Attorneys

January 20, 2016

Los Angeles County Public Works,
Waterworks District 40
900 S. Fremont St.
Alhambra, CA 91803

RE: 2015 URBAN WATER MANAGEMENT PLAN FOR THE PALMDALE WATER DISTRICT

To Whom It May Concern:

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Deputy Water and Energy Resource Director

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ALESHIRE & WYNDER LLP
Attorneys

January 20, 2016

County of Los Angeles, Department of Regional Planning
Attn: Planning
320 W. Temple St.
Los Angeles, CA 90012

RE: 2015 URBAN WATER MANAGEMENT PLAN FOR THE PALMDALE WATER DISTRICT

Dear Planning Manager:

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ALESHIRE & WYNDER LLP
Attorneys

January 20, 2016

LA County Farm Bureau
Attn: Eugene Nebeker
41228 12th Street W., Suite A
Palmdale, CA 93551

RE: 2015 URBAN WATER MANAGEMENT PLAN FOR THE PALMDALE WATER DISTRICT

Dear Mr. Nebeker:

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ALESHIRE & WYNDER LLP
Attorneys

January 20, 2016

Los Angeles World Airports
Airport Environmental Manager
7301 World Way West, 3rd Floor
Los Angeles, CA 90045

RE: 2015 URBAN WATER MANAGEMENT PLAN FOR THE PALMDALE WATER DISTRICT

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Sincerely,

PETER THOMPSON II,
Deputy Water and Energy Resource Director

PT/dh

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ALESHIRE & WYNDER LLP
Attorneys

January 20, 2016

City of Palmdale Planning Division
Attn: Planning Manager
38250 Sierra Highway
Palmdale, CA 93550

RE: 2015 URBAN WATER MANAGEMENT PLAN FOR THE PALMDALE WATER DISTRICT

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ALESHIRE & WYNDER LLP
Attorneys

January 20, 2016

Local Agency Formation Commission
County of Los Angeles
Attn: Paul Novak
80 South Lake Avenue, Suite 870
Pasadena, CA 91101

RE: 2015 URBAN WATER MANAGEMENT PLAN FOR THE PALMDALE WATER DISTRICT

Dear Mr. Novak:

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Sincerely,

PETER THOMPSON II,
Deputy Water and Energy Resource Director

PT/dh

the estate, you may file with the court a Request for

CREDITOR or a contingent creditor of the decedent, you must file your claim

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PALMDALE WATER DISTRICT
NOTICE OF PUBLIC HEARING
2015 URBAN WATER MANAGEMENT PLAN

NOTICE IS HEREBY GIVEN that on June 1, 2016 at 7:00 PM, in the meeting room of the Board of Directors of Palmdale Water District, 2029 E Avenue Q., Palmdale, CA 93550, the Board of Directors will conduct a public hearing pursuant to California Water Code sections 10642 and 10608.26 to consider and receive comments and input on the *2015 Urban Water Management Plan for Palmdale Water District* to allow community input regarding the District's implementation plan for complying with Part 2.55 of the Water Code, to consider the potential economic impacts of the implementation plan, and to provide information on District baseline water use, water use targets, and implementation plan required by the Water Conservation Act of 2009 (Water Code section 10608.20(b)). At the same time a revised Water Shortage Contingency Plan (WSCP) will be considered by the Board of Directors of Palmdale Water District.

A copy of the *Draft 2015 Urban Water Management Plan for Palmdale Water District*, including the updated WSCP, will be available for public review on or before May 13, 2016, Monday through Friday, during normal business hours at Palmdale Water District Administrative Office located at 2029 E Avenue Q., Palmdale, CA 93550. In addition, an electronic version of the plan will be accessible at http://www.palmdalewater.org/.

In summary, the *2015 Urban Water Management Plan for Palmdale Water District*, including the WSCP, has been developed for implementation in accordance with the requirements of the California Urban Water Management Planning Act, Water Code sections 350 through 359 and 10610 through 10657, and the Water Conservation Act of 2009, Water Code sections 10608 through 10608.64. Public input from diverse social, cultural and economic elements of the population is encouraged and will be considered as part of the urban water management planning process. Input from and coordination with the City of Palmdale and County of Los Angeles and other public agencies is also encouraged and will be considered (Water Code §§ 10620(d)(2); 10621(b); 10642.). Any written comments regarding the *Draft 2015 Urban Water Management Plan for Palmdale Water District*, including the WSCP, should be submitted by the close of business on June 1, 2016 to the address set forth above, attention Peter K. Thompson Jr. Public comments can also be made at the public hearing at the time and place first set forth above. The Board of Directors of Palmdale Water District may revise, change, modify, the document as a result of the comments received and plans to adopt the UWMP and WSCP at its special Board Meeting after the Public Hearing on June 1, 2016. Questions regarding the public hearing or the plans should be directed to Peter K. Thompson Jr at 661-947-4111 ext. 1042. If you are disabled in any way and need accommodation to participate in the public hearing, please call Dawn Deans at 661-947-4111 x1003 for assistance at least 48 hours prior to the hearing so the necessary arrangements can be made.

PALMDALE WATER DISTRICT
Publish Dates: May 18, 2016 and May 25, 2016

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Appendix D: DWR Population Tool

WUEdata - Palmdale Water District

Sign Out

Please print this page to a PDF and include as part of your UWMP submittal.

Confirmation Information

Generated By	Water Supplier Name	Confirmation #	Generated On
Lauren Everett	Palmdale Water District	9644422233	4/29/2016 9:14:27 AM

Boundary Information

Census Year	Boundary Filename	Internal Boundary ID
1990	PWD_Boundary_1990.kml	462
2000	PWD_Boundary_2000.kml	463
2010	PWD_Boundary_2010.kml	464
1990	PWD_Boundary_1990.kml	462
2000	PWD_Boundary_2000.kml	463
2010	PWD_Boundary_2010.kml	464
1990	PWD_Boundary_1990.kml	462
2000	PWD_Boundary_2000.kml	463
2010	PWD_Boundary_2010.kml	464

Baseline Period Ranges

10 to 15-year baseline period

Number of years in baseline period: 10

Year beginning baseline period range: 1995

Year ending baseline period range[1]: 2004

5-year baseline period

Year beginning baseline period range: 2003

Year ending baseline period range[2]: 2007

[1] The ending year must be between December 31, 2004 and December 31, 2010.

[2] The ending year must be between December 31, 2007 and December 31, 2010.

Persons per Connection

Year	Census Block Level Total Population	Number of Connections *	Persons per Connection
1990	66,477	19619	3.39

1991	-	-	3.46
1992	-	-	3.53
1993	-	-	3.60
1994	-	-	3.67
1995	-	-	3.74
1996	-	-	3.80
1997	-	-	3.87
1998	-	-	3.94
1999	-	-	4.01
2000	**92,172**	**22595**	**4.08**
2001	-	-	4.11
2002	-	-	4.13
2003	-	-	4.16
2004	-	-	4.18
2005	-	-	4.21
2006	-	-	4.23
2007	-	-	4.25
2008	-	-	4.28
2009	-	-	4.30
2010	**112,468**	**25959**	**4.33**
2015	**-**	**-**	**4.46 ****

Population Using Persons-Per-Connection

Year		Number of Connections *	Persons per Connection	Total Population
10 to 15 Year Baseline Population Calculations				
Year 1	1995	21306	3.74	79,578
Year 2	1996	23340	3.80	88,785
Year 3	1997	23154	3.87	89,675
Year 4	1998	22968	3.94	90,540
Year 5	1999	22781	4.01	91,375
Year 6	2000	22595	4.08	92,172
Year 7	2001	23999	4.11	98,516
Year 8	2002	24128	4.13	99,649
Year 9	2003	24257	4.16	100,788
Year 10	2004	24937	4.18	104,237
5 Year Baseline Population Calculations				
Year 1	2003	24257	4.16	100,788
Year 2	2004	24937	4.18	104,237
Year 3	2005	24761	4.21	104,120
Year 4	2006	25001	4.23	105,754
Year 5	2007	25240	4.25	107,396
2015 Compliance Year Population Calculations				
2015		26508	4.46 **	118,227

Hide Print Confirmation

Appendix E: AWWA Water Loss Reporting Worksheets

AWWA Free Water Audit Software:
Reporting Worksheet

WAS v5.0

American Water Works Association.
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? Click to access definition
+ Click to add a comment

Water Audit Report for: PALMDALE WATER DISTRICT (CA1910102)
Reporting Year: 2014 (1/2014 - 12/2014)

Please enter data in the white cells below. Where available, metered values should be used; if metered values are unavailable please estimate a value. Indicate your confidence in the accuracy of the input data by grading each component (n/a or 1-10) using the drop-down list to the left of the input cell. Hover the mouse over the cell to obtain a description of the grades

All volumes to be entered as: ACRE-FEET PER YEAR

To select the correct data grading for each input, determine the highest grade where the utility meets or exceeds all criteria for that grade and all grades below it.

Master Meter and Supply Error Adjustments

WATER SUPPLIED

<---------- Enter grading in column 'E' and 'J' ---------->

					Pcnt:	Value:	
Volume from own sources:	10	20,641.000	acre-ft/yr	9			acre-ft/yr
Water imported:	10		acre-ft/yr				acre-ft/yr
Water exported:	9	698.380	acre-ft/yr	8			acre-ft/yr

Enter negative % or value for under-registration
Enter positive % or value for over-registration

WATER SUPPLIED: 19,942.620 acre-ft/yr

AUTHORIZED CONSUMPTION

Click here: ? for help using option buttons below

			Pcnt:	Value:	
Billed metered:	10	18,047.904	acre-ft/yr			
Billed unmetered:	n/a		acre-ft/yr			
Unbilled metered:	n/a		acre-ft/yr			
Unbilled unmetered:		249.283	acre-ft/yr	1.25%		acre-ft/yr

Default option selected for Unbilled unmetered - a grading of 5 is applied but not displayed

AUTHORIZED CONSUMPTION: 18,297.187 acre-ft/yr

Use buttons to select percentage of water supplied **OR** value

WATER LOSSES (Water Supplied - Authorized Consumption) 1,645.433 acre-ft/yr

Apparent Losses

			Pcnt:	Value:	
Unauthorized consumption:		49.857	acre-ft/yr	0.25%		acre-ft/yr

Default option selected for unauthorized consumption - a grading of 5 is applied but not displayed

Customer metering inaccuracies:	7	949.890	acre-ft/yr	5.00%	acre-ft/yr
Systematic data handling errors:		45.120	acre-ft/yr	0.25%	acre-ft/yr

Default option selected for Systematic data handling errors - a grading of 5 is applied but not displayed

Apparent Losses: 1,044.866 acre-ft/yr

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: 600.567 acre-ft/yr

WATER LOSSES: 1,645.433 acre-ft/yr

NON-REVENUE WATER

NON-REVENUE WATER: 1,894.716 acre-ft/yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains:	10	414.0	miles	
Number of active AND inactive service connections:	8	27,373		
Service connection density:		66	conn./mile main	
Are customer meters typically located at the curbstop or property line?		Select...		
Average length of customer service line:	8	15.0	ft	(length of service line, beyond the property boundary, that is the responsibility of the utility)
Average operating pressure:	9	70.0	psi	

COST DATA

Total annual cost of operating water system:	10	$22,365,448	$/Year	
Customer retail unit cost (applied to Apparent Losses):	10	$2.93	$/100 cubic feet (ccf)	
Variable production cost (applied to Real Losses):	7	$290.59	$/acre-ft	☐ Use Customer Retail Unit Cost to value real losses

WATER AUDIT DATA VALIDITY SCORE:

*** YOUR SCORE IS: 87 out of 100 ***

A weighted scale for the components of consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION:

Based on the information provided, audit accuracy can be improved by addressing the following components:

1: Unauthorized consumption
2: Systematic data handling errors
3: Customer metering inaccuracies

Appendix F: Water Conservation Resolutions

PALMDALE WATER DISTRICT
RESOLUTION NO. 09-19

RESOLUTION OF THE BOARD OF DIRECTORS OF THE PALMDALE WATER DISTRICT DECLARING WATER CONSERVATION REGULATIONS

WHEREAS, Palmdale Water District ("District") is a water district empowered to provide water service for domestic, sanitation and fire protection uses; and

WHEREAS, due to persistent inadequate rainfall, California is suffering from a chronic and continuing water shortage which impacts the water supply available to the District's service area; and

WHEREAS, precipitation remains substantially below normal locally, particularly in the watersheds of the sources of water supply serving Southern California and many communities in the state are suffering water shortages; and

WHEREAS, the District relies on rainfall and water supply from the State Water Project to meet its water needs; and

WHEREAS, State Water Project deliveries to the District have been reduced in response to the continuing arid conditions and could be exacerbated further by legal restrictions on the flow of State Water Project water through the Bay-Delta; and

WHEREAS, these arid conditions and reduced supplies from the State Water Project have led to a greater reliance on groundwater to meet the needs of District customers with the corresponding depletion of groundwater supplies in the District's service area; and

WHEREAS, the District's ability to rely upon and entitlement to utilize groundwater will be subject to court decisions in the basin adjudication action now pending in the court system; and

WHEREAS, following due public notice, the conduct of a public hearing and the making of findings as required by law, the District has the power and authority to adopt mandatory water conservation measures within its boundaries; and

WHEREAS, by Resolution No. 09-04 adopted by the District on March 11, 2009, a water shortage emergency was declared; and

WHEREAS, the District's new water budget allocation based rate has reduced water demand; and

WHEREAS, the District amends the mandatory water conservation measures in Resolution No. 09-04.

NOW, THEREFORE, BE IT RESOLVED, by the Board of Directors of the Palmdale Water District as follows:

Section 1: Findings: The Board of Directors of the District hereby finds and declares as follows:

1) The State Water Project water available to the District has been reduced with no guarantee that the District will receive emergency water deliveries.

2) Continued production of water from the groundwater basin without proportionate recharge of the basin through artificial recharging, stream runoff, rainfall and snow melt could impair the long-term water delivery capability of the District.

3) There are potential scenarios of reduced imported water supply availability combined with peak local demands that could result in insufficient water for human consumption, sanitation and fire prevention. The District is working to reduce the likelihood of such a scenario by reducing existing water demands through rates and conservation, increasing groundwater production capability, and by developing new supply sources such as recycled water.

Section 2: Authorization to Implement Restrictions on Water Consumption: The Board of Directors of the District hereby authorizes the General Manager of the District to take specific steps to meet water conservation goals and ensure adequate water supply for human consumption, sanitation, and fire protection, and to implement the regulations and restrictions on water consumption as hereinafter set forth.

Section 3: Conservation Goal and Authorized Actions. The initial conservation goal of the District is a reduction in water use of ten percent (10%), which goal is subject to adjustment from time to time based upon demands, supplies, and conservation, with an ultimate conservation goal of a reduction in water use of 20% by 2020. The General Manager is authorized to implement this resolution to meet said conservation and water supply goals.

Action 1. Mandatory Water Conservation Regulations. The General Manager shall take all steps necessary to advise the District's customers of the following mandatory regulations and to enforce them in accordance the District's existing Waste of Water Policy:

1. There shall be no hose washing of sidewalks, walkways, buildings, walls, patios, driveways, parking areas or other paved surfaces, or walls, except to eliminate conditions dangerous to public health or safety or when required as surface preparation for the application of architectural coating or painting.

2. Washing of motor vehicles, trailers, boats and other types of equipment shall be done only with a hand-held nozzle for quick rinses, except that washing may be done with reclaimed wastewater or by a commercial car wash using recycled water.

3. No water shall be used to clean, fill or maintain levels in decorative fountains, ponds, lakes or other similar aesthetic structures unless such water is part of a closed recycling system.

4. No restaurant, hotel, cafe, cafeteria or other public place where food is sold, served or offered for sale, shall serve drinking water to any customer unless expressly requested.

5. All water users shall promptly repair all leaks from indoor and outdoor plumbing fixtures.

6. Irrigation of landscaping is not to occur between 10:00 a.m. and 8:00 p.m. April to October. The District will allow an exemption from the watering schedule if an ET based controller is installed and operating.

7. No water users shall cause or allow the water to run off landscape areas into adjoining streets, sidewalks, or other paved areas due to incorrectly directed or maintained sprinklers or excessive watering. If cited, random acts of vandalism will be considered in any appeal.

8. The use of water from fire hydrants shall be limited to fire fighting and related activities and other uses of water for municipal purposes shall be limited to activities necessary to maintain the public health, safety, and welfare. The use of construction meters in accordance with standard District policy is permitted.

Section 4: Appeal: Decisions made by the District under the regulations set forth in this Resolution may be appealed by consumers in accordance with the procedure set forth in the District Rules and Regulations.

Section 5: Violation: A violation of the regulations and restrictions set forth herein may result in a fine and/or result in the discontinuance of service to consumers willfully violating the conservation measures set forth herein or such other penalty or restriction as may be allowed by law.

Section 6: Severability: If any portion of this Resolution is found to be unconstitutional or invalid, the District hereby declares that it would have enacted the remainder of this Resolution regardless of the absence of any such valid part.

Section 7: Effective Date: This Resolution shall take effect immediately.

BE IT FURTHER RESOLVED, that the Board of Directors finds that the provisions of this Resolution are exempt from the provisions of the California Environmental Quality Act as an action to mitigate emergency conditions and as a rate setting measure pursuant to Public Resources Code §21080(b)(4); and

BE IT FURTHER RESOLVED, that this resolution supersedes and replaces Resolution No. 09-04 adopted by the District on March 11, 2009, which resolution is hereby rescinded and of no further force or effect.

PASSED AND ADOPTED at a regular meeting of the Board of Directors of Palmdale Water District held on December 9, 2009.

Gordon Dexter, President, Board of Directors
Palmdale Water District

Raul Figueroa, Secretary, Board of Directors
Palmdale Water District

5/23/07

PALMDALE WATER DISTRICT
RESOLUTION NO. 07-4

RESOLUTION OF THE BOARD OF DIRECTORS
OF PALMDALE WATER DISTRICT
ADOPTING A VOLUNTARY WATER CONSERVATION PROGRAM

WHEREAS, Palmdale Water District ("District") was established for the purpose of providing adequate reliable potable water to its inhabitants at a reasonable cost; and

WHEREAS, due to inadequate snowfall and rainfall, opposition to the development and construction of water supply facilities and legal restrictions on the flow of State Water Project water to Southern California, California in general, and the Antelope Valley in particular, is experiencing shortages in water supplies; and

WHEREAS, the State Water Project deliveries have therefore been drastically curtailed in response to the inadequacy of water supplies; and

WHEREAS, groundwater supplies which provide a supplemental source of water to the District are limited in nature, being subjected to increased demands and now subject to legal challenges arising from a basin adjudication action that could further limit the District groundwater supplies; and

WHEREAS, conservation of water by all District consumers will help relieve the problems caused by the shortage in water supplies; and

WHEREAS, the District has attempted through its public information program to advise and alert the consumers to the serious nature of the water supply situation but has not experienced any significant reduction in consumer demand; and

WHEREAS, the District has the power and authority to adopt water conservation measures for activities within its boundaries; and

WHEREAS, given the current water supply conditions, and uncertainties related thereto, the District finds it necessary and beneficial to undertake a phased water conservation program.

NOW, THEREFORE, BE IT RESOLVED, that the General Manager be and hereby is authorized to implement a voluntary water conservation program, with the goal of reducing total customer water use by fifteen percent (15%), to reduce the risk and severity of a possible water shortage; and

BE IT FURTHER RESOLVED, that the District will:

a. Audit its landscape irrigation systems to maximize irrigation efficiency; adjust sprinklers and irrigation systems to avoid overspray, runoff, and waste;

b. Not irrigate its landscape areas during the hot hours of the day, during windy days, and avoid watering between the hours of 6:00 a.m. and 6:00 p.m.;

c. Not hose down driveways, sidewalks and other paved surfaces, except for health or sanitary reasons;

d. Retrofit its plumbing fixtures with low-flow devices, except for those fixtures that require high-flow fixtures for health and/or sanitary reasons;

e. Check its faucets, toilets, and pipes, both indoor and outdoor, for leaks and repair them immediately; and

BE IT FURTHER RESOLVED, that the District urges its customers to:

a. Adjust sprinklers and irrigation systems to avoid overspray, runoff, and waste;

b. Avoid watering in the hot of the day, on windy days, and between the hours of 6:00 a.m. and 6:00 p.m.;

c. Install new drought-tolerant landscaping, low-water-using trees and plants, and efficient irrigation systems;

d. Shut off decorative fountains, unless a water recycling system is used;

e. Not hose down driveways, sidewalks, and other paved surfaces, except for health or sanitary reasons;

f. Install pool and spa covers to minimize water loss due to evaporation;

g. Not allow the hose to run while washing any vehicle and to use a bucket or a hose with an automatic cutoff valve;

h. Retrofit indoor plumbing fixtures with low-flow devices;

i. Check faucets, toilets, and pipes, both indoor and outdoor, including house service laterals and sprinkler piping, for leaks and repair them immediately, or upon demand of the District;

j. Restaurants, hotels, cafes, cafeterias, or other public places where food is sold, served, or offered for sale, should serve drinking water to any customer only upon request and display a notice to that effect; and

BE IT FURTHER RESOLVED, that the District finds that a program of voluntary measures to reduce consumption will assist in achieving the goal of conserving the water supply without causing unnecessary adverse economic consequences; and

BE IT FURTHER RESOLVED, that if critical water shortages continue to exist, and if voluntary measures prove insufficient to accomplish the necessary conservation, the District will consider further action to curtail customer water use; and

BE IT FURTHER RESOLVED, that this resolution supersedes and replaces Resolution No. 01-03 adopted by the District on July 9, 2001, which resolution is hereby rescinded and of no further force or effect.

PASSED AND ADOPTED at a regular meeting of the Board of Directors of Palmdale Water District held on May 23, 2007.

Richard Wells, President
Palmdale Water District

Linda Godin, Secretary
Palmdale Water District

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8/29/07

PALMDALE WATER DISTRICT
RESOLUTION NO. 07-09

RESOLUTION OF THE BOARD OF DIRECTORS OF PALMDALE WATER DISTRICT DECLARING A WATER SHORTAGE EMERGENCY CONDITION AND ADOPTING REGULATIONS AND RESTRICTIONS ON THE DELIVERY AND CONSUMPTION OF WATER FOR PUBLIC USE

WHEREAS, Palmdale Water District ("District") is a water district empowered to provide water service within District boundaries; and

WHEREAS, due to persistent inadequate rainfall, California is suffering from a chronic and continuing water shortage which is predicted to severely impact the District's service area; and

WHEREAS, precipitation remains substantially below normal locally, particularly in the watersheds of the sources of water supply serving Southern California and many communities in the state are suffering water shortages; and

WHEREAS, the District relies on rainfall and water supply from the State Water Project to meet its water needs; and

WHEREAS, State Water Project deliveries to the District have been reduced by forty percent (40%) in response to the continuing arid conditions and could be exacerbated further by legal restrictions on the flow of State Water Project water through the Bay-Delta; and

WHEREAS, these arid conditions and reduced supplies from the State Water Project have led to a greater reliance on groundwater to meet the needs of District customers with the corresponding depletion of groundwater supplies in the District's service area; and

WHEREAS, the District's ability to rely upon and entitlement to utilize groundwater is under attack in a basin adjudication action now pending in the court system; and

WHEREAS, with increasing water demand and limitations on water supplies, it is anticipated that the District will not have enough water to meet customer demand for water for the remainder of this year; and

WHEREAS, the ordinary demands and requirements of the District customers cannot be satisfied without depleting the available water supply to such an extent that there would be insufficient available water for human consumption, sanitation and fire protection; and

REVISED
NOVEMBER 14, 2007

WHEREAS, following due public notice, the conduct of a public hearing and the making of findings as required by law, the District has the power and authority to adopt mandatory water conservation measures within its boundaries; and

WHEREAS, if following the District's implementation of both a voluntary water conservation program and water conservation regulations, it is determined such measures have not resulted in the necessary reduction in consumption, further and more severe measures may be required; and

WHEREAS, due to the critical water shortage, the District now finds it necessary to adopt additional water conservation measures, including mandatory water rationing and a moratorium on new connections, which measures shall be implemented should present conditions continue to the point where there is imminent danger of insufficient water available for human consumption, sanitation and fire protection.

NOW, THEREFORE, BE IT RESOLVED, by the Board of Directors of the Palmdale Water District as follows:

Section 1: Findings: The Board of Directors of the District hereby finds and declares as follows:

1) The State Water Project water available to the District has been reduced by forty percent (40%), with no guarantee that the District will receive emergency water deliveries.

2) Continued production of water from the groundwater basin without proportionate recharge of the basin through stream runoff, rainfall and snow melt, could result in irreparable damage to the storage capacity of the basin aquifers and impair the long-term water delivery capability of the District;

3) Voluntary water conservation measures have not resulted in the necessary reduction in consumption;

4) At present the anticipated water available to the District is insufficient to meet anticipated demands;

5) Should existing circumstances continue, or should the District lose its water production capacity, there will be insufficient water available for human consumption, sanitation and fire protection;

6) Any additional connections to the District's system would create additional burden and demand on the system that could not be met by existing supplies, and would further endanger the District's ability to provide water for human consumption, sanitation and fire protection.

Section 2: Declaration of Water Shortage Emergency: The Board of Directors of the District, in accordance with the foregoing findings, hereby determines and declares the existence of an emergency condition of water shortage within its service area, and further determines and declares that the regulations and restrictions on delivery of water and consumption of water within its service area as hereinafter set forth are necessary, in the sound discretion of the Board of Directors of the District, to conserve the water supply for the greatest public benefit with particular regard to domestic use, sanitation, and fire protection.

Section 3: Authorization to Implement Restrictions on Water Consumption: The Board of Directors of the District hereby authorizes the General Manager of the District to take specific steps to meet water conservation goals and avoid an imminent danger that the District will be unable to supply sufficient water for human consumption, sanitation, and fire protection, to implement the regulations and restrictions on water consumption as hereinafter set forth.

Section 4: Conservation Goal and Authorized Actions. The initial conservation goal of the District is a reduction in water use of ten percent (10%), which goal is subject to adjustment from time to time based upon demands, supplies, and conservation. The General Manager is authorized to implement Action 1, Paragraphs 1 through 9 of this resolution to meet said conservation goal.

Action 1. Mandatory Water Conservation Regulations. The General Manager shall take all steps necessary to advise the District's customers of the following mandatory regulations and to enforce them in accordance the District's existing Waste of Water Policy:

1. There shall be no hose washing of sidewalks, walkways, buildings, walls, patios, driveways, parking areas or other paved surfaces, or walls, except to eliminate conditions dangerous to public health or safety or when required as surface preparation for the application of architectural coating or painting.

2. Washing of motor vehicles, trailers, boats and other types of equipment shall be done only with a hand-held nozzle for quick rinses, except that washing may be done with reclaimed wastewater or by a commercial car wash using recycled water.

3. No water shall be used to clean, fill or maintain levels in decorative fountains, ponds, lakes or other similar aesthetic structures unless such water is part of a closed recycling system.

4. No restaurant, hotel, cafe, cafeteria or other public place where food is sold, served or offered or sale, shall serve drinking water to any customer unless expressly requested and shall display a notice to that effect.

5. All water users shall promptly repair all leaks from indoor and outdoor plumbing fixtures.

6. No lawn, landscape, or other turf area shall be watered more often than three (3) days per week and no more often than every other day nor during the hours between 6:00 a.m. and 6:00 p.m. Water days will be set as follows: addresses ending in an even number starting on Monday, and; addresses ending in an odd number starting on Tuesday.

   Exemptions:

   1. No watering hour restrictions during the months of November, December, January, February, and March. Watering can occur between the hours of 6:00 a.m. and 6:00 p.m.

   2. The District will allow an exemption from the watering schedule if an ET based controller is installed and operating. *The ET Controller Exemption Form* must be completed and the installation verified by a licensed landscape architect or PWD staff.

7. No water users shall cause or allow the water to run off landscape areas into adjoining streets, sidewalks, or other paved areas due to incorrectly directed or maintained sprinklers or excessive watering. If cited, random acts of vandalism will be considered in any appeal.

8. The owner and manager of every hotel, motel, inn, guest house, bed and breakfast facility, and short-term commercial lodging shall post a notice of such shortage and any necessary compliance measures.

9. Commercial nurseries, golf courses, parks, school yards, and other public open space, and landscaped areas shall be prohibited from watering lawn, landscaping, and other turf areas more often than five days per week and between the hours of 6:00 a.m. and 6:00 p.m., except that there shall be no restriction on watering utilizing reclaimed water or where public use requires a modified and approved watering schedule.

   Exemptions:

   1. Athletic field watering can occur between the hours of 6:00 p.m. and 10:00 a.m. the following morning.

2. No watering hour restrictions during the months of November, December, January, February, and March. Watering can occur between the hours of 6:00 a.m. and 6:00 p.m.

3. The District will allow an exemption from the watering schedule if an ET based controller is installed and operating. *The ET Controller Exemption Form* must be completed and the installation verified by a licensed landscape architect or PWD staff.

4. Watering schedules must be adhered to at all times. The District requires advance written notice of any maintenance activities requiring water use between the hours of 6:00 a.m. and 6:00 p.m.

10. The use of water from fire hydrants shall be limited to fire fighting and related activities and other uses of water for municipal purposes shall be limited to activities necessary to maintain the public health, safety, and welfare. Ongoing water system improvement projects qualifying with the exemption available under Action 2 are also exempt under this section and may continue to use construction meters in accordance with standard District policy.

Action 2: Moratorium on New Connections: Upon specific authorization by the Board of Directors, the General Manager shall impose a moratorium on new connections to the District's water system. Such moratorium shall take effect immediately pursuant to the authority authorized by this Resolution. Water system improvement projects that include new connections, have begun construction, and have not been activated at the time this resolution is effective can be exempted. The exemption is based on certification of the installation, proper programming, and proper operation of District-approved E/T irrigation system controller(s) for all irrigation systems in the project. These include those irrigation systems with separate water service connections and those connected to water service connections used for both irrigation and domestic purposes.

Action 3: Mandatory Water Rationing: Upon specific authorization by the Board of Directors, the General Manager shall the General Manager shall implement a phased water rationing to protect the water supply of the District and to guarantee adequate supply for domestic use, sanitation, and fire protection, as follows:

1. Stage 1: Water Rationing: A twenty percent (20%) reduction in water deliveries to all District customers.

2. Stage 2: Water Rationing: A thirty percent (30%) reduction in water deliveries to all District customers.

3. Stage 3: Water Rationing: A forty percent (40%) reduction in water deliveries to all District customers.

a) A Base water use shall be established for each residential, commercial and industrial consumer of the Palmdale water District corresponding to the amount of water delivered to that consumer during the last annual water year ending on December 31, 2006.

b) Water consumption by a consumer which is in excess of the specified conservation percentage of the base water use, as described in section 5 will be charged at a rate of $3.00 per 100 cubic feet of water, or fraction thereof, in addition to the current base water rate.

Section 5: Duration of Water Emergency: The regulations, restrictions, and actions set forth herein shall take full force and effect immediately upon authorization by the Board of Directors and shall remain in full force and effect until the supply of water available for distribution within the District service area has been replenished or augmented, as determined by the General Manager such that a sufficient supply of water is available for human consumption, sanitation, and fire protection, or until further action by the Board of Directors.

Section 6: Appeal: Decisions made by the District under the regulations set forth in this Resolution may be appealed by consumers in accordance with the procedure set forth in the District Rules and Regulations.

Section 7: Violation: A violation of the regulations and restrictions set forth herein may result in a fine and/or result in the discontinuance of service to consumers willfully violating the conservation measures set forth herein or such other penalty or restriction as may be allowed by law.

Section 8: Severability: If any portion of this Resolution is found to be unconstitutional or invalid, the District hereby declares that it would have enacted the remainder of this Resolution regardless of the absence of any such valid part.

Section 9: Effective Date: This Resolution shall take effect immediately.

BE IT FURTHER RESOLVED, that the Board of Directors finds that the provisions of this Resolution are exempt from the provisions of the California Environmental Quality Act as an action

to mitigate emergency conditions and as a rate setting measure pursuant to Public Resources Code §21080(b)(4) and (8); and

BE IT FURTHER RESOLVED, that this resolution supersedes and replaces Resolution No. 07-04 adopted by the District on May 23, 2007, which resolution is hereby rescinded and of no further force or effect.

PASSED AND ADOPTED at a regular meeting of the Board of Directors of Palmdale Water District held on August 29, 2007.

Richard Wells, President
Palmdale Water District

Linda Godin, Secretary
Palmdale Water District

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REVISED
NOVEMBER 14, 2007

3/11/2009

PALMDALE WATER DISTRICT
RESOLUTION NO. 09-04

RESOLUTION OF THE BOARD OF DIRECTORS OF PALMDALE WATER DISTRICT DECLARING A WATER SHORTAGE EMERGENCY CONDITION AND ADOPTING REGULATIONS AND RESTRICTIONS ON THE DELIVERY AND CONSUMPTION OF WATER FOR PUBLIC USE

WHEREAS, Palmdale Water District ("District") is a water district empowered to provide water service within District boundaries; and

WHEREAS, due to persistent inadequate rainfall, California is suffering from a chronic and continuing water shortage which is predicted to severely impact the District's service area; and

WHEREAS, precipitation remains substantially below normal locally, particularly in the watersheds of the sources of water supply serving Southern California and many communities in the state are suffering water shortages; and

WHEREAS, the District relies on rainfall and water supply from the State Water Project to meet its water needs; and

WHEREAS, State Water Project deliveries to the District have been reduced by eighty-five percent (85%) in response to the continuing arid conditions and could be exacerbated further by legal restrictions on the flow of State Water Project water through the Bay-Delta; and

WHEREAS, these arid conditions and reduced supplies from the State Water Project have led to a greater reliance on groundwater to meet the needs of District customers with the corresponding depletion of groundwater supplies in the District's service area; and

WHEREAS, the District's ability to rely upon and entitlement to utilize groundwater is under attack in a basin adjudication action now pending in the court system; and

WHEREAS, with increasing water demand and limitations on water supplies, it is anticipated that the District will not have enough water to meet customer demand for water for the remainder of this year; and

WHEREAS, the ordinary demands and requirements of the District customers cannot be satisfied without depleting the available water supply to such an extent that there would be insufficient available water for human consumption, sanitation and fire protection; and

WHEREAS, following due public notice, the conduct of a public hearing and the making of findings as required by law, the District has the power and authority to adopt mandatory water conservation measures within its boundaries; and

District, to conserve the water supply for the greatest public benefit with particular regard to domestic use, sanitation, and fire protection.

Section 3: Authorization to Implement Restrictions on Water Consumption: The Board of Directors of the District hereby authorizes the General Manager of the District to take specific steps to meet water conservation goals and avoid an imminent danger that the District will be unable to supply sufficient water for human consumption, sanitation, and fire protection, to implement the regulations and restrictions on water consumption as hereinafter set forth.

Section 4: Conservation Goal and Authorized Actions. The initial conservation goal of the District is a reduction in water use of ten percent (10%), which goal is subject to adjustment from time to time based upon demands, supplies, and conservation, with an ultimate conservation goal of a reduction in water use of 20% by 2020. The General Manager is authorized to implement Action 1, Paragraphs 1 through 9 of this resolution to meet said conservation goal.

Action 1. Mandatory Water Conservation Regulations. The General Manager shall take all steps necessary to advise the District's customers of the following mandatory regulations and to enforce them in accordance the District's existing Waste of Water Policy:

1. There shall be no hose washing of sidewalks, walkways, buildings, walls, patios, driveways, parking areas or other paved surfaces, or walls, except to eliminate conditions dangerous to public health or safety or when required as surface preparation for the application of architectural coating or painting.

2. Washing of motor vehicles, trailers, boats and other types of equipment shall be done only with a hand-held nozzle for quick rinses, except that washing may be done with reclaimed wastewater or by a commercial car wash using recycled water.

3. No water shall be used to clean, fill or maintain levels in decorative fountains, ponds, lakes or other similar aesthetic structures unless such water is part of a closed recycling system.

4. No restaurant, hotel, cafe, cafeteria or other public place where food is sold, served or offered or sale, shall serve drinking water to any customer unless expressly requested and shall display a notice to that effect.

5. All water users shall promptly repair all leaks from indoor and outdoor plumbing fixtures.

6. No lawn, landscape, or other turf area shall be watered more often than three (3) days per week and no more often than every other day

nor during the hours between 10:00 a.m. and 8:00 p.m. Water days will be set as follows: addresses ending in an even number starting on Monday, and; addresses ending in an odd number starting on Tuesday.

Exemptions:

1. No watering hour restrictions during the months of November, December, January, February, and March. Watering can occur between the hours of 10:00 a.m. and 8:00 p.m.

2. The District will allow an exemption from the watering schedule if an ET based controller is installed and operating. *The ET Controller Exemption Form* must be completed and the installation verified by a licensed landscape architect or PWD staff.

7. No water users shall cause or allow the water to run off landscape areas into adjoining streets, sidewalks, or other paved areas due to incorrectly directed or maintained sprinklers or excessive watering. If cited, random acts of vandalism will be considered in any appeal.

8. The owner and manager of every hotel, motel, inn, guest house, bed and breakfast facility, and short-term commercial lodging shall post a notice of such shortage and any necessary compliance measures.

9. Commercial nurseries, golf courses, parks, school yards, and other public open space, and landscaped areas shall be prohibited from watering lawn, landscaping, and other turf areas more often than five days per week and between the hours of 10:00 a.m. and 8:00 p.m., except that there shall be no restriction on watering utilizing reclaimed water or where public use requires a modified and approved watering schedule.

Exemptions:

1. No watering hour restrictions during the months of November, December, January, February, and March. Watering can occur between the hours of 10:00 a.m. and 8:00 p.m.

2. The District will allow an exemption from the watering schedule if an ET based controller is installed and operating. *The ET Controller Exemption Form* must be completed and the installation verified by a licensed landscape architect or PWD staff.

3. Watering schedules must be adhered to at all times. The District requires advance written notice of any maintenance activities requiring water use between the hours of 10:00 a.m. and 8:00 p.m.

10. The use of water from fire hydrants shall be limited to fire fighting and related activities and other nses of water for municipal purposes shall be limited to activities necessary to maintain the public health, safety, and welfare. Ongoing water system improvement projects qualifying with the exemption available under Action 2 are also exempt under this section and may continue to use construction meters in accordance with standard District policy.

Action 2: Moratorium on New Connections: Upon specific authorization by the Board of Directors, the General Manager shall impose a moratorium on new connections to the District's water system. Such moratorium shall take effect immediately pursuant to the authority authorized by this Resolution. Water system improvement projects that include new connections, have begun construction, and have not been activated at the time this resolution is effective can be exempted. The exemption is based on certification of the installation, proper programming, and proper operation of District-approved E/T irrigation system controller(s) for all irrigation systems in the project. These include those irrigation systems with separate water service connections and those connected to water service connections used for both irrigation and domestic purposes.

Action 3: Mandatory Water Rationing: Upon specific authorization by the Board of Directors, the General Manager shall the General Manager shall implement a phased water rationing to protect the water supply of the District and to guarantee adequate supply for domestic use, sanitation, and fire protection, as follows:

1. Stage 1: Water Rationing: A twenty percent (20%) reduction in water deliveries to all District customers.

2. Stage 2: Water Rationing: A thirty percent (30%) reduction in water deliveries to all District customers.

3. Stage 3: Water Rationing: A forty percent (40%) reduction in water deliveries to all District customers.

a) A Base water use shall be established for each residential, commercial and industrial consumer of the Palmdale water District corresponding to the amount of water delivered to that consumer during the last annual water year ending on December 31, 2006.

b) Water consumption by a consumer which is in excess of the specified conservation percentage of the base water use, as described in section 5 will be charged at a rate of $3.00 per 100 cubic feet of water, or fraction thereof, in addition to the current base water rate.

Section 5: Duration of Water Emergency: The regulations, restrictions, and actions set forth herein shall take full force and effect immediately upon authorization by the Board of Directors and shall remain in full force and effect until the supply of water available for distribution within the District service area has been replenished or augmented, as determined by the General Manager such that a sufficient supply of water is available for human consumption, sanitation, and fire protection, or until further action by the Board of Directors.

Section 6: Appeal: Decisions made by the District under the regulations set forth in this Resolution may be appealed by consumers in accordance with the procedure set forth in the District Rules and Regulations.

Section 7: Violation: A violation of the regulations and restrictions set forth herein may result in a fine and/or result in the discontinuance of service to consumers willfully violating the conservation measures set forth herein or such other penalty or restriction as may be allowed by law.

Section 8: Severability: If any portion of this Resolution is found to be unconstitutional or invalid, the District hereby declares that it would have enacted the remainder of this Resolution regardless of the absence of any such valid part.

Section 9: Effective Date: This Resolution shall take effect immediately.

BE IT FURTHER RESOLVED, that the Board of Directors finds that the provisions of this Resolution are exempt from the provisions of the California Environmental Quality Act as an action to mitigate emergency conditions and as a rate setting measure pursuant to Public Resources Code §21080(b)(4) and (8); and

BE IT FURTHER RESOLVED, that this resolution supersedes and replaces Resolution No. 07-09 adopted by the District on November 14, 2007, which resolution is hereby rescinded and of no further force or effect.

PASSED AND ADOPTED at a regular meeting of the Board of Directors of Palmdale Water District held on March 11, 2009.

President
Palmdale Water District

Secretary
Palmdale Water District

PALMDALE WATER DISTRICT
RESOLUTION NO. 14-12

RESOLUTION OF THE BOARD OF DIRECTORS OF PALMDALE WATER DISTRICT DECLARING EMERGENCY WATER CONSERVATION RESTRICTIONS AND ADOPTING STATE WATER RESOURCE CONTROL BOARD REGULATIONS ON THE DELIVERY AND CONSUMPTION OF WATER FOR PUBLIC USE

WHEREAS, Palmdale Water District ("District") is a water district empowered to provide water service within District boundaries; and

WHEREAS, due to inadequate snowfall and rainfall, opposition to the development and construction of water supply facilities and legal restrictions on the flow of State Water Project water to Southern California, California in general, and the Antelope Valley in particular, is experiencing shortages in water supplies; and

WHEREAS, the State Water Project allocation for 2014 has been established at a historically low 5% and deliveries have therefore been drastically curtailed in response to the inadequacy of water supplies; and

WHEREAS, groundwater supplies which provide a supplemental source of water to the District are limited in nature, being subjected to increased demands and now subject to legal challenges arising from a groundwater basin adjudication action that could further limit the District groundwater supplies; and

WHEREAS, conservation of water by all District consumers that have not already conserved will help relieve the problems caused by the shortage in water supplies; and

WHEREAS, the District has attempted through its public information program to advise and alert the consumers to the serious nature of the water supply situation. Customers have made significant progress in water use efficiency from pre-2009 by exceeding the State required 20% reduction by the year 2020 under SBX 7-7 but the District has not experienced any significant reduction in consumer demand compared to 2013; and

WHEREAS, on January 17, 2014, Governor Edmund G. Brown Jr. issued Proclamation January 17, 2014 declaring a State of Emergency to exist in California due to severe drought conditions; and

WHEREAS, on April 25, 2014, Governor Edmund G. Brown Jr. further issued an executive order to strengthen the state's ability to manage water and habitat effectively in drought conditions and called on all Californians to redouble their efforts to conserve water; and

WHEREAS, the District adopted Resolution 14-9 on May 14, 2014 urging heightened water conservation by customers in response to drought and the April 25, 2014 Governor's Proclamation; and

WHEREAS, Water Code section 1058.5 grants the State Water Resources Control Board the authority to adopt emergency regulations in certain drought years in order to: "prevent the waste, unreasonable use, unreasonable method of use, or unreasonable method of diversion, of water, to promote water recycling or water conservation;" and

WHEREAS, on July 15, 2014 the State Water Resources Control Board adopted emergency water conservation regulations prohibiting all individuals from engaging in certain water use practices and would require mandatory conservation-related actions of public water suppliers during the current drought emergency; and

WHEREAS, following the making of findings as required by law, the District has the power and authority to adopt mandatory water conservation measures within its boundaries pursuant to Part 5 of the Irrigation District Law, codified at Division 11 of the California Water Code; and

WHEREAS, the District is required to comply with State law, including regulations adopted by the State Water Resources Control Board (SWRCB), codified at Title 23 of the California Code of Regulations and is authorized pursuant thereto to implement its requirements;

WHEREAS the District now desires to comply with the SWRCB emergency water conservation regulations and to implement the Stage 1 Water Shortage Emergency Plan contained in the Districts 2010 Urban Water Management Plan, including mandatory water rationing which measures shall be implemented.

NOW, THEREFORE, BE IT RESOLVED, by the Board of Directors of the Palmdale Water District as follows:

Section 1: Findings: The Board of Directors of the District hereby finds and declares as follows:

1) On July 15, 2014 the State Water Resources Control Board issued mandatory Emergency Water Conservation Regulations prohibiting all individuals from engaging in certain water use practices and requiring the District to implement its mandatory water conservation measures.

2) The State Water Project water available to the District has been reduced to a (5%), allocation with no guarantee that the District will receive emergency water deliveries.

3) Continued production of water from the groundwater basin without proportionate recharge of the basin through stream runoff, rainfall and snow melt, could result in irreparable damage to the storage capacity of the basin aquifers and impair the long-term water delivery capability of the District;

4) Voluntary water conservation measures have not resulted in the recommended 20% reduction in consumption;

5) At present, without supplemental supplies, the anticipated water available to the District is insufficient to meet anticipated demands;

6) Should existing drought conditions continue, or should the District lose its water production capacity, there may be insufficient water available for human consumption, sanitation and fire protection;

Section 2: Declaration of Stage 1 Water Shortage Emergency: The Board of Directors of the District, in accordance with the foregoing findings, hereby determines and declares the existence of an emergency condition of water shortage within its service area, and further determines and declares that the regulations and restrictions on delivery of water and consumption of water within its service area as hereinafter set forth are necessary, in the sound discretion of the Board of Directors of the District, to conserve the water supply for the greatest public benefit with particular regard to domestic use, sanitation, and fire protection.

Section 3: Authorization to Implement Restrictions on Water Consumption: The Board of Directors of the District hereby authorizes the General Manager of the District to take specific steps to meet water conservation goals, regulations and restrictions on water consumption as hereinafter set forth.

Section 4: Conservation Goal and Authorized Actions. The conservation goal of the District and the State Water Board is a reduction in water use of twenty percent (20%), which goal is subject to adjustment from time to time based upon demands, supplies, and conservation. The General Manager is authorized to implement Action 1, Paragraphs 1 through 10 of this resolution to meet said conservation goal.

Action 1. Mandatory Water Conservation Regulations. The General Manager shall take all steps necessary to advise the District's customers of the following mandatory regulations and to enforce them in accordance the District's existing Waste of Water Policy:

1. There shall be no hose washing of sidewalks, walkways, buildings, walls, patios, driveways, parking areas or other paved surfaces, or walls, except to eliminate conditions dangerous to public health or safety or when required as surface preparation for the application of architectural coating or painting.

2. Washing of motor vehicles, trailers, boats and other types of equipment shall be done only with a hand-held nozzle for quick rinses, except that washing may be done with reclaimed wastewater or by a commercial car wash using recycled water.

3. No water shall be used to clean, fill or maintain levels in decorative fountains, ponds, lakes or other similar aesthetic structures unless such water is part of a closed recycling system.

4. No restaurant, hotel, cafe, cafeteria or other public place where food is sold, served or offered or sale, shall serve drinking water to any customer unless expressly requested and shall display a notice to that effect.

5. All water users shall promptly repair all leaks from indoor and outdoor plumbing fixtures.

6. No lawn, landscape, or other turf area shall be watered more often than three (3) days per week and no more often than every other day nor during the hours between 10:00 a.m. and 4:00 p.m. Water days will be set as follows: addresses ending in an even number starting on Monday, and; addresses ending in an odd number starting on Tuesday.

   Exemptions:

   a. No watering **hour restrictions** during the months of November, December, January, February, and March. Watering can occur between the hours of 6:00 a.m. and 6:00 p.m.

   b. The District will allow an exemption from the watering schedule if an ET based controller is installed and operating. *The ET Controller Exemption Form* must be completed and the installation verified by a licensed landscape architect or PWD staff.

7. No water users shall cause or allow the water to run off landscape areas into adjoining streets, sidewalks, or other paved areas due to incorrectly directed or maintained sprinklers or excessive watering. If cited, random acts of vandalism will be considered in any appeal.

8. The owner and manager of every hotel, motel, inn, guest house, bed and breakfast facility, and short-term commercial lodging shall post a notice of such shortage and any necessary compliance measures.

9. Commercial nurseries, golf courses, parks, school yards, and other public open space, and landscaped areas shall be prohibited from watering lawn, landscaping, and other turf areas more often than five days per week and between the hours of 6:00 a.m. and 6:00 p.m., except that there shall be no restriction on watering utilizing reclaimed water or where public use requires a modified and approved watering schedule.

Exemptions:

a. Athletic field watering can occur between the hours of 6:00 p.m. and 10:00 a.m. the following morning.

b. No watering hour restrictions during the months of November, December, January, February, and March. Watering can occur between the hours of 6:00 a.m. and 6:00 p.m.

c. The District will allow an exemption from the watering schedule if an ET based controller is installed and operating. *The ET Controller Exemption Form* must be completed and the installation verified by a licensed landscape architect or PWD staff.

d. Watering schedules must be adhered to at all times. The District requires advance written notice of any maintenance activities requiring water use between the hours of 6:00 a.m. and 6:00 p.m.

10. The use of water from fire hydrants shall be limited to fire fighting and related activities and other uses of water for municipal purposes shall be limited to activities necessary to maintain the public health, safety, and welfare. Ongoing water system improvement projects are also exempt under this section and may continue to use construction meters in accordance with standard District policy.

Action 2: Mandatory Water Rationing: Upon specific authorization by the Board of Directors, the General Manager shall implement a phased water rationing to protect the water supply of the District and to guarantee adequate supply for domestic use, sanitation, and fire protection, as follows:

1. Stage 1: Water Rationing: A twenty percent (20%) reduction in water deliveries to all District customers.

2. Stage 2: Water Rationing: A thirty percent (30%) reduction in water deliveries to all District customers.

3. Stage 3: Water Rationing: A forty percent (40%) reduction in water deliveries to all District customers.

Section 5: Duration of Water Emergency: The regulations, restrictions, and actions set forth herein shall take full force and effect on August 1, 2014 upon authorization by the Board of Directors and shall remain in full force and effect for 270 days or until otherwise directed by the SWRCB.

Section 6: Appeal: Decisions made by the District under the regulations set forth in this Resolution may be appealed by consumers in accordance with the procedure set forth in the District Rules and Regulations.

Section 7: Violation: A violation of the regulations and restrictions set forth herein will result in progressive warnings, fines, or result in the discontinuance of service to consumers willfully violating the conservation measures set forth herein or such other penalty or restriction as may be allowed by law.

Section 8: Severability: If any portion of this Resolution is found to be unconstitutional or invalid, the District hereby declares that it would have enacted the remainder of this Resolution regardless of the absence of any such valid part.

Section 9: Effective Date: This Resolution shall take effect August 1, 2014.

BE IT FURTHER RESOLVED, that the Board of Directors finds that the provisions of this Resolution are exempt from the provisions of the California Environmental Quality Act as an action to mitigate emergency conditions and as a rate setting measure pursuant to Public Resources Code §21080(b)(4) and (8); and

PASSED AND ADOPTED at a special meeting of the Board of Directors of Palmdale Water District held on July 23, 2014.

Robert E. Alvarado, Vice President
Palmdale Water District

Joe Estes, Secretary
Palmdale Water District

RESOLUTION NO. 14-9
BOARD OF DIRECTORS OF THE
PALMDALE WATER DISTRICT
URGING HEIGHTENED WATER CONSERVATION BY CUSTOMERS IN RESPONSE TO DROUGHT

WHEREAS, California is experiencing one of the most severe droughts on record; and

WHEREAS, the 2014 water year has been one of the driest in decades and follows two consecutive dry years throughout the State; and

WHEREAS, even after recent rain and snowfall, the state's major reservoirs remain well below average levels for the date, and the statewide snowpack is less than a third of normal with little time remaining to recover in 2014; and

WHEREAS, many areas of the State will face water shortages this year; and

WHEREAS, the State Water Project (Project) has announced an initial allocation of 5%, then zero, and then 5% again for its customers in 2014 making this year the lowest-ever allocations for its contractors, creating a real possibility that 25 million Californians and nearly a million acres of farmland will receive little water from the Project this year; and

WHEREAS, Governor Brown declared a drought state of emergency on January 17, 2014 and called on all Californians to do their part to reduce their water use; and

WHEREAS, though local water supply conditions vary around the State, California is nevertheless in a statewide drought, and it is critical that all residents do what they can to use water wisely to maximize supplies and protect water reserves in case next year is dry too; and

WHEREAS, Palmdale Water District has made significant investments in local programs and projects to improve water supply reliability, including supplemental water supply contracts, local water storage projects, water conservation, water recycling and other strategies to stretch supplies, and will continue to do so; and

WHEREAS, Palmdale Water District customers have made significant progress in water use efficiency by exceeding a 26% reduction in water use compared to pre-2009 water use levels, therefore, exceeding the state required 20% reduction by the year 2020.

NOW, THEREFORE, BE IT RESOLVED, that the Board of Directors of the Palmdale Water District recognizes that California is in a statewide drought, and there is a critical need for all Californians to use water wisely on an ongoing basis and heighten their conservation efforts now as the State continues to face drought conditions.

BE IT FURTHER RESOLVED, that the Board of Directors thanks its customers for their ongoing water use efficiency efforts and asks that they re-double those efforts wherever possible this year in response to the drought.

I certify that this is a true copy of Resolution No. 14-9 as passed by the Board of Directors of the Palmdale Water District at its meeting on May 14, 2014 in Palmdale, California.

Date: May 14, 2014

Board President

Board Secretary

PALMDALE WATER DISTRICT
RESOLUTION NO. 15-13

WHEREAS, the Los Angeles County Auditor-Controller has submitted to the Palmdale Water District the assessed value information necessary to enable the District to establish its assessment rates; and

WHEREAS, the Board of Directors has reviewed the assessed value information and has calculated the amounts needed to be raised to meet the State Water Contract; and

WHEREAS, the Board of Directors has determined the assessment rate required to raise the required funds.

NOW, THEREFORE, BE IT RESOLVED, that the Board of Directors of Palmdale Water District hereby establishes the following secured tax rates for 2015-2016:

ACCOUNT #	AGENCY NAME	TAX RATE
308.60	Palmdale Water District	.000000
308.61	Palmdale Water District Zone B	0.299219
308.62	Palmdale Water District Zone B2	0.299219
308.63	Palmdale Water District Zone C	0.299219
308.65	Palmdale Water District Zone E	0.299219
308.66	Palmdale Water District Zone A	0.299219
308.67	Palmdale Water-Westmont Imp. Dist.	.000000

FURTHER RESOLVED, that the Board of Supervisors of the County of Los Angeles, State of California, is hereby authorized and directed, at the time and in the manner directed by law, in addition to any and all other taxes and assessments levied against the lands within the Palmdale Water District, to levy and collect assessments against all of the lands within said District and the aforesaid improvement District at the rates set forth above.

PASSED AND ADOPTED at a regular meeting of the Board of Directors held on August 12, 2015, by the following roll call vote:

AYE: Kathy Mac Laren, Robert Alvarado, Gloria Dizmang, Joe Estes, Vincent Dino

NO: None

ABSENT: None

I hereby certify under penalty of perjury that the tax rates levied herein are exempt from the application of Article XIII A, Section 1(A) of the Constitution of the State of California.

Name: Kathy Mac Laren
Title: President, Board of Directors

DATED: August 12, 2015

RESOLUTION NO. 15-13

CR52RPTA

COUNTY OF LOS ANGELES
AUDITOR-CONTROLLER, TAX DIVISION

2015 - 16 SECURED TAX RATES

ACCT #	AGENCY NAME	TAX RATE
308.60	PALMDALE WATER DIST	.000000
308.61	PALMDALE WATER DIST ZONE B	0.299219
308.62	PALMDALE WATER DIST ZONE B2	0.299219
308.63	PALMDALE WATER DIST ZONE C	0.299219
308.65	PALMDALE WATER DIST ZONE E	0.299219
308.66	PALMDALE WATER DIST ZONE A	0.299219
308.67	PALMDALE WATER-WESTMONT IMP DIST	.000000

I, KATHY MAC LAREN, AM ~~A MEMBER OF THE CITY COUNCIL, A~~ MEMBER OF THE GOVERNING BOARD, ~~THE CHIEF EXECUTIVE OR THE CHIEF FINANCIAL OFFICER~~ FOR THIS AGENCY AND I HEREBY CERTIFY THAT THE TAX RATES LEVIED HEREIN ARE IN ACCORDANCE WITH THE PROVISIONS OF ARTICLE XIII SECTION 1(b) OF THE CONSTITUTION OF THE STATE OF CALIFORNIA.

Kathy Mac Laren
AUTHORIZED SIGNATURE

President
Board of Directors
TITLE

August 12, 2015
DATE

PALMDALE WATER DISTRICT
RESOLUTION NO. 15-14

RESOLUTION OF THE BOARD OF DIRECTORS OF PALMDALE WATER DISTRICT REVISING SECTION 7 OF RESOLUTION 15-9 ACCELERATING AND AMENDING PENALTIES FOR VIOLATING MANDATORY WATER CONSERVATION REGULATIONS FOR THE PURPOSE OF ACHIEVING THE MANDATED 32% REDUCTION IN POTABLE WATER USE

WHEREAS, Palmdale Water District ("District") is a water district empowered to provide water service within District boundaries; and

WHEREAS, due to inadequate snowfall and rainfall, opposition to the development and construction of water supply facilities, and legal restrictions on the flow of State Water Project water to Southern California, California in general, and the Antelope Valley, in particular, is experiencing shortages in water supplies; and

WHEREAS, the State Water Project allocation for 2015 has been established at a critically low 20% and deliveries have, therefore, been drastically curtailed in response to the inadequacy of water supplies; and

WHEREAS, groundwater supplies which provide a supplemental source of water to the District, are limited in nature, being subjected to increased demands, and now subject to legal rulings arising from a groundwater basin adjudication action that further limit the District groundwater supplies; and

WHEREAS, conservation of water by all District consumers that have not already conserved will help relieve the problems caused by the shortage in water supplies; and

WHEREAS, the District has attempted, through its public information program, to advise and alert the consumers to the serious nature of the water supply situation. Customers have made significant progress in water use efficiency from pre-2009 by exceeding the State required 20% reduction by the year 2020 under SBX 7-7, but the District has not experienced any significant reduction in consumer demand compared to 2013; and

WHEREAS, on January 17, 2014, Governor Edmund G. Brown Jr. issued a Proclamation January 17, 2014 declaring a State of Emergency to exist in California due to severe drought conditions; and

WHEREAS, on April 25, 2014, Governor Edmund G. Brown Jr. further issued an Executive Order to strengthen the state's ability to manage water and habitat effectively in drought conditions and called on all Californians to redouble their efforts to conserve water; and

WHEREAS, on April 1, 2015, Governor Edmund G. Brown Jr. further issued an Executive Order to re-affirm the orders and provisions contained in the January 17, 2014 Proclamation, the April 25 Proclamation, and Executive Orders B-26-14 and B-28-14 and mandated further restrictions

and programs for the purpose of achieving a statewide reduction in potable water use through February 28, 2016; and

WHEREAS, on May 5, 2015, The State Water Resource Control Board adopted Resolution 2015-0032, prescribing mandatory 32% conservation for Palmdale Water District from June 1, 2015-February 28, 2016 compared to the same months in 2013; and further affirmed the restrictions and programs specified in Executive Order B-29-15; and

WHEREAS, the District adopted Resolution No. 14-9 on May 14, 2014 urging heightened water conservation by customers in response to drought and the April 25, 2014 Governor's Proclamation; and

WHEREAS, Water Code Section 1058.5 grants the State Water Resources Control Board the authority to adopt emergency regulations in certain drought years in order to: "prevent the waste, unreasonable use, unreasonable method of use, or unreasonable method of diversion, of water, to promote water recycling or water conservation;" and

WHEREAS, on July 15, 2014, the State Water Resources Control Board adopted emergency water conservation regulations prohibiting all individuals from engaging in certain water use practices and would require mandatory conservation-related actions of public water suppliers during the current drought emergency; and

WHEREAS, following the making of findings as required by law, the District has the power and authority to adopt mandatory water conservation measures within its boundaries pursuant to Part 5 of the Irrigation District Law, codified at Division 11 of the California Water Code; and

WHEREAS, the District is required to comply with State law, including regulations adopted by the State Water Resources Control Board (SWRCB), codified at Title 23 of the California Code of Regulations and is authorized pursuant thereto to implement its requirements; and

WHEREAS the District now desires to comply with the SWRCB emergency water conservation regulations and to implement the Stage 3 Water Shortage Emergency Plan contained in the District's 2010 Urban Water Management Plan, including mandatory water rationing which measures shall be implemented.

WHEREAS, *the District's achieved conservation of 29% from June through August 2015 is short of the 32% mandated goal the fines set forth in Section 7 of this resolution shall be revised in order to improve the overall level of compliance with mandatory water restriction found herein.*

NOW, THEREFORE, BE IT RESOLVED, by the Board of Directors of the Palmdale Water District as follows:

Section 1: Findings: The Board of Directors of the District hereby finds and declares as follows:

1) On July 15, 2014, the State Water Resources Control Board issued mandatory Emergency Water Conservation Regulations prohibiting all individuals from engaging in certain

water use practices and requiring the District to implement its mandatory water conservation measures.

2) The State Water Project water available to the District is a critically low (20%) allocation.

3) Continued production of water from the groundwater basin without proportionate recharge of the basin through stream runoff, rainfall, and snow melt could result in irreparable damage to the storage capacity of the basin aquifers and impair the long-term water delivery capability of the District.

4) Voluntary water conservation measures have not resulted in the recommended 25% reduction in consumption.

5) At present, without supplemental supplies, the anticipated water available to the District is insufficient to meet anticipated demands.

6) Should existing drought conditions continue, or should the District lose its water production capacity, there may be insufficient water available for human consumption, sanitation and fire protection.

Section 2: Declaration of Stage 3 Water Shortage Emergency: The Board of Directors of the District, in accordance with the foregoing findings, hereby determines and declares the existence of an emergency condition of water shortage within its service area and further determines and declares that the regulations and restrictions on delivery of water and consumption of water within its service area as hereinafter set forth are necessary, in the sound discretion of the Board of Directors of the District, to conserve the water supply for the greatest public benefit with particular regard to domestic use, sanitation, and fire protection.

Section 3: Authorization to Implement Restrictions on Water Consumption: The Board of Directors of the District hereby authorizes the General Manager of the District to take specific steps to meet water conservation goals, regulations, and restrictions on water consumption as hereinafter set forth.

Section 4: Conservation Goal and Authorized Actions. The conservation goal of the District and the State Water Board is a reduction in water use of thirty-two percent (32%) when compared against usage in 2013, which goal is mandatory through February 28, 2016. The General Manager is authorized to implement Action 1 Paragraphs 1 through 13 of this Resolution to meet said conservation goal.

Action 1. Mandatory Water Conservation Regulations. The General Manager shall take all steps necessary to advise the District's customers of the following mandatory regulations and to enforce them in accordance with the District's existing Waste of Water Policy:

1. There shall be no hose washing of sidewalks, walkways, buildings, walls, patios, driveways, parking areas or other paved surfaces, or

walls, except to eliminate conditions dangerous to public health or safety or when required as surface preparation for the application of architectural coating or painting.

2. Washing of motor vehicles, trailers, boats and other types of equipment shall be done only with a hand-held nozzle for quick rinses, except that washing may be done with reclaimed wastewater or by a commercial car wash using recycled water.

3. No water shall be used to clean, fill or maintain levels in decorative fountains, ponds, lakes or other similar aesthetic structures unless such water is part of a closed recycling system.

4. No restaurant, hotel, cafe, cafeteria or other public place where food is sold, served or offered for sale, shall serve drinking water to any customer unless expressly requested and shall display a notice to that effect.

5. All water users shall repair all leaks from indoor and outdoor plumbing fixtures within one week of discovery.

6. No lawn, landscape, or other turf area shall be watered more often than two (2) days per week nor during the hours between 10:00 a.m. and 6:00 p.m. Water days will be set as follows: Wednesdays and Saturdays only.

7. Irrigation with potable water of ornamental turf on public street medians is prohibited.

8. Irrigation with potable water outside of newly constructed homes and buildings not delivered by drip or microspray is prohibited.

   Exemption:

   a. No watering hour restrictions during the months of November, December, January, February, and March. Watering can occur between the hours of 6:00 a.m. and 6:00 p.m.

9. No water users shall cause or allow the water to run off landscape areas into adjoining streets, sidewalks, or other paved areas due to incorrectly directed or maintained sprinklers or excessive watering. If cited, random acts of vandalism will be considered in any appeal.

10. No water shall be applied to outdoor landscapes during and within 48 hours of measurable rainfall.

11. The owner and manager of every hotel, motel, inn, guest house, bed and breakfast facility, and short-term commercial lodging shall post a notice of such shortage and any necessary compliance measures.

12. Commercial nurseries, golf courses, parks, school yards, and other public open space, and landscaped areas shall be prohibited from watering lawn, landscaping, and other turf areas no more than two (2) days a week (Wednesdays and Saturdays) and between the hours of 6:00 a.m. and 6:00 p.m. except that there shall be no restriction on watering utilizing reclaimed water or where public use requires a modified and approved watering schedule.

    Exemptions:

    a. Athletic field watering can occur between the hours of 6:00 p.m. and 10:00 a.m. the following morning.

    b. No watering hour restrictions during the months of November, December, January, February, and March. Watering can occur between the hours of 6:00 a.m. and 6:00 p.m.

    c. Watering schedules must be adhered to at all times. The District requires advance written notice of any maintenance activities requiring water use between the hours of 6:00 a.m. and 6:00 p.m.

13. The use of water from fire hydrants shall be limited to fire fighting and related activities and other uses of water for municipal purposes shall be limited to activities necessary to maintain the public health, safety, and welfare. Ongoing water system improvement projects are also exempt under this section and may continue to use construction meters in accordance with standard District policy.

Action 2: Mandatory Water Rationing: Upon specific authorization by the Board of Directors, the General Manager shall implement a phased water rationing to protect the water supply of the District and to guarantee adequate supply for domestic use, sanitation, and fire protection as follows:

1. Stage 3: Water Rationing: An over thirty percent (30%) reduction in water deliveries to all District customers.

Action 3: Adoption of Drought Surcharge: Upon specific authorization by the Board of Directors, the General Manager shall implement a phased drought surcharge to cover costs due to lost revenue during mandatory water cutbacks.

1. Stage 1: Drought Surcharge: A 45 cent surcharge on all non-essential usage tiers (Tiers 2-6). This will be effective on water use as of June 1, 2015.

Section 5: Duration of Water Emergency: The regulations, restrictions, and actions set forth herein shall take full force and effect immediately upon authorization by the Board of Directors and shall remain in full force and effect through February 28, 2016 or until otherwise directed by the SWRCB.

Section 6: Appeal: Decisions made by the District under the regulations set forth in this Resolution may be appealed by consumers in accordance with the procedure set forth in the District Rules and Regulations.

Section 7: Violation: A violation of the regulations and restrictions set forth herein will result in progressive warnings, fines, or result in the discontinuance of service to consumers willfully violating the conservation measures set forth herein or such other penalty or restriction as may be allowed by law. The Stage 3 fines under Water Shortage Emergency Plan (2010 UWMP) will be set as follows:

1. *First violation will result in a fine of $50.*
2. *Second violation will result in fine of $250.*
3. *Third violation will result in a fine of $500.*
4. *Fourth violation will result in discontinuance of service.*

Section 8: Severability: If any portion of this Resolution is found to be unconstitutional or invalid, the District hereby declares that it would have enacted the remainder of this Resolution regardless of the absence of any such valid part.

Section 9: Effective Date: This Resolution shall take effect immediately.

BE IT FURTHER RESOLVED, that the Board of Directors finds that the provisions of this Resolution are exempt from the provisions of the California Environmental Quality Act as an action to mitigate emergency conditions and as a rate setting measure pursuant to Public Resources Code §21080(b)(4) and (8).

PASSED AND ADOPTED at a regular meeting of the Board of Directors of Palmdale Water District held on September 9, 2015.

Robert E. Alvarez
Vice President, Board of Directors
Palmdale Water District

Secretary, Board of Directors
Palmdale Water District

APPROVED AS TO FORM:

Aleshire & Wynder, LLP,
District Legal Counsel

PALMDALE WATER DISTRICT
RESOLUTION NO. 15-9

RESOLUTION OF THE BOARD OF DIRECTORS OF PALMDALE WATER DISTRICT DECLARING CONTINUED EMERGENCY WATER CONSERVATION RESTRICTIONS AND REAFFIRMING STATE WATER RESOURCES CONTROL BOARD REGULATIONS FOR THE PURPOSE OF ACHIEVING THE MANDATORY PRESCRIBED 32% REDUCTION IN POTABLE WATER USE

WHEREAS, Palmdale Water District ("District") is a water district empowered to provide water service within District boundaries; and

WHEREAS, due to inadequate snowfall and rainfall, opposition to the development and construction of water supply facilities, and legal restrictions on the flow of State Water Project water to Southern California, California in general, and the Antelope Valley, in particular, is experiencing shortages in water supplies; and

WHEREAS, the State Water Project allocation for 2015 has been established at a critically low 20% and deliveries have, therefore, been drastically curtailed in response to the inadequacy of water supplies; and

WHEREAS, groundwater supplies which provide a supplemental source of water to the District, are limited in nature, being subjected to increased demands, and now subject to legal rulings arising from a groundwater basin adjudication action that further limit the District groundwater supplies; and

WHEREAS, conservation of water by all District consumers that have not already conserved will help relieve the problems caused by the shortage in water supplies; and

WHEREAS, the District has attempted, through its public information program, to advise and alert the consumers to the serious nature of the water supply situation. Customers have made significant progress in water use efficiency from pre-2009 by exceeding the State required 20% reduction by the year 2020 under SBX 7-7, but the District has not experienced any significant reduction in consumer demand compared to 2013; and

WHEREAS, on January 17, 2014, Governor Edmund G. Brown Jr. issued a Proclamation January 17, 2014 declaring a State of Emergency to exist in California due to severe drought conditions; and

WHEREAS, on April 25, 2014, Governor Edmund G. Brown Jr. further issued an Executive Order to strengthen the state's ability to manage water and habitat effectively in drought conditions and called on all Californians to redouble their efforts to conserve water; and

WHEREAS, on April 1, 2015, Governor Edmund G. Brown Jr. further issued an Executive Order to re-affirm the orders and provisions contained in the January 17, 2014 Proclamation, the April 25 Proclamation, and Executive Orders B-26-14 and B-28-14 and mandated further restrictions and programs for the purpose of achieving a statewide reduction in potable water use through February 28, 2016; and

WHEREAS, on May 5, 2015, The State Water Resource Control Board adopted Resolution 2015-0032, prescribing mandatory 32% conservation for Palmdale Water District from June 1, 2015-February 28, 2016 compared to the same months in 2013; and further affirmed the restrictions and programs specified in Executive Order B-29-15; and

WHEREAS, the District adopted Resolution No. 14-9 on May 14, 2014 urging heightened water conservation by customers in response to drought and the April 25, 2014 Governor's Proclamation; and

WHEREAS, Water Code Section 1058.5 grants the State Water Resources Control Board the authority to adopt emergency regulations in certain drought years in order to: "prevent the waste, unreasonable use, unreasonable method of use, or unreasonable method of diversion, of water, to promote water recycling or water conservation;" and

WHEREAS, on July 15, 2014, the State Water Resources Control Board adopted emergency water conservation regulations prohibiting all individuals from engaging in certain water use practices and would require mandatory conservation-related actions of public water suppliers during the current drought emergency; and

WHEREAS, following the making of findings as required by law, the District has the power and authority to adopt mandatory water conservation measures within its boundaries pursuant to Part 5 of the Irrigation District Law, codified at Division 11 of the California Water Code; and

WHEREAS, the District is required to comply with State law, including regulations adopted by the State Water Resources Control Board (SWRCB), codified at Title 23 of the California Code of Regulations and is authorized pursuant thereto to implement its requirements; and

WHEREAS the District now desires to comply with the SWRCB emergency water conservation regulations and to implement the Stage 3 Water Shortage Emergency Plan contained in the District's 2010 Urban Water Management Plan, including mandatory water rationing which measures shall be implemented.

NOW, THEREFORE, BE IT RESOLVED, by the Board of Directors of the Palmdale Water District as follows:

Section 1: Findings: The Board of Directors of the District hereby finds and declares as follows:

1) On July 15, 2014, the State Water Resources Control Board issued mandatory Emergency Water Conservation Regulations prohibiting all individuals from engaging in certain water use practices and requiring the District to implement its mandatory water conservation measures.

2) The State Water Project water available to the District is a critically low (20%) allocation.

3) Continued production of water from the groundwater basin without proportionate recharge of the basin through stream runoff, rainfall, and snow melt could result in irreparable damage to the storage capacity of the basin aquifers and impair the long-term water delivery capability of the District.

4) Voluntary water conservation measures have not resulted in the recommended 25% reduction in consumption.

5) At present, without supplemental supplies, the anticipated water available to the District is insufficient to meet anticipated demands.

6) Should existing drought conditions continue, or should the District lose its water production capacity, there may be insufficient water available for human consumption, sanitation and fire protection.

Section 2: Declaration of Stage 3 Water Shortage Emergency: The Board of Directors of the District, in accordance with the foregoing findings, hereby determines and declares the existence of an emergency condition of water shortage within its service area and further determines and declares that the regulations and restrictions on delivery of water and consumption of water within its service area as hereinafter set forth are necessary, in the sound discretion of the Board of Directors of the District, to conserve the water supply for the greatest public benefit with particular regard to domestic use, sanitation, and fire protection.

Section 3: Authorization to Implement Restrictions on Water Consumption: The Board of Directors of the District hereby authorizes the General Manager of the District to take specific steps to meet water conservation goals, regulations, and restrictions on water consumption as hereinafter set forth.

Section 4: Conservation Goal and Authorized Actions. The conservation goal of the District and the State Water Board is a reduction in water use of thirty-two percent (32%) when compared against usage in 2013, which goal is mandatory through February 28, 2016. The General Manager is authorized to implement Action 1 Paragraphs 1 through 13 of this Resolution to meet said conservation goal.

Action 1. Mandatory Water Conservation Regulations. The General Manager shall take all steps necessary to advise the District's customers of the following mandatory regulations and to enforce them in accordance with the District's existing Waste of Water Policy:

1. There shall be no hose washing of sidewalks, walkways, buildings, walls, patios, driveways, parking areas or other paved surfaces, or walls, except to eliminate conditions dangerous to public health or safety or when required as surface preparation for the application of architectural coating or painting.

2. Washing of motor vehicles, trailers, boats and other types of equipment shall be done only with a hand-held nozzle for quick rinses, except that washing may be done with reclaimed wastewater or by a commercial car wash using recycled water.

3. No water shall be used to clean, fill or maintain levels in decorative fountains, ponds, lakes or other similar aesthetic structures unless such water is part of a closed recycling system.

4. No restaurant, hotel, cafe, cafeteria or other public place where food is sold, served or offered for sale, shall serve drinking water to any customer unless expressly requested and shall display a notice to that effect.

5. All water users shall repair all leaks from indoor and outdoor plumbing fixtures within one week of discovery.

6. No lawn, landscape, or other turf area shall be watered more often than two (2) days per week nor during the hours between 10:00 a.m. and 6:00 p.m. Water days will be set as follows: Wednesdays and Saturdays only.

7. Irrigation with potable water of ornamental turf on public street medians is prohibited.

8. Irrigation with potable water outside of newly constructed homes and buildings not delivered by drip or microspray is prohibited.

Under Stage 3 exemption 6b. is revoked.

Exemptions:

a. No watering hour restrictions during the months of November, December, January, February, and March. Watering can occur between the hours of 6:00 a.m. and 6:00 p.m.

b. ~~The District will allow an exemption from the watering schedule if an ET based controller is installed and operating. *The ET Controller Exemption Form* must be completed and the installation verified by a licensed landscape architect or PWD staff.~~

9. No water users shall cause or allow the water to run off landscape areas into adjoining streets, sidewalks, or other paved areas due to incorrectly directed or maintained sprinklers or excessive watering. If cited, random acts of vandalism will be considered in any appeal.

10. No water shall be applied to outdoor landscapes during and within 48 hours of measurable rainfall.

11. The owner and manager of every hotel, motel, inn, guest house, bed and breakfast facility, and short-term commercial lodging shall post a notice of such shortage and any necessary compliance measures.

12. Commercial nurseries, golf courses, parks, school yards, and other public open space, and landscaped areas shall be prohibited from watering lawn, landscaping, and other turf areas no more than two (2) days a week (Wednesdays and Saturdays) and between the hours of 6:00 a.m. and 6:00 p.m. except that there shall be no restriction on watering utilizing reclaimed water or where public use requires a modified and approved watering schedule.

    Under Stage 3 exemption 6c is revoked.

    Exemptions:

    a. Athletic field watering can occur between the hours of 6:00 p.m. and 10:00 a.m. the following morning.

    b. No watering hour restrictions during the months of November, December, January, February, and March. Watering can occur between the hours of 6:00 a.m. and 6:00 p.m.

    c. ~~The District will allow an exemption from the watering schedule if an ET based controller is installed and operating. *The ET Controller Exemption Form* must be completed and the installation verified by a licensed landscape architect or PWD staff.~~

    d. Watering schedules must be adhered to at all times. The District requires advance written notice of any maintenance activities requiring water use between the hours of 6:00 a.m. and 6:00 p.m.

13. The use of water from fire hydrants shall be limited to fire fighting and related activities and other uses of water for municipal purposes shall be limited to activities necessary to maintain the public health, safety, and welfare. Ongoing water system improvement projects are also exempt

under this section and may continue to use construction meters in accordance with standard District policy.

Action 2: Mandatory Water Rationing: Upon specific authorization by the Board of Directors, the General Manager shall implement a phased water rationing to protect the water supply of the District and to guarantee adequate supply for domestic use, sanitation, and fire protection as follows:

1. Stage 3: Water Rationing: An over thirty percent (30%) reduction in water deliveries to all District customers.

Action 3: Adoption of Drought Surcharge: Upon specific authorization by the Board of Directors, the General Manager shall implement a phased drought surcharge to cover costs due to lost revenue during mandatory water cutbacks.

1. Stage 1: Drought Surcharge: A 45 cent surcharge on all non-essential usage tiers (Tiers 2-6). This will be effective on water use as of June 1, 2015.

Section 5: Duration of Water Emergency: The regulations, restrictions, and actions set forth herein shall take full force and effect immediately upon authorization by the Board of Directors and shall remain in full force and effect through February 28, 2016 or until otherwise directed by the SWRCB.

Section 6: Appeal: Decisions made by the District under the regulations set forth in this Resolution may be appealed by consumers in accordance with the procedure set forth in the District Rules and Regulations.

Section 7: Violation: A violation of the regulations and restrictions set forth herein will result in progressive warnings, fines, or result in the discontinuance of service to consumers willfully violating the conservation measures set forth herein or such other penalty or restriction as may be allowed by law. The Stage 3 fines under Water Shortage Emergency Plan (2010 UWMP) will be set as follows:

1. First violation will result in a documented warning.
2. Second violation will result in fine of $50.
3. Third violation will result in a fine of $500.
4. Fourth violation will result in discontinuance of service with a $1,000 water waste fine to reconnect service.

Section 8: Severability: If any portion of this Resolution is found to be unconstitutional or invalid, the District hereby declares that it would have enacted the remainder of this Resolution regardless of the absence of any such valid part.

Section 9: Effective Date: This Resolution shall take effect immediately.

BE IT FURTHER RESOLVED, that the Board of Directors finds that the provisions of this Resolution are exempt from the provisions of the California Environmental Quality Act as an action to mitigate emergency conditions and as a rate setting measure pursuant to Public Resources Code §21080(b)(4) and (8).

PASSED AND ADOPTED at a regular meeting of the Board of Directors of Palmdale Water District held on May 27, 2015.

President, Board of Directors
Palmdale Water District

Secretary, Board of Directors
Palmdale Water District

APPROVED AS TO FORM:

Aleshire & Wynder, LLP
District Legal Counsel

APPENDIX O

WASTE OF WATER POLICY

Palmdale Water District is engaged in the production, transmission, storage and distribution of water to its Consumers in accordance with California law.

California law prohibits the waste or unreasonable use of water and requires that the District take all appropriate actions to prevent such waste and unreasonable use of this finite resource.

Despite its conservation efforts, including its campaign to encourage conservation by Consumers, the District has been made aware of Consumers activities including (1) over-irrigation, (2) misuse of water in cleaning of paved surfaces, and (3) waste resulting from inefficient and leaking plumbing fixtures, all of which result in runoff or waste of water.

In order to prevent continued waste and unreasonable use of water and to protect its limited available water supply, the District adopts the following policy:

1. Upon notification or observation of waste or misuse of water, the District shall:

   (a) Make a photographic record of such activity;

   (b) Provide notice to the Consumer in writing or by means of a doortag; and

   (c) Log the warning on the Consumer's service record.

2. In the event of a second offense, the District shall:

   (a) Assess a surcharge of $50.00 upon the Consumer for each offense occurring after the warning has been given;

   (b) Give notice to the Consumer in writing that if such waste or misuse continues or occurs again, the Consumer will be subject to disconnection of service.

3. Upon a third offense, the District shall:

   (a) Give written notice to the Consumer that disconnection of the service will occur within five (5) working days of the date of the notice;

   (b) Disconnect the Consumer's service; and

   (c) Charge the Consumer a disconnection charge for waste or misuse of water as set forth in Appendix D, and a turn-on fee as set forth in Appendix D if service is later restored. Service will be restored only when the Consumer has provided evidence satisfactory to the District that waste and unreasonable use of water will no longer occur.

The District recognizes that there may be mitigating or intervening circumstances that bear upon a Consumer's apparent misuse of water. Upon receipt of any notice regarding purported misuse or waste of water, the Consumer shall have five (5) working days within which to file a written request for reconsideration with the General Manager. If the Consumer is not satisfied with the General Manager's decision, the Consumer shall have fifteen (15) days after the General Manager's decision within which to file a written appeal with the Board. The Board shall conduct a hearing on the appeal at the next Board meeting immediately following the appeal. The Board's decision following such hearing shall be final and conclusive.

ADOPTED BY THE BOARD OF DIRECTORS OF PALMDALE WATER DISTRICT AT A REGULAR MEETING HELD JULY 9, 2001.

Appendix G: California Urban Water Conservation Council (CUWCC) BMP Reports

CUWCC BMP Retail Coverage Report 2013

Foundational Best Managemant Practices for Urban Water Efficiency

BMP 1.1 Operation Practices

ON TRACK

7034 Palmdale Water District

1. Conservation Coordinator provided with necessary resources to implement BMPs?

Name: Mike McNutt

Title: PIO/Conservation Director

Email: mmcnutt@palmdalewater.org

2. Water Waste Prevention Documents

WW Document Name	WWP File Name	WW Prevention URL	WW Prevention Ordinance Terms Description
Option A Describe the ordinances or terms of service adopted by your agency to meet the water waste prevention requirements of this BMP.		http://www.palmdalewater.org/conservation/policies/	The PWD has a waste of water policy.
Option B Describe any water waste prevention ordinances or requirements adopted by your local jurisdiction or regulatory agencies within your service area.		http://www.cityofpalmdale.org/Your-City-Hall/City-Codes-and-Ordinances	The City of Palmdale has 1) landscape ordinance 2) native plant ordinance 3) water conservation ordinance 4) and other landscape ordinances
Option C Describe any documentation of support for legislation or regulations that prohibit water waste.			
Option D Describe your agency efforts to cooperate with other entities in the adoption or enforcement of local requirements consistent with this BMP.			
Option E Describe your agency support positions with respect to adoption of legislation or regulations that are consistent with this BMP.			
Option F Describe your agency efforts to support local ordinances that establish permits requirements for water efficient design in new development.			

At Least As effective As No

Exemption No

Comments:

CUWCC BMP Retail Coverage Report 2013

Foundational Best Managemant Practices for Urban Water Efficiency

BMP 1.1 Operation Practices **ON TRACK**

CUWCC BMP Coverage Report 2013

Foundational Best Management Practices For Urban Water Efficiency

BMP 1.2 Water Loss Control **ON TRACK**

7034 Palmdale Water District

Completed Standard Water Audit Using AWWA Software?	Yes
AWWA File provided to CUWCC?	Yes
Copy_of_2013_AWWA_WATER_LOSS_AUDIT_SHEET.xls	
AWWA Water Audit Validity Score?	
Complete Training in AWWA Audit Method	Yes
Complete Training in Component Analysis Process?	Yes
Component Analysis?	Yes
Repaired all leaks and breaks to the extent cost effective?	Yes
Locate and Repar unreported leaks to the extent cost effective?	Yes
Maintain a record keeping system for the repair of reported leaks, including time of report, leak location, type of leaking pipe segment or fitting, and leak running time from report to repair.	Yes

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)
370	816070	1020087.5	2.6	False	476052.16	588

At Least As effective As No

Exemption No

Comments:

CUWCC BMP Coverage Report 2013

Foundational Best Management Practices For Urban Water Efficiency

BMP 1.3 Metering With Commodity

ON TRACK

7034 Palmdale Water District

Numbered Unmetered Accounts	No
Metered Accounts billed by volume of use	Yes
Number of CII Accounts with Mixed Use Meters	61
Conducted a feasibility study to assess merits of a program to provide incentives to switch mixed-use accounts to dedicated landscape meters?	Yes
Feasibility Study provided to CUWCC?	Yes

Date: 1/1/0001

Uploaded file name:

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

At Least As effective As Yes

Commodity is billed in tiers using an average of the lowest billed months over 3 years for Tier 1 and an average for a total of Tier 1 and 2 over the lowest 3 months and the months prior and after to set the base allocation.

Exemption No

Comments:

CUWCC BMP Coverage Report 2013

Foundational Best Management Practices For Urban Water Efficiency

BMP 1.4 Retail Conservation Pricing

On Track

7034 Palmdale Water District

Implementation (Water Rate Structure)

Customer Class	Water Rate Type	Conserving Rate?	(V) Total Revenue Comodity Charges	(M) Total Revenue Fixed Carges
Single-Family	Allocation Based	Yes	8007198.66	9104165.97
Multi-Family	Allocation Based	Yes	940356.87	519880.29
Commercial	Allocation Based	Yes	1815936.18	1114940.24
Industrial	Allocation Based	Yes	621150.14	347797.41
Other	Allocation Based	Yes	50785.48	92448.27
			11435427.33	**11179232.18**

Calculate: V / (V + M) **51 %**

Implementation Option: Use Annual Revenue As Reported

☐ Use 3 years average instead of most recent year

Canadian Water and Wastewater Association

Upload file:

Agency Provide Sewer Service: No

At Least As effective As No

The budget based rate, contains 6 tiers. Tiers 1 and 2 are for indoor and efficient outdoor use. Tiers 3-6 are penalty tiers with increasing costs per unit they are triggered when 101% to greater than 191% of the combined Tier 1 and 2 budget is used

Exemption No

Comments:

N/A

CUWCC BMP Coverage Report 2013

Foundational Best Management Practices For Urban Water Efficiency

BMP 2.1 Public Outreach

ON TRACK

7034 **Palmdale Water District** **Retail**

Does your agency perform Public Outreach programs? Yes

The list of wholesale agencies performing public outreach which can be counted to help the agency comply with the BMP

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? No

Public Outreach Program List	Number
Newsletter articles on conservation	14
Flyers and/or brochures (total copies), bill stuffers, messages printed on bill, information packets	800
Website	8
General water conservation information	4
Email Messages	29
Total	**855**

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

Number Media Contacts	Number
Radio contacts	6
Television contacts	4
Newspaper contacts	4
News releases	4
Total	**18**

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
water news	22500
Supplies	2000
landscape workshops	2500
general media	3000
Total Amount:	**30000**

Public Outreah Additional Programs
Cash for grass program
toilet rebates

CUWCC BMP Coverage Report 2013

Foundational Best Management Practices For Urban Water Efficiency

BMP 2.1 Public Outreach

ON TRACK

Public Outreah Additional Programs
Washing machine rebates
PWD plant sale
Events: Home and garden show, Thursday night on the square

Description of all other Public Outreach programs

Comments:

At Least As effective As No

Exemption No 0

CUWCC BMP Coverage Report 2013

Foundational Best Management Practices For Urban Water Efficiency

BMP 2.2 School Education Programs

ON TRACK

7034 Palmdale Water District **Retail**

Does your agency implement School Education programs? No

The list of wholesale agencies performing public outreach which can be counted to help the agency comply with the BMP

Materials meet state education framework requirements? Yes

PWD uses the CUWCC materials Units 1-5 and project wet materials. We also use materials from the Culver company and make our own materials from CUWCC pages.

Materials distributed to K-6? Yes

Booklets-Where does your water come from? and the Ca. Water Map from Water Education Foundation also CUWCC materials Units 1-5 and project wet materials. We also use materials from the Culver company and make our own materials from CUWCC pages.

Materials distributed to 7-12 students? Yes (Info Only)

Booklets-Where does your water come from? and the Ca. Water Map from Water Education Foundation.

Annual budget for school education program: 5000.00

Description of all other water supplier education programs

School contests, bus tours to PWD's treatment plant and to Littlerock Reservoir, and presentations to schools.

Comments:

At Least As effective As No

Exemption No 0

CUWCC BMP Retail Coverage Report 2013

Foundational Best Managemant Practices for Urban Water Efficiency

BMP 1.1 Operation Practices

ON TRACK

7034 Palmdale Water District

1. Conservation Coordinator provided with necessary resources to implement BMPs?

Name: Mike McNutt

Title: PIO/Conservation Director

Email: mmcnutt@palmdalewater.org

2. Water Waste Prevention Documents

WW Document Name	WWP File Name	WW Prevention URL	WW Prevention Ordinance Terms Description
Option A Describe the ordinances or terms of service adopted by your agency to meet the water waste prevention requirements of this BMP.		http://www.palmdalewater.org/conservation/policies/	The PWD has a waste of water policy.
Option B Describe any water waste prevention ordinances or requirements adopted by your local jurisdiction or regulatory agencies within your service area.		http://www.cityofpalmdale.org/Your-City-Hall/City-Codes-and-Ordinances	The City of Palmdale has 1) landscape ordinance 2) native plant ordinance 3) water conservation ordinance 4) and other landscape ordinances
Option C Describe any documentation of support for legislation or regulations that prohibit water waste.			
Option D Describe your agency efforts to cooperate with other entities in the adoption or enforcement of local requirements consistent with this BMP.			
Option E Describe your agency support positions with respect to adoption of legislation or regulations that are consistent with this BMP.			
Option F Describe your agency efforts to support local ordinances that establish permits requirements for water efficient design in new development.			

At Least As effective As No

Exemption No

Comments:

CUWCC BMP Retail Coverage Report 2013

Foundational Best Managemant Practices for Urban Water Efficiency

BMP 1.1 Operation Practices **ON TRACK**

CUWCC BMP Coverage Report 2013

Foundational Best Management Practices For Urban Water Efficiency

BMP 1.2 Water Loss Control **ON TRACK**

7034 Palmdale Water District

Completed Standard Water Audit Using AWWA Software?	Yes
AWWA File provided to CUWCC?	Yes
Copy_of_2013_AWWA_WATER_LOSS_AUDIT_SHEET.xls	
AWWA Water Audit Validity Score?	
Complete Training in AWWA Audit Method	Yes
Complete Training in Component Analysis Process?	Yes
Component Analysis?	Yes
Repaired all leaks and breaks to the extent cost effective?	Yes
Locate and Repar unreported leaks to the extent cost effective?	Yes
Maintain a record keeping system for the repair of reported leaks, including time of report, leak location, type of leaking pipe segment or fitting, and leak running time from report to repair.	Yes

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)
370	816070	1020087.5	2.6	False	476052.16	588

At Least As effective As No

Exemption No

Comments:

CUWCC BMP Coverage Report 2013

Foundational Best Management Practices For Urban Water Efficiency

BMP 1.3 Metering With Commodity

ON TRACK

7034 Palmdale Water District

Numbered Unmetered Accounts	No
Metered Accounts billed by volume of use	Yes
Number of CII Accounts with Mixed Use Meters	61
Conducted a feasibility study to assess merits of a program to provide incentives to switch mixed-use accounts to dedicated landscape meters?	Yes
Feasibility Study provided to CUWCC?	Yes

Date: 1/1/0001

Uploaded file name:

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

At Least As effective As Yes

Commodity is billed in tiers using an average of the lowest billed months over 3 years for Tier 1 and an average for a total of Tier 1 and 2 over the lowest 3 months and the months prior and after to set the base allocation.

Exemption No

Comments:

CUWCC BMP Coverage Report 2013

Foundational Best Management Practices For Urban Water Efficiency

BMP 1.4 Retail Conservation Pricing

On Track

7034 Palmdale Water District

Implementation (Water Rate Structure)

Customer Class	Water Rate Type	Conserving Rate?	(V) Total Revenue Comodity Charges	(M) Total Revenue Fixed Carges
Single-Family	Allocation Based	Yes	8007198.66	9104165.97
Multi-Family	Allocation Based	Yes	940356.87	519880.29
Commercial	Allocation Based	Yes	1815936.18	1114940.24
Industrial	Allocation Based	Yes	621150.14	347797.41
Other	Allocation Based	Yes	50785.48	92448.27
			11435427.33	**11179232.18**

Calculate: V / (V + M) **51 %**

Implementation Option: Use Annual Revenue As Reported

☐ Use 3 years average instead of most recent year

Canadian Water and Wastewater Association

Upload file:

Agency Provide Sewer Service: No

At Least As effective As No

The budget based rate, contains 6 tiers. Tiers 1 and 2 are for indoor and efficient outdoor use. Tiers 3-6 are penalty tiers with increasing costs per unit they are triggered when 101% to greater than 191% of the combined Tier 1 and 2 budget is used

Exemption No

Comments:

N/A

CUWCC BMP Coverage Report 2013

Foundational Best Management Practices For Urban Water Efficiency

BMP 2.1 Public Outreach

ON TRACK

7034 **Palmdale Water District** **Retail**

Does your agency perform Public Outreach programs? Yes

The list of wholesale agencies performing public outreach which can be counted to help the agency comply with the BMP

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? No

Public Outreach Program List	Number
Newsletter articles on conservation	14
Flyers and/or brochures (total copies), bill stuffers, messages printed on bill, information packets	800
Website	8
General water conservation information	4
Email Messages	29
Total	**855**

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

Number Media Contacts	Number
Radio contacts	6
Television contacts	4
Newspaper contacts	4
News releases	4
Total	**18**

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
water news	22500
Supplies	2000
landscape workshops	2500
general media	3000
Total Amount:	**30000**

Public Outreah Additional Programs
Cash for grass program
toilet rebates

CUWCC BMP Coverage Report 2013

Foundational Best Management Practices For Urban Water Efficiency

BMP 2.1 Public Outreach

ON TRACK

Public Outreah Additional Programs
Washing machine rebates
PWD plant sale
Events: Home and garden show, Thursday night on the square

Description of all other Public Outreach programs

Comments:

At Least As effective As No

Exemption No 0

CUWCC BMP Coverage Report 2013

Foundational Best Management Practices For Urban Water Efficiency

BMP 2.2 School Education Programs

ON TRACK

7034 Palmdale Water District **Retail**

Does your agency implement School Education programs? No

The list of wholesale agencies performing public outreach which can be counted to help the agency comply with the BMP

Materials meet state education framework requirements? Yes

PWD uses the CUWCC materials Units 1-5 and project wet materials. We also use materials from the Culver company and make our own materials from CUWCC pages.

Materials distributed to K-6? Yes

Booklets-Where does your water come from? and the Ca. Water Map from Water Education Foundation also CUWCC materials Units 1-5 and project wet materials. We also use materials from the Culver company and make our own materials from CUWCC pages.

Materials distributed to 7-12 students? Yes (Info Only)

Booklets-Where does your water come from? and the Ca. Water Map from Water Education Foundation.

Annual budget for school education program: 5000.00

Description of all other water supplier education programs

School contests, bus tours to PWD's treatment plant and to Littlerock Reservoir, and presentations to schools.

Comments:

At Least As effective As No

Exemption No 0

CUWCC BMP Retail Coverage Report **2014**

Foundational Best Manegemant Practices for Urban Water Efficiency

Foundational BMPs

BMP 1.1 Operation Practices

7034 Palmdale Water District

1. Conservation Coordinator provided with necessary resources to implement BMPs?	Name:	Mike McNutt
	Title:	PIO/Conservation Director
	Email:	mmcnutt@palmdalewater.org

On Track

2. Water Waste Prevention Documents

WW Document Name	WWP File Name	WW Prevention URL	WW Prevention Ordinance Terms Description
Option A Describe the ordinances or terms of service adopted by your agency to meet the water waste prevention requirements of this BMP.		http://www.palmdalewater.org/conservation/policies/	The PWD has a waste of water policy.
Option B Describe any water waste prevention ordinances or requirements adopted by your local jurisdiction or regulatory agencies within your service area.		http://www.cityofpalmdale.org/Your-City-Hall/City-Codes-and-Ordinances	The City of Palmdale has 1) landscape ordinance 2) native plant ordinance 3) water conservation ordinance 4) and other landscape ordinances
Option C Describe any documentation of support for legislation or regulations that prohibit water waste.			
Option D Describe your agency efforts to cooperate with other entities in the adoption or enforcement of local requirements consistent with this BMP.			
Option E Describe your agency support positions with respect to adoption of legislation or regulations that are consistent with this BMP.			
Option F Describe your agency efforts to support local ordinances that establish permits requirements for water efficient design in new development.			

On Track

BMP1.1 Operation Practices - Retail Only 2014

Agency name:	Palmdale Water District	Reporting unit number:	
Reporting unit name (District name)	Palmdale Water District	7034	

Conservation Coordinator: **Yes**

Contact Information

First Name:	Mike
Last Name:	McNutt
Title:	PIO/Conservation Director
Phone:	661-456-1041
Email:	mmcnutt@palmdalewater.org

Water Waste Prevention

Option A Describe the ordinances or terms of service adopted by your agency to meet the water waste prevention requirements of this BMP.

File Name:	
URL:	http://www.palmdalewater.org/conservation/policies/

Description:

The PWD has a waste of water policy.

Comments:

BMP1.1 Operation Practices - Retail Only 2014

Agency name:	Palmdale Water District	Reporting unit number:	
Reporting unit name (District name)	Palmdale Water District	7034	

Conservation Coordinator: **Yes**

Contact Information

First Name:	Mike
Last Name:	McNutt
Title:	PIO/Conservation Director
Phone:	661-456-1041
Email:	mmcnutt@palmdalewater.org

Water Waste Prevention

Option B Describe any water waste prevention ordinances or requirements adopted by your local jurisdiction or regulatory agencies within your service area.

File Name:	
URL:	http://www.cityofpalmdale.org/Your-City-Hall/City-Codes-and-Ordinances

Description:

The City of Palmdale has
1) landscape ordinance
2) native plant ordinance
3) water conservation ordinance
4) and other landscape ordinances

Comments:

BMP1.1 Operation Practices - Retail Only 2014

Agency name:	Palmdale Water District	Reporting unit number:	
Reporting unit name (District name)	Palmdale Water District	7034	

Conservation Coordinator: **Yes**

Contact Information

First Name:	Mike
Last Name:	McNutt
Title:	PIO/Conservation Director
Phone:	661-456-1041
Email:	mmcnutt@palmdalewater.org

Water Waste Prevention

Option C Describe any documentation of support for legislation or regulations that prohibit water waste.

File Name:	
URL:	

Description:

Comments:

BMP1.1 Operation Practices - Retail Only 2014

Agency name:	Palmdale Water District	Reporting unit number:	
Reporting unit name (District name)	Palmdale Water District	7034	

Conservation Coordinator: **Yes**

Contact Information

First Name:	Mike
Last Name:	McNutt
Title:	PIO/Conservation Director
Phone:	661-456-1041
Email:	mmcnutt@palmdalewater.org

Water Waste Prevention

Option D Describe your agency efforts to cooperate with other entities in the adoption or enforcement of local requirements consistent with this BMP.

File Name:	
URL:	

Description:

Comments:

BMP1.1 Operation Practices - Retail Only 2014

Agency name:	Palmdale Water District	Reporting unit number:	
Reporting unit name (District name)	Palmdale Water District	7034	

Conservation Coordinator: **Yes**

Contact Information

First Name:	Mike
Last Name:	McNutt
Title:	PIO/Conservation Director
Phone:	661-456-1041
Email:	mmcnutt@palmdalewater.org

Water Waste Prevention

Option E Describe your agency support positions with respect to adoption of legislation or regulations that are consistent with this BMP.

File Name:

URL:

Description:

Comments:

BMP1.1 Operation Practices - Retail Only 2014

Agency name:	Palmdale Water District	Reporting unit number:	
Reporting unit name (District name)	Palmdale Water District	7034	

Conservation Coordinator: **Yes**

Contact Information

First Name:	Mike
Last Name:	McNutt
Title:	PIO/Conservation Director
Phone:	661-456-1041
Email:	mmcnutt@palmdalewater.org

Water Waste Prevention

Option F Describe your agency efforts to support local ordinances that establish permits requirements for water efficient design in new development.

File Name:	
URL:	

Description:

Comments:

CUWCC BMP Coverage Report 2014

Foundational Best Management Practices For Urban Water Efficiency

Foundational BMPs

BMP 1.2 Water Loss Control

7034 Palmdale Water District

Completed Standard Water Audit Using AWWA Software?	**Yes**	**On Track**
AWWA File provided to CUWCC?	**No**	

Palmdale Water District BMP1.2 FY14

AWWA Water Audit Validity Score?

Complete Training in AWWA Audit Method

Complete Training in Component Analysis Process?

CompComponent Analysis?

Repaired all leaks and breaks to the extent cost effective?

Locate and Repar unreported leaks to the extent cost effective?

Maintain a record keeping system for the repair of reported leaks, including time of report, leak location, type of leaking pipe segment or fitting, and leak running time from report to repair.

Provided 7 Types of Water Loss Control Info

Leaks Repars	Value Real Losses	Value Apparent Losses	Miles Surveyed	Press Reduction	Cost Of Interventions	Water Saved (AF)
281	849981	1062476.25	4.4		514891.63	626

On Track

At Least As Effective As

In lieau of an active leak detection program, the City has opted to replace 1% of distribution system lines each year. Lines are replaced based on age and other asset management factors. Attached documentation shows the reduction in main breaks due to 7034 Palmdale Water District BMP 1.2 Results from Main Replacement Program.

We encourage them every year to join.

BMP 1.2 Water Loss Control

2014

Agency name: Palmdale Water District

Reporting unit number: 7034

Reporting unit name (District name): Palmdale Water District

AWWA Water Audit

Agency to complete a Water Audit & Balance Using The AWWA Software: Yes

Water Audit Validity Score from AWWA spreadsheet:

Email to office@cuwcc.org - Worksheets (AWWA Water Audit). Enter the name of the file below:

Agency Completed Training In The AWWA Water Audit Method: Yes

Agency Completed Training In The Component Analysis Process: Yes

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

Component Analysis Completed/Updated Date: 8/14/2013 12:00:00 AM

Water Loss Performance

Agency Repaired All Reported Leaks & Breaks To The Extent Cost Effective: No

Recording Keeping Requirements:

- Date/Time Leak Reported
- Type of Leaking Pipe Segment or Fitting
- Leak Volume Estimate
- Leak Location
- Leak Running Time From Report to Repair
- Cost of Repair

Agency Located and Repaired Unreported Leaks to the Extent Cost Effective: Yes

Type of Program Activities Used to Detect Unreported Leaks

PWD uses it GIS system to record all pipes and repair dates on the distribution system.
PWD's map of the system shows all pipes in the system and dates when pipes have been repaired. The District can visualize unreported leaks and old pipe areas.

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

Does your agency keeps records of each component analysis performed, and incorporates results into future annual standard water balances? Yes

Annual Summary Information

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

Total Leak Repaired	Economic Value Of Real Loss	Economic Value Of Apparent Loss	Miles Of System Surveyed For Leaks	Pressure Reduction Undertaken For Loss Reduction	Cost Of Interventions	Water Saved (AF/Year)
281	849981	1062476.25	4.4		514891.63	626

Comments:

CUWCC BMP Coverage Report 2014

Foundational Best Manegemant Practices for Urban Water Efficiency

Foundational BMPs

BMP 1.3 Metering With Commodity

7034	Palmdale Water District

Numbered Unmetered Accounts	No	**On Track**
Metered Accounts billed by volume of use	Yes	**On Track**
Number of CII Accounts with Mixed Use Meters	61	
Conducted a feasibility study to assess merits of a program to provide incentives to switch mixed-use accounts to dedicated landscape meters?	No	**Not On Track**
Feasibility Study provided to CUWCC?	No	**Not On Track**
Completed a written plan, policy or program to test, repair and replace meters	Yes	**On Track**

At Least As Effective As **Yes**

BMP 1.3 Metering With Commodity

2014

Agency name:	Palmdale Water District	Reporting unit number:	
Reporting unit name (District name)	Palmdale Water District		7034

Implementation

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

Meters Matrix

Error: Subreport could not be shown.

Number of CII Accounts with Mixed-use Meters	61	Number of CII Accounts with Mixed-use Meters Retrofitted with Dedicated Irrigation Meters during Reporting Period	

Feasibility Study

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

If YES, please fill in the following information:

A. When was the Feasibility Study conducted	1/1/0001 12:00:00 AM	B. Describe,	
		upload or provide an electronic link to the Feasibility Study Upload File	

Comments:

CUWCC BMP Coverage Report 2014

Foundational Best Manegemant Practices for Urban Water Efficiency

Foundational BMPs

BMP 1.4 Retail Consrvation Pricing

7034 Palmdale Water District

Implementation (Water Rate Structure)

Customer Class	Water Rate Type	Conserving Rate?
Single-Family	Allocation Based	Yes
Multi-Family	Allocation Based	Yes
Commercial	Allocation Based	Yes
Dedicated Irrigation	Allocation Based	Yes
Other	Allocation Based	Yes

On Track

	Customer Class	Water Rate Type	(V) Total Revenue Comodity Charges	(M) Total Revenue Fixed Carges
	Single-Family	Allocation Based	7197786.28	9300427.19
	Multi-Family	Allocation Based	803141.84	533347.19
	Commercial	Allocation Based	1673512.65	1157371.23
	Dedicated Irrigation	Allocation Based	597730.39	355731.23
	Other	Allocation Based	51687.47	107489.46
			10323858.63	**11454366.3**

Calculate: V / (V + M) **47 %**

Implementation Option: Use Annual Revenue As Reported

Agency Provide Sewer Service: No

At Least As Effective As **Yes**

In order to stabilize revenue, the PWD has implemented a rate structure that focuses on splitting tiers 1 and 2 into two tiers. Tier 1 = Essential usage, while Tier 2 = Outdoor Usage.Tiers 3-6 escalate in price. ResolutionNo.14-16WaterRates.pdf

BMP 1.4 Retail Conservation Pricing

2014

Agency name: Palmdale Water District

Reporting unit number: 7034

Reporting unit name (District name): Palmdale Water District

Implementation (Water Rate Structure)

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

Water Rate Name	Customer Class Name	Total Revenue Commodity Charges	Total Revenue Customer Meter/Service (Fixed Charges)	
Allocation Based	Single-Family	7197786.28	9300427.19	
Allocation Based	Multi-Family	803141.84	533347.19	
Allocation Based	Commercial	1673512.65	1157371.23	
Allocation Based	Dedicated Irrigation	597730.39	355731.23	
Allocation Based	Other	51687.47	107489.46	

Implementation (Conservation Pricing Option)

☐ Use Annual Revenue As Reported

☐ Use CWWA Rate Design Model

☐ Use 3 years average instead of most recent year

Retail Waste Water (Sewer) Rate Structure by Customer Class

Agency Provide Sewer Service: No

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

Comments:

CUWCC BMP Coverage Report 2014

Foundational Best Manegemant Practices for Urban Water Efficiency

Foundational BMPs

BMP 2.1 Public Outreach

7034 Palmdale Water District Retail Only

Does a wholesale Agency implement Public Outreach Programs? Yes

List of wholesale Agencies

	Public Outreach Program List	Number
	Newsletter articles on conservation	6
	Flyers and/or brochures (total copies), bill stuffers, messages printed on bill, information packets	800
	Landscape water conservation media campaigns	1
	General water conservation information	4
	Email Messages	32
	Total	**843**
		On Track

	Number Media Contacts	Number
	Articles or stories resulting from outreach	4
	News releases	15
	Television contacts	4
	Newspaper contacts	4
	Radio contacts	79
	Total	**106**
		On Track

An actively maintained website that is updated regularly (minimum = 4 times per year, i.e., at least quarterly) Yes

	Annual Budget Category	Annual Budget Amount
	Supplies	5000
	Public Relations - Education Programs	5000
	Public Relations - General Media (Public Outreach)	3000
	Public Relations - Contests	1000
	Public Relations - Landscape Workshop/Training	1000
	Public Relations - General Media	5000
	Total Amount:	**20000**
		On Track

Description of all other Public Outreach programs

CUWCC BMP Coverage Report 2014

Foundational Best Manegemant Practices for Urban Water Efficiency

Foundational BMPs

BMP 2.1 Public Outreach

All press releases, events, and drought updates were posted to the website either on the front page or within the conservation page. Also, the entire website was overhauled and updated in 2014.

On Track

Public Outreah Additional Programs
Cash for Grass
Toilet Rebates
Washing Machine Rebates
Conservation Expo

At Least As Effective As **No**

BMP 2.1 Public Outreach

2014

Agency name: Palmdale Water District | Reporting unit # 7034

Reporting unit name (District name): Palmdale Water District / Retail Only

Does a wholesale Agency implement Public Outreach Programs? Yes

List of wholesale Agencies — Please provide the name of Agency if not CUWCC Group1 members

Is your agency performing public outreach?

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

Did at least one contact take place duringeach quarter of the reporting year? No

Public Information Programs List

Number of Public Contacts	Public Information Programs Name	
6	Newsletter articles on conservation	
800	Flyers and/or brochures (total copies), bill stuffers, messages printed on bill, information packets	
1	Landscape water conservation media campaigns	
4	General water conservation information	
32	Email Messages	

Contact with the Media

Does a wholesale Agency implement Public Outreach Programs? Yes

List of wholesale Agencies — Please provide the name of Agency if not CUWCC Group1 members

OR Retail Agency (Contacts with the Media)

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

Media Contacts List

Number of Media Contacts	Public Outreach Media Contact Name List	
4	Articles or stories resulting from outreach	
15	News releases	
4	Television contacts	
4	Newspaper contacts	
79	Radio contacts	

BMP 2.1 Public Outreach

2014

Does a wholesale Agency implement Public Outreach Programs? No

List of wholesale Agencies — Please provide the name of Agency if not CUWCC Group1 members

Is Your Agency Performing Website Updates?

Enter your agency's URL (website address):	www.palmdalewater.org
Describe a minimum of four water conservationrelated updates to your agency's website thattook place during the year:	All press releases, events, and drought updates were posted to the website either on the front page or within the conservation page. Also, the entire website was overhauled and updated in 2014.

Did at least one Website Update take place duringeach quarter of the reporting year? Yes

Public Outreach Annual Budget

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

Annual Budget Category	Annual Budget Amount	Personal Cost Included?	Comments	
Supplies	5000			
Public Relations - Education Programs	5000			
Public Relations - General Media (Public Outreach)	3000			
Public Relations - Contests	1000			
Public Relations - Landscape Workshop/Training	1000			
Public Relations - General Media	5000			

Public Outreach Expenses

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

Public Outreach Expense Category	Expense Amount	Personal Cost Included?	
Supplies	7709.69		
Education Programs	412.5		

BMP 2.1 Public Outreach

2014

Public Outreach	4418		
Contests	0		
Workshop	71.42		
General Media	787.39		

Additional Public Information Program

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

Were there additional Public Outreach efforts? Yes

Public Outreach Additional Information

Public Information Additional Programs	Importance	
Cash for Grass	1	
Toilet Rebates	2	
Washing Machine Rebates	3	
Conservation Expo	4	

Social Marketing Programs

Branding

Does your agency have a water conservation"brand," "theme" or mascot? Yes

Describe the brand, theme or mascot. 2014 was a year of change. Aquadog was used sparingly; for schools and parades. A more "current" professional them and brand was beginning to be implemented with a tag line of, Less is More... Save for Our Future.

Market Research

Have you sponsored or participated inmarket research to refine your message? No

Market Research Topic

Brand Message

BMP 2.1 Public Outreach

2014

Brand Mission Statement

Community Committees

Do you have a community conservationcommittee? No

Enter the names of the community committees:

Training

Social Marketing Expenditures

Public Outreach Social Marketing Expenses

Partnering Programs - Partners

	Name	**Type of Program**
☐	CLCA?	
☐	Green Building Programs?	
☐	Master Gardeners?	
☐	Cooperative Extension?	
☐	Local Colleges?	
☐	Other	

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

Partnering Programs - Newsletters

Number of newsletters per year

Number of customers per year

Partnering with Other Utilities

Describe other utilities your agency partners with, including electrical utilities

Conservation Gardens

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

Landscape contests or awards

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

Additional Programs supported by Agency but not mentioned above:

BMP 2.1 Public Outreach

2014

Comments

CUWCC BMP Coverage Report 2014

Foundational Best Manegemant Practices for Urban Water Efficiency

Foundational BMPs

BMP 2.2 School Education Programs

7034 Palmdale Water District — Retail Only

Does a wholesale Agency implement School Education Programs? Yes

List of wholesale Agencies

Materials meet state education framework requirements and are grade-level appropriate? Yes

Curriculum materials developed and/or provided by Agency:

PWD uses the CUWCC materials Units 1-5 and project wet materials. We also use materials from the Culver company and make our own materials from CUWCC pages.

Materials Distributed to K-6? Yes

Describe K-6 Materials

Booklets-Where does your water come from? and the Ca. Water Map from Water Education Foundation also CUWCC materials Units 1-5 and project wet materials. We also use materials from the Culver company and make our own materials from CUWCC pages.

Materials distributed to 7-12 students? Yes (Info Only)

Annual budget for school education program: 5000.00

Description of all other water supplier education programs

PWD uses the CUWCC materials Units 1-5 and project wet materials. We also use materials from the Culver company and make our own materials from CUWCC pages. Booklets-Where does your water come from? and the Ca. Water Map from Water Education Foundation also CUWCC materials Units 1-5 and project wet materials. We also use materials from the Culver company and make our own materials from CUWCC pages. School contests, bus tours to PWD's treatment plant and to Littlerock Reservoir, and presentations to schools.

On Track

At Least As Effective As **No**

WMP 2.2 School Education Programs

2014

School Education Programs

7034 Palmdale Water District

Retail Only

Does a wholesale Agency implement School Education Programs? Yes

List of wholesale Agencies

Please provide the name of Agency if not FORTECH Group1 members

V	Materials meet state education framework requirements?	Description	PWD uses the CUWCC materials Units 1-5 and project wet materials. We also use materials from the Culver company and make our own materials from CUWCC pages.
V	Materials distributed to K-6 Students?	Description	Booklets-Where does your water come from? and the Ca. Water Map from Water Education Foundation also CUWCC materials Units 1-5 and project wet materials. We also use materials from the Culver company and make our own materials from CUWCC pages.
	Number of students reached		
V	Materials distributed to 7-12 Students? (optional)	Description	Booklets-Where does your water come from? and the Ca. Water Map from Water Education Foundation.

Annual budget for school education program: 5000.00

Description of all other water supplier educationprograms: School contests, bus tours to PWD's treatment plant and to Littlerock Reservoir, and presentations to schools.

School Programs Activities

Classroom Presentation:

Number of presentation: 17 Number of attendees: 350

Describe the topics covered in your classroom presentations: water conservation, water treatment, water distribution

Large group assemblies:

Number of presentation: Number of attendees:

Children's water festivals or other events:

Number of presentation: Number of attendees:

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

Number of presentation: Number of attendees:

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

Description: Number distributed:

Staffing children's booths at events & festivals:

Number of booths: Number of attendees:

Water conservation contests such as poster and photo:

Description: Number of participants:

WMP 2.2 School Education Programs

2014

Offer monetary awards/funding or scholarships to students:

Number offered		Total funding	

Teacher training workshops:

Number of presentation		Number of attendees	

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

Number of tours or fieldtrips	2	Number of participants	75

College internships in water conservation offered:

Number of internship		Total funding	

Career Fairs / Workshops:

Number of presentation		Number of attendees	

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

Description	Number of events	Number of participants

Comments

CUWCC BMP Retail Coverage Report 2014

Foundational Best Managemant Practices for Urban Water Efficiency

BMP 1.1 Operation Practices

ON TRACK

7034 Palmdale Water District

1. Conservation Coordinator provided with necessary resources to implement BMPs?

Name: Mike McNutt

Title: PIO/Conservation Director

Email: mmcnutt@palmdalewater.org

2. Water Waste Prevention Documents

WW Document Name	WWP File Name	WW Prevention URL	WW Prevention Ordinance Terms Description
Option A Describe the ordinances or terms of service adopted by your agency to meet the water waste prevention requirements of this BMP.		http://www.palmdalewater.org/conservation/policies/	The PWD has a waste of water policy.
Option B Describe any water waste prevention ordinances or requirements adopted by your local jurisdiction or regulatory agencies within your service area.		http://www.cityofpalmdale.org/Your-City-Hall/City-Codes-and-Ordinances	The City of Palmdale has 1) landscape ordinance 2) native plant ordinance 3) water conservation ordinance 4) and other landscape ordinances
Option C Describe any documentation of support for legislation or regulations that prohibit water waste.			
Option D Describe your agency efforts to cooperate with other entities in the adoption or enforcement of local requirements consistent with this BMP.			
Option E Describe your agency support positions with respect to adoption of legislation or regulations that are consistent with this BMP.			
Option F Describe your agency efforts to support local ordinances that establish permits requirements for water efficient design in new development.			

At Least As effective As No

Exemption No

Comments:

CUWCC BMP Retail Coverage Report 2014

Foundational Best Managemant Practices for Urban Water Efficiency

BMP 1.1 Operation Practices **ON TRACK**

CUWCC BMP Coverage Report 2014

Foundational Best Management Practices For Urban Water Efficiency

BMP 1.2 Water Loss Control **ON TRACK**

7034 Palmdale Water District

Completed Standard Water Audit Using AWWA Software?	Yes
AWWA File provided to CUWCC?	Yes
2014 AWWA WATER LOSS AUDIT SHEET.xls	
AWWA Water Audit Validity Score?	
Complete Training in AWWA Audit Method	Yes
Complete Training in Component Analysis Process?	Yes
Component Analysis?	Yes
Repaired all leaks and breaks to the extent cost effective?	Yes
Locate and Repar unreported leaks to the extent cost effective?	Yes
Maintain a record keeping system for the repair of reported leaks, including time of report, leak location, type of leaking pipe segment or fitting, and leak running time from report to repair.	Yes

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)
281	849981	1062476.25	4.4	False	514891.63	626

At Least As effective As No

Exemption No

Comments:

CUWCC BMP Coverage Report 2014

Foundational Best Management Practices For Urban Water Efficiency

BMP 1.3 Metering With Commodity

ON TRACK

7034 Palmdale Water District

Numbered Unmetered Accounts	No
Metered Accounts billed by volume of use	Yes
Number of CII Accounts with Mixed Use Meters	61
Conducted a feasibility study to assess merits of a program to provide incentives to switch mixed-use accounts to dedicated landscape meters?	Yes
Feasibility Study provided to CUWCC?	Yes

Date: 1/1/0001

Uploaded file name:

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

At Least As effective As Yes

Commodity is billed in tiers using an average of the lowest billed months over 3 years for Tier 1 and an average for a total of Tier 1 and 2 over the lowest 3 months and the months prior and after to set the base allocation.

Exemption No

Comments:

ON TRACK

CUWCC BMP Coverage Report 2014

Foundational Best Management Practices For Urban Water Efficiency

BMP 1.4 Retail Conservation Pricing

7034 Palmdale Water District

Implementation (Water Rate Structure)

Customer Class	Water Rate Type	Conserving Rate?	(V) Total Revenue Comodity Charges	(M) Total Revenue Fixed Carges
Single-Family	Allocation Based	Yes	7197786.28	9300427.19
Multi-Family	Allocation Based	Yes	803141.84	533347.19
Commercial	Allocation Based	Yes	1673512.65	1157371.23
Dedicated Irrigation	Allocation Based	Yes	597730.39	355731.23
Other	Allocation Based	Yes	51687.47	107489.46
			10323858.63	**11454366.3**

Calculate: V / (V + M) **47 %**

Implementation Option: Use Canadian Water Wastewater Association Rate Design Model

☐ Use 3 years average instead of most recent year

Canadian Water and Wastewater Association

Upload file:

Agency Provide Sewer Service: No

At Least As effective As Yes

The budget based rate has 6 tiers. Tiers 1 & 2 are for indoor and efficient outdoor use. Tiers 3-6 are penalty tiers with increasing costs per unit. They are triggered when 101% to greater than 191% of the combined tier 1 and 2 budget is used.

Exemption No

Comments:

CUWCC BMP Coverage Report 2014

Foundational Best Management Practices For Urban Water Efficiency

BMP 2.1 Public Outreach

ON TRACK

7034 **Palmdale Water District** **Retail**

Does your agency perform Public Outreach programs? Yes

The list of wholesale agencies performing public outreach which can be counted to help the agency comply with the BMP

Antelope Valley Eastern Kern Water Agency, Patti Rose, prose@avek.org

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? No

Public Outreach Program List	Number
Newsletter articles on conservation	6
Flyers and/or brochures (total copies), bill stuffers, messages printed on bill, information packets	800
Landscape water conservation media campaigns	1
General water conservation information	4
Email Messages	32
Total	**843**

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

Number Media Contacts	Number
Articles or stories resulting from outreach	4
News releases	15
Television contacts	4
Newspaper contacts	4
Radio contacts	79
Total	**106**

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
Supplies	5000
Public Relations - Education Programs	5000
Public Relations - General Media (Public Outreach)	3000
Public Relations - Contests	1000
Public Relations - Landscape Workshop/Training	1000
Public Relations - General Media	5000
Total Amount:	**20000**

CUWCC BMP Coverage Report 2014

Foundational Best Management Practices For Urban Water Efficiency

BMP 2.1 Public Outreach

ON TRACK

Public Outreah Additional Programs
Cash for Grass
Toilet Rebates
Washing Machine Rebates
Conservation Expo

Description of all other Public Outreach programs

Comments:

At Least As effective As	No	
Exemption	No	0

CUWCC BMP Coverage Report 2014

Foundational Best Management Practices For Urban Water Efficiency

BMP 2.2 School Education Programs

ON TRACK

7034 Palmdale Water District **Retail**

Does your agency implement School Education programs? Yes

The list of wholesale agencies performing public outreach which can be counted to help the agency comply with the BMP

Antelope Valley Eastern Kern Water Agency, Patti Rose, prose@avek.org

Materials meet state education framework requirements? Yes

PWD uses the CUWCC materials Units 1-5 and project wet materials. We also use materials from the Culver company and make our own materials from CUWCC pages.

Materials distributed to K-6? Yes

Booklets-Where does your water come from? and the Ca. Water Map from Water Education Foundation also CUWCC materials Units 1-5 and project wet materials. We also use materials from the Culver company and make our own materials from CUWCC pages.

Materials distributed to 7-12 students? Yes (Info Only)

Booklets-Where does your water come from? and the Ca. Water Map from Water Education Foundation.

Annual budget for school education program: 5000.00

Description of all other water supplier education programs

School contests, bus tours to PWD's treatment plant and to Littlerock Reservoir, and presentations to schools.

Comments:

At Least As effective As No

Exemption No 0

CUWCC BMP Coverage Report 2014

7034 Palmdale Water District

Baseline GPCD: 228.97

GPCD in 2014 153.85

GPCD Target for 2018: 187.80

Biennial GPCD Compliance Table

ON TRACK

		Target		Highest Acceptable Bound	
Year	Report	% Base	GPCD	% Base	GPCD
2010	1	96.4%	**220.70**	100%	**229.00**
2012	2	92.8%	**212.50**	96.4%	**220.70**
2014	3	89.2%	**204.20**	92.8%	**212.50**
2016	4	85.6%	**196.00**	89.2%	**204.20**
2018	5	82.0%	**187.80**	82.0%	**187.80**

Appendix H: Climate Change Vulnerability Assessment



Appendix H: Climate Change Vulnerability Question Worksheet

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Vulnerability	Y/N	Justification	Vulnerability Issue	Comments
Water Demand				
Are there major industries that require cooling/process water in your planning region?	Y	Thermal solar power generation, EAFB (not significant), Palmdale Power, landfills, recycling plants	Industrial demand would increase	• Renewables
Are crops grown in your region climate-sensitive? Would shifts in daily heat patterns, such as how long heat lingers before night-time cooling, be prohibitive for some crops?	Y	Major crops: Ornamental trees, turf, alfalfa, nuts, carrots	Crop demand would increase	• Maintain some crops
Do groundwater supplies in your region lack resiliency after drought events?	Y	Groundwater levels are a long-standing issue	Lack of groundwater storage to buffer drought	• Issue is already a major concern. I see the issue increasing exponentially. • Overpumping issues/concerns • Need increased storage to meet needs • Groundwater recharge is slow and AV basin already overdrawn so capacity is reduced
Are water use curtailment measures effective in your region?	N	Not yet saturated	Limited ability to conserve further	
Does water use vary by more than 50% seasonally in parts of your region?	Y	Higher demand in summer: Agriculture, indoor/outdoor varies	Limited ability to meet summer demand	• SWP uncertainty • Aggravates overall issue
Are some instream flow requirements in your region either currently insufficient to support aquatic life, or occasionally unmet?	Y	Aquatic plants, freshwater shrimp,	Habitat demand would be impacted	
Water Supply				
Does a portion of the water supply in your region come from snowmelt?	Y	Local surface supply comes from snowmelt.	Decrease in local surface supply	• Our supply is already limited. Seeing that supply decrease some more is a concern. • Decrease in natural water supplies from snowpack and diverted water will increase dependency and expense of imported water • Impact to species/habitats by capture of runoff
Does part of your region rely on water diverted from the Delta, imported from the Colorado River, or imported from other climate-sensitive systems outside your region?	Y	Large portion of supply comes from imported (SWP)	Decrease in imported supply	• Vulnerability in storage/more rain, then snow - timing • SWP vulnerability • Dependency of Antelope Valley on imported water
Would your region have difficulty in storing carryover supply surpluses from year to year?	Y	Potential for groundwater recharge, have not yet met potential for GW recharge	Decrease in seasonal reliability	*No comments*
Does part of your region rely on coastal aquifers? Has salt intrusion been a problem in the past?	N		Decrease in groundwater supply	
Has your region faced a drought in the past during which it failed to meet local water demands?	Y	Demand management plans have been effective in the past	Sensitivity due to higher drought potential	• See this as fundamental issue • More frequent and prolonged droughts • With the increased potential for drought, the competition for water would be a concern
Does your region have invasive species management issues at your facilities, along conveyance structures, or in habitat areas?	Y	Tamarisk, Cottonwoods	Invasives can reduce supply available	

Vulnerability	Y/N	Justification	Vulnerability Issue	Comments
Water Quality				
Are increased wildfires a threat in your region? If so, does your region include reservoirs with fire-susceptible vegetation nearby which could pose a water quality concern from increased erosion?	Y	Fire in the San Gabriel mountains could cause sedimentation in the Little Rock reservoir.	Increased erosion and sedimentation	• Resulting from fires and flash floods • Limited water quantity makes quality even more important
Does part of your region rely on surface water bodies with current or recurrent water quality issues related to eutrophication, such as low dissolved oxygen or algal blooms? Are there other water quality constituents potentially exacerbated by climate change?	N	Little Rock reservoir and Lake Palmdale do not have eutrophication issues.	Poor water quality in surface waters	
Are seasonal low flows decreasing for some waterbodies in your region? If so, are the reduced low flows limiting the waterbodies' assimilative capacity?	N	Contaminant levels are low in areas with transport potential to drinking water bodies.	Increased constituent concentrations	
Are there beneficial uses designated for some water bodies in your region that cannot always be met due to water quality issues?	N	Reservoirs are primarily for drinking water.	Decrease in recreational opportunity	
Does part of your region currently observe water quality shifts during rain events that impact treatment facility operation?	N	Bulk of water either imported or groundwater	Increase in treatment needs and costs	
Sea Level Rise				
Has coastal erosion already been observed in your region?	N		Decrease in land	
Are there coastal structures, such as levees or breakwaters, in your region?	N		Damage to coastal infrastruture/receration/tourism	
Is there significant coastal infrastructure, such as residences, recreation, water and wastewater treatment, tourism, and transportation) at less than six feet above mean sea level in your region?	N			
Is there land subsidence in the coastal areas of your region?	N			
Are there climate-sensitive low-lying coastal habitats in your region?	N		Damage to ecosystem/habitat	
Are there areas in your region that currently flood during extreme high tides or storm surges?	N			
Do tidal gauges along the coastal parts of your region show an increase over the past several decades?	N			

Vulnerability	Y/N	Justification	Vulnerability Issue	Comments
Flooding				
Does critical infrastructure in your region lie within the 200-year floodplain?	Y	Water reclamation plants are in the 100-yr to 500-yr floodplain	Increases in inland flooding	
Does aging critical flood protection infrastructure exist in your region?	Y	Aging local flood protection infrastructure exists in region		
Have flood control facilities (such as impoundment structures) been insufficient in the past?	Y	Areas exist that flood regularly		
Are wildfires a concern in parts of your region?	Y	Flash flooding has been an issue in the past	Increases in flash flooding	• Increase in extreme weather events though decrease in frequency • Historical occurrences • Development in flood plain • Need to avoid development in flash flooding channels/areas to increase availability of flows to habitat and EAFB landing fields • Great potential for damage
Does part of your region lie within the Sacramento-San Joaquin Drainage District?	N			
Ecosystem and Habitat				
Does your region include inland or coastal aquatic habitats vulnerable to erosion and sedimentation issues?	Y	Erosion and sedimentation in Little and Big Rock Wash, (watershed by Three Points)	Increased impacts to water dependent species	• Stressors to water dependent habitat • Potential conflicts among users of water supply
Does your region include aquatic habitats which rely on seasonal freshwater flow patterns?	Y	Local Piute ponds, ephemeral streambeds - all subwatersheds in desert are critical		
Do climate-sensitive fauna or flora populations live in your region?	Y	Evapotranspiration may affect habitat		
Do estuaries, coastal dunes, wetlands, marshes, or exposed beaches exist in your region? If so, are coastal storms possible/frequent in your region?	N	Region does not have coastal storms	Decrease in habitat protection against coastal storms	
Do endangered or threatened species exist in your region? Are changes in species distribution already being observed in parts of your region?	Y	Desert tortoise, burrowing owl, mojave ground squirrel	Decrease in available necessary habitat	• There are already several factors in play. With anticipated climate change issues, the issue will almost be exacerbated. • Many climate-sensitive and endangered species with limited opportunity for migration
Does the region rely on aquatic or water-dependent habitats for recreation or other economic activities?	Y	Duck hunting in Piute ponds, bird watching, canoeing		
Are there areas of fragmented estuarine, aquatic, or wetland wildlife habitat within your region? Are there movement corridors for species to naturally migrate? Are there infrastructure projects planned that might preclude species movement?	Y	Limited planning in ecological areas - Big Rock & Little Rock Washes, Broad Cyn Wash, Elizabeth Lake - "choke points"		
Does your region include one or more of the habitats described in the Endangered Species Coalition's Top 10 habitats vulnerable to climate change?	Y	The "Southwest Deserts", which include the Mojave Desert, is one of the "Top 10 Habitats"		
Are there rivers in your region with quantified environmental flow requirements or known water quality/quantity stressors to aquatic life?	Y	Freshwater shrimp and mariposa lily require a certain quantity of flow	Decrease in environmental flows	*No comments*
Hydropower				
Is hydropower a source of electricity in your region?	N			

Vulnerability	Y/N	Justification	Vulnerability Issue	Comments
Are energy needs in your region expected to increase in the future? If so, are there future plans for hydropower generation facilities or conditions for hydropower generation in your region?	N		Decrease in hydropower potential	

Appendix I: WSCP Resolution

THIS FINAL RESOLUTION WILL BE PROVIDED WITH THE FINAL UWMP.

PALMDALE WATER DISTRICT
RESOLUTION NO. 16-7

RESOLUTION ADOPTING, DIRECTING FILING OF, AND IMPLEMENTING THE PALMDALE WATER DISTRICT 2015 URBAN WATER MANAGEMENT PLAN AND INCORPORATED WATER SHORTAGE CONTINGENCY PLAN

WHEREAS, the California Legislature enacted Assembly Bill 797 during the 1983-1984 Regular Session of the California Legislature (Water Code Section 10610 et.seq.) known as the Urban Water Management Plan Act (the Act).

WHEREAS, California Water Code section 10632 requires water agencies to plan for water shortages of up to 50 percent as part of their Urban Water Management Plan; and

WHEREAS, PWD has prepared an update to its Water Shortage Contingency Plan (WSCP); and

WHEREAS, the WSCP is consistent with the California Water Code sections 350 through 359 and section 10632, and guidance provided by the California Department of Water Resources Urban Drought Guidebook 2008 Updated Edition; and

WHEREAS, the Act mandates that every urban water supplier of water providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually, prepare, and every five (5) years thereafter update, its Urban Water Management Plan, (UWMP), the primary objective of which is to plan for the conservation and efficient use of water.

WHEREAS, the latest update of the Plan was due at the end of 2015, but a six-month extension was granted by the Legislature for submittals of the 2015 Urban Water Management plan to provide time for urban water suppliers to address Senate Bill X7-7 (SB X7-7), which requires water retailers like the Palmdale Water District to develop plans to reduce per capita water use by 20 percent by the year 2020, with an interim target of a 10 percent reduction by 2015; and

WHEREAS, the Palmdale Water District prepared and filed a UWMP with the California Department of Water Resources in December 1985, December 1990, December 1995, December 2000, December 2005, and December 2010; and

WHEREAS, considering the six (6) month extension granted by the Legislature, the 2015 Plan should be adopted by June 30, 2016 and filed with the California Department of Water Resources, the California State Library and the City of Palmdale within thirty days of adoption; and

WHEREAS, the Act further requires that the adopted UWMP and WSCP be available for public review during normal business hours for thirty (30) days following its submission to the Department of Water Resources; and

WHEREAS, as an urban water supplier providing water service to over 109,000 customers, Palmdale Water District is subject to the Act and has, therefore, prepared and circulated for public view a Draft 2015 Urban Water Management Plan in compliance with the requirements of the Act, and a properly noticed public hearing regarding the proposed UWMP and WSCP was duly held by the Palmdale Water District on June 1, 2016.

NOW, THEREFORE, BE IT RESOLVED by the Board of the Directors of the Palmdale Water District as follows:

1. The 2015 Urban Water Management Plan and incorporated Water Shortage Contingency Plan are hereby approved and adopted.

2. The General Manager is hereby authorized and directed to file the UWMP and WSCP with the California Department of Water Resources, the California State Library and the City of Palmdale within thirty days of adoption in accordance with the Act.

3. When required by conditions contained in the Plan, the General Manager is authorized to declare a Water Shortage Emergency and to implement water conservation programs as detailed in the WSCP, including recommendations to the Board of Directors regarding necessary procedures, rules and regulations to carry out effective and equitable water conservation programs.

4. The General Manager and staff are hereby further authorized and directed to take such other and further actions as may be reasonably necessary to carry out the purposes and intent of the Plan.

PASSED AND ADOPTED at the regular meeting of the Board of Directors held on June 1, 2016.

_____
ROBERT ALVARADO, President,
Palmdale Water District Board of Directors

ATTEST:

_____
JOE ESTES, Secretary,

Appendix J: Groundwater Adjudication Court Order

SUPERIOR COURT OF THE STATE OF CALIFORNIA

COUNTY OF LOS ANGELES – CENTRAL DISTRICT

ANTELOPE VALLEY GROUNDWATER CASES Included Actions: Los Angeles County Waterworks District No. 40 v. Diamond Farming Co., Superior Court of California, County of Los Angeles, Case No. BC 325201; Los Angeles County Waterworks District No. 40 v. Diamond Farming Co., Superior Court of California, County of Kern, Case No. S-1500-CV-254-348; Wm. Bolthouse Farms, Inc. v. City of Lancaster, Diamond Farming Co. v. City of Lancaster, Diamond Farming Co. v. Palmdale Water Dist., Superior Court of California, County of Riverside, Case Nos. RIC 353 840, RIC 344 436, RIC 344 668 RICHARD WOOD, on behalf of himself and all other similarly situated v. A.V. Materials, Inc., et al., Superior Court of California, County of Los Angeles, Case No. BC509546	Judicial Council Coordination Proceeding No. 4408 CLASS ACTION Santa Clara Case No. 1-05-CV-049053 Assigned to the Honorable Jack Komar ~~(PROPOSED)~~ **JUDGMENT**

The matter came on for trial in multiple phases. A large number of parties representing the majority of groundwater production in the Antelope Valley Area of Adjudication ("Basin") entered into a written stipulation to resolve their claims and requested that the Court enter their [Proposed] Judgment and Physical Solution as part of the final judgment. As to all remaining parties, including those who failed to answer or otherwise appear, the Court heard the testimony of witnesses, considered the evidence, and heard the arguments of counsel. Good cause appearing, the Court finds and orders judgment as follows:

1. The Second Amended Stipulation For Entry of Judgment and Physical Solution among the stated stipulating parties is accepted and approved by the Court.

2. Consistent with the December 23 2015 Statement of Decision ("Decision"), the Court adopts the Proposed Judgment and Physical Solution attached hereto as Exhibit A and incorporated herein by reference, as the Court's own physical solution ("Physical Solution"). The Physical Solution is binding upon all parties.

3. In addition to the terms and provisions of the Physical Solution the Court finds as follows:

   a. Each of the Stipulating Parties to the Physical Solution has the right to pump groundwater from the Antelope Valley Adjudication Area as stated in the Decision and Physical Solution.

   b. The following entities are awarded prescriptive rights from the native safe yield against the Tapia Parties, defaulted parties identified in Exhibit 1 to the Physical Solution, and parties who did not appear at trial identified in Exhibit B attached hereto, in the following amounts:

Los Angeles County Waterworks District No. 40	17,659.07 AFY
Palmdale Water District	8,297.91 AFY
Littlerock Creek Irrigation District	1,760 AFY
Quartz Hill Water District	1,413 AFY
Rosamond Community Services District	1,461.7 AFY
Palm Ranch Irrigation District	960 AFY

Desert Lake Community Services District		318 AFY
California Water Service Company		655 AFY
North Edwards Water District		111.67 AFY

No other parties are subject to these prescriptive rights.

c. Each of the parties referred to in the Decision as Supporting Landowner Parties has the right to pump groundwater from the Antelope Valley Adjudication Area as stated in the Decision and in Paragraph 5.1.10 of the Physical Solution in the following amounts:

i.	Desert Breeze MHP, LLC	18.1 AFY
ii.	Milana VII, LLC dba Rosamond Mobile Home Park	21.7 AFY
iii.	Reesdale Mutual Water Company	23 AFY
iv.	Juanita Eyherabide, Eyherabide Land Co., LLC and Eyherabide Sheep Company, collectively	12 AFY
v.	Clan Keith Real Estate Investments, LLC., dba Leisure Lake Mobile Estates	64 AFY
vi.	White Fence Farms Mutual Water Co. No. 3	4 AFY
vii.	LV Ritter Ranch LLC	0 AFY
viii.	Rotar Enterprises, Inc., Hi-Grade Materials Co., and CJR, a General Partnership	200 AFY

d. Each member of the Small Pumper Class can exercise an overlying right pursuant to the Physical Solution. The Judgment Approving Small Pumper Class Action Settlements is attached as Exhibit C ("Small Pumper Class Judgment") and is incorporated herein by reference.

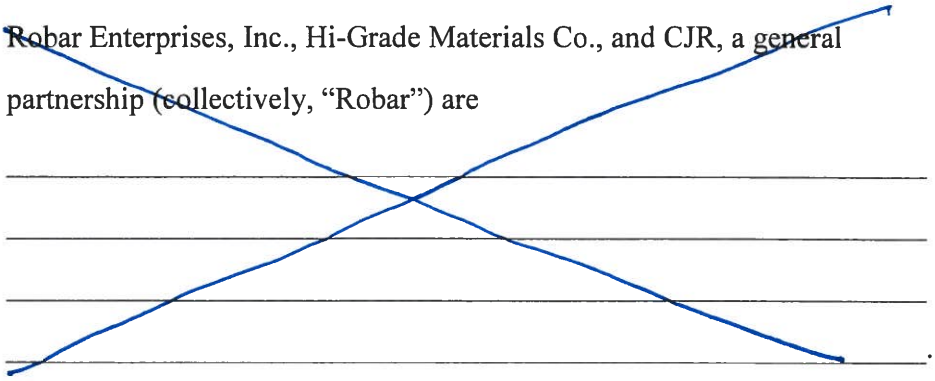
e. Cross-defendant Charles Tapia, as an individual and as Trustee of Nellie Tapia Family Trust (collectively, "The Tapia Parties") has no right to pump groundwater from the Antelope Valley Adjudication Area except under the terms of the Physical Solution.

f. Phelan Piñon Hills Community Services District ("Phelan") has no right to pump groundwater from the Antelope Valley Adjudication Area except under the terms of the Physical Solution.

g. The Willis Class members have an overlying right that is to be exercised in accordance with the Physical Solution.

h. All defendants or cross-defendants who failed to appear in any of these coordinated and consolidated cases are bound by the Physical Solution and their overlying rights, if any, are subject to the prescriptive rights of the Public Water Suppliers. A list of the parties who failed to appear is attached hereto as Exhibit D.

i. Robar Enterprises, Inc., Hi-Grade Materials Co., and CJR, a general partnership (collectively, "Robar") are



.

4. Each party shall designate the name, address and email address, to be used for all subsequent notices and service of process by a designation to be filed within thirty days after entry of this Judgment. The list attached as Exhibit A to the Small Pumper Class Judgment shall be used for notice purposes initially, until updated by the Class members and/or Watermaster. The designation may be changed from time to time by filing a written notice with the Court. Any party desiring to be relieved of receiving notice may file a waiver of notice to be approved by the Court. The Court will maintain a list of parties and their respective addresses to whom notice or service of process is to be sent. If no designation is made as required herein, a party's designee shall be deemed to be the attorney of record or, in the absence of an attorney of record, the party at its specified address.

5. All real property owned by the parties within the Basin is subject to this Judgment. It is binding upon all parties, their officers, agents, employees, successors and assigns. Any party, or executor of a deceased party, who transfers real property that is subject to this Judgment shall notify any transferee thereof of this Judgment.

This Judgment shall not bind the parties that cease to own real property within the Basin, and cease to use groundwater, except to the extent required by the terms of an instrument, contract, or other agreement.

The Clerk shall enter this Judgment.

Dated: Dec 23, 2015

JUDGE OF THE SUPERIOR COURT

EXHIBIT A

SUPERIOR COURT OF THE STATE OF CALIFORNIA

COUNTY OF LOS ANGELES - CENTRAL DISTRICT

Coordination Proceeding Special Title (Rule 1550(b)) **ANTELOPE VALLEY GROUNDWATER CASES**	Judicial Council Coordination Proceeding No. 4408 **Santa Clara Case No.: 1-05-CV-049053** Judge: The Honorable Jack Komar, Dept. 17 [PROPOSED] JUDGMENT AND PHYSICAL SOLUTION

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Exhibits:

Exhibit 1:	Listing of Parties Against Which a Default Judgment Has Been Entered.
Exhibit 2:	Map of Area Adjudicated in This Action.
Exhibit 3:	Non-Overlying Production Rights.
Exhibit 4:	Overlying Production Rights
Exhibit 5:	Phase 3 Trial Decision.
Exhibit 6:	Map of boundaries of Edwards Air Force Base.
Exhibit 7:	Map of boundaries of Air Force Plant 42.
Exhibit 8:	Rights to Produce Imported Water Return Flows.
Exhibit 9:	Map of the Watershed of the Basin.
Exhibit 10:	Map of Subareas.

Appendices:

Appendix A:	Non-Pumper Class Judgment.
Appendix B:	Non-Pumper Class Stipulation of Settlement.

A number of Parties have agreed and stipulated to entry of a Judgment consistent with the terms of this Judgment and Physical Solution (hereafter "this Judgment"). The stipulations of the Parties are conditioned upon further proceedings that will result in a Judgment binding all Parties to the Action. The Court, having considered the pleadings, the stipulations of the Parties, and the evidence presented, and being fully informed in the matter, approves the Physical Solution[1] contained herein. This Judgment is entered as a Judgment binding on all Parties served or appearing in this Action, including without limitation, those Parties which have stipulated to this Judgment, are subject to prior settlement(s) and judgment(s) of this Court, have defaulted or hereafter stipulate to this Judgment.

I. DESCRIPTION OF LITIGATION

1. PROCEDURAL HISTORY

1.1 Initiation of Litigation.

On October 29, 1999, Diamond Farming Company ("Diamond Farming") filed in the Riverside County Superior Court (Case No. RIC 344436) the first complaint in what would become these consolidated complex proceedings known as the Antelope Valley Groundwater Cases. Diamond Farming's complaint names as defendants the City of Lancaster, Palmdale Water District, Antelope Valley Water Company, Palm Ranch Irrigation District, Quartz Hill Water District, Rosamond Community Services District, and Mojave Public Utility District.

On February 22, 2000, Diamond Farming filed another complaint in the Riverside County Superior Court (Case No. RIC 344468). The two Diamond Farming actions were subsequently consolidated.

On January 25, 2001, Wm. Bolthouse Farms, Inc. ("Bolthouse") filed a complaint in the same Court against the same entities, as well as Littlerock Creek Irrigation District and Los Angeles Waterworks Districts Nos. 37 and 40 (Case No. RIC 353840).

[1] A "physical solution" describes an agreed upon or judicially imposed resolution of conflicting claims in a manner that advances the constitutional rule of reasonable and beneficial use of the state's water supply. (*City of Santa Maria v. Adam* (2012) 211 Cal. App. 4th 266, 288.) It is defined as "an equitable remedy designed to alleviate overdrafts and the consequential depletion of water resources in a particular area, consistent with the constitutional mandate to prevent waste and unreasonable water use and to maximize the beneficial use of this state's limited resource." (*California American Water v. City of Seaside* (2010) 183 Cal. App. 4th 471, 480.)

The Diamond Farming and Bolthouse complaints variously allege that unregulated pumping by these named public agencies (collectively the Public Water Suppliers) has irreparably harmed Diamond Farming and Bolthouse's rights to produce Groundwater from the Antelope Valley Groundwater Basin, and interfered with their rights to put that Groundwater to reasonable and beneficial uses on property they own or lease. Diamond Farming and Bolthouse's complaints seek a determination of their water rights and to quiet title as to the same.

In 2001, the Diamond Farming and Bolthouse actions were consolidated in the Riverside County Superior Court.

In August 2002, a Phase 1 trial commenced in the Riverside County Superior Court in the consolidated Diamond Farming/Bolthouse proceedings for the purpose of determining the geographic boundary of the area to be adjudicated. That Phase 1 trial was not concluded and the Court did not determine any issues or make any factual findings at that time.

1.2 General Adjudication Commenced.

In 2004, Los Angeles County Waterworks District No. 40 ("District No. 40") initiated a general Groundwater adjudication for the Antelope Valley Ground Water Basin by filing identical complaints for declaratory and injunctive relief in the Los Angeles and Kern County Superior Courts (Los Angeles County Superior Court Case No. BC 325201 and Kern County Superior Court Case No. S-1500-CV 254348). District No. 40's complaints sought a judicial determination of the respective rights of the Parties to produce Groundwater from the Antelope Valley Groundwater Basin.

On December 30, 2004, District No. 40 petitioned the Judicial Council of California for coordination of the above-referenced actions. On June 17, 2005, the Judicial Council of California granted the petition and assigned the "Antelope Valley Groundwater Cases" (Judicial Council Coordination Proceeding No. 4408) to this Court (Santa Clara County Superior Court Case No. 1-05-CV-049053 (Hon. Jack Komar)).

For procedural purposes, the Court requested that District No. 40 refile its complaint as a first amended cross-complaint in the now coordinated proceedings. Joined by the

other Public Water Suppliers, District No. 40 filed a first amended cross-complaint seeking declaratory and injunctive relief and an adjudication of the rights to all Groundwater within the Antelope Valley Groundwater Basin. The Public Water Suppliers' cross-complaint, as currently amended, requests an adjudication to protect the public's water supply, prevent water quality degradation, and stop land subsidence. Some of the Public Water Suppliers allege they have acquired prescriptive and equitable rights to the Groundwater in the Basin. They allege the Basin has been in overdraft for more than five consecutive Years and they have pumped water from the Basin for reasonable and beneficial purposes in an open, notorious, and continuous manner. They allege each non-public cross-defendant had actual or constructive notice of these activities, sufficient to establish prescriptive rights in their favor. In order to alleviate overdraft conditions and protect the Basin, the Public Water Suppliers also request a physical solution.

1.3 Other Actions

In response to the Public Water Suppliers first amended cross-complaint, numerous Parties filed cross-complaints seeking various forms of relief.

On August 30, 2006, Antelope Valley-East Kern Water Agency ("AVEK") filed a cross-complaint seeking declaratory and injunctive relief and claiming overlying rights and rights to pump the supplemental yield attributable to return flows from State Water Project water imported to the Basin.

On January 11, 2007, Rebecca Lee Willis filed a class action complaint in the Los Angeles County Superior Court (Case No. BC 364553) for herself and on behalf of a class of non-pumping overlying property owners ("Non-Pumper Class"), through which she sought declaratory relief and money damages from various public entities. Following certification, the Non-Pumper Class entered into a settlement agreement with the Public Water Suppliers concerning the matters at issue in the class complaint. On September 22, 2011, the Court approved the settlement through an amended final judgment.

On June 2, 2008, Richard A. Wood filed a class action complaint for himself and on behalf of a class of small property owners in this action ("Small Pumper Class"), *Wood v. Los*

Angeles Co. Waterworks Dist. 40, et al., (Case No.: BC 391869) through which he sought declaratory relief and money damages from various public entities. The Small Pumper Class was certified on September 2, 2008.

On February 24, 2010, following various orders of coordination, the Court granted the Public Water Suppliers' motion to transfer and consolidate all complaints and cross-complaints in this matter, with the exception of the complaint in Sheldon R. Blum, etc. v. Wm. Bolthouse Farms, Inc. (Santa Clara County Superior Court Case No. 1-05-CV-049053), which remains related and coordinated.

1.4 McCarran Amendment Issues

The Public Water Suppliers' cross-complaint names Edwards Air Force Base, California and the United States Department of the Air Force as cross-defendants, seeking the same declaratory and injunctive relief as sought against the other cross-defendants. This Judgment, or any other determination in this case regarding rights to water, is contingent on a Judgment satisfying the requirements of the McCarran Amendment, 43 U.S.C. §666. The United States reserves all rights to object or otherwise challenge any interlocutory judgment and reserves all rights to appeal a Judgment that does not satisfy the requirements of the McCarran Amendment.

1.5 Phased Trials

The Court has divided the trial in this matter into multiple phases, four of which have been tried.

Through the Phase 1 trial, the Court determined the geographical boundaries of the area adjudicated in this Action which is defined as the Basin. On November 3, 2006, the Court entered an order determining that issue.

Through the Phase 2 trial, the Court determined that all areas within the Basin are hydrologically connected and a single aquifer, and that there is sufficient hydraulic connection between the disputed areas and the rest of the Basin such that the Court must include the disputed areas within the adjudication area. The Court further determined that it would be premature to make

any determinations regarding, *inter alia*, claims that portions of the Basin should be treated as a separate area for management purposes. On November 6, 2008, the Court entered its Order after Phase Two Trial on Hydrologic Nature of Antelope Valley.

Through the Phase 3 trial, the Court determined the Basin is in a current state of overdraft and the safe yield is 110,000 acre-feet per Year. The Court found the preponderance of the evidence presented established that setting the safe yield at 110,000 acre-feet per Year will permit management of the Basin in such a way as to preserve the rights of the Parties in accordance with the California Constitution and California law. On July 13, 2011, the Court filed its Statement of Decision.

Through the Phase 4 trial, the Court determined the overall Production occurring in the Basin in calendar Years 2011 and 2012.

1.6 Defaults

Numerous Parties have failed to respond timely, or at all, to the Public Water Suppliers' cross-complaint, as amended, and their defaults have been entered. The Court has given the defaulted Parties notice of this Judgment and Physical Solution, together with the opportunity to be heard regarding this Judgment, and hereby enters default judgments against all such Parties and incorporates those default judgments into this Judgment. Pursuant to such default judgments a defaulted Party has no right to Produce Groundwater from the Basin. All Parties against which a default judgment has been entered are identified on Exhibit 1, attached hereto and incorporated herein by reference.

2. GENERAL ADJUDICATION DOES NOT APPLY TO SURFACE WATER.

Pursuant to California law, surface water use since 1914 has been governed by the Water Code. This Judgment does not apply to surface water as defined in the Water Code and is not intended to interfere with any State permitted or licensed surface water rights or pre-1914 surface water right. The impact of any surface water diversion should be considered as part of the State Water Resources Control Board permitting and licensing process and not as part of this Judgment.

II. DECREE

3. JURISDICTION, PARTIES, DEFINITIONS.

3.1 Jurisdiction. This Action is an *inter se* adjudication of all claims to the rights to Produce Groundwater from the Basin alleged between and among all Parties. This Court has jurisdiction over the subject matter and Parties herein to enter a Judgment declaring and adjudicating the rights to reasonable and beneficial use of water by the Parties in the Action pursuant to Article X, section 2 of the California Constitution.

3.2 Parties. The Court required that all Persons having or claiming any right, title or interest to the Groundwater within the Basin be notified of the Action. Notice has been given pursuant to the Court's order. All Public Water Suppliers, landowners, Non-Pumper Class and Small Pumper Class members and other Persons having or making claims have been or will be included as Parties to the Action. All named Parties who have not been dismissed have appeared or have been given adequate opportunity to appear.

3.3 Factual and Legal Issues. The complaints and cross-complaints in the Action frame many legal issues. The Action includes over 4,000 Parties, as well as the members of the Non-Pumper Class and the members of the Small Pumper Class. The Basin's entire Groundwater supply and Groundwater rights, extending over approximately 1390 square miles, have been brought to issue. The numerous Groundwater rights at issue in the case include, without limitation, overlying, appropriative, prescriptive, and federal reserved water rights to Groundwater, rights to return flows from Imported Water, rights to recycled water, rights to stored Imported Water subject to the Watermaster rules and regulations, and rights to utilize the storage space within the Basin. After several months of trial, the Court made findings regarding Basin characteristics and determined the Basin's Safe Yield. The Court's rulings and judgments in this case, including the Safe Yield determination, form the basis for this Judgment.

3.4 Need for a Declaration of Rights and Obligations for a Physical Solution. A Physical Solution for the Basin, based on a declaration of water rights and a formula for allocation of rights and obligations, is necessary to implement the mandate of Article X,

section 2 of the California Constitution and to protect the Basin and the Parties' rights to the Basin's water resources. The Physical Solution governs Groundwater, Imported Water and Basin storage space, and is intended to ensure that the Basin can continue to support existing and future reasonable and beneficial uses. A Physical Solution requires determining individual Groundwater rights for the Public Water Suppliers, landowners, Non-Pumper Class and Small Pumper Class members, and other Parties within the Basin. The Physical Solution set forth in this Judgment: (1) is a fair and reasonable allocation of Groundwater rights in the Basin after giving due consideration to water rights priorities and the mandate of Article X, section 2 of the California Constitution; (2) provides for a reasonable sharing of Imported Water costs; (3) furthers the mandates of the State Constitution and State water policy; and (4) is a remedy that gives due consideration to applicable common law rights and priorities to use Basin water and storage space without substantially impairing such rights. Combined with water conservation, water reclamation, water transfers, water banking, and improved conveyance and distribution methods within the Basin, present and future Imported Water sources are sufficient both in quantity and quality to assure implementation of a Physical Solution. This Judgment will facilitate water resource planning and development by the Public Water Suppliers and individual water users.

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

3.5.1 Action. The coordinated and consolidated actions included in the Antelope Valley Groundwater Cases, Judicial Council Coordination Proceeding No. 4408, Santa Clara Superior Court Case No. 1-05-CV-049053.

3.5.2 Adjusted Native Safe Yield. The Native Safe Yield minus (1) the Production Right allocated to the Small Pumper Class under Paragraph 5.1.3, (2) the Federal Reserved Water Right under Paragraph 5.1.4, and (3) the State of California Production Right under Paragraph 5.1.5. The Adjusted Native Safe Yield as of the date of entry of this Judgment is 70,686.6 acre-feet per year.

3.5.3 Administrative Assessment. The amount charged by the Watermaster for the costs incurred by the Watermaster to administer this Judgment.

3.5.4 Annual Period. The calendar Year.

3.5.5 Antelope Valley United Mutuals Group. The members of the Antelope Valley United Mutuals Group are Antelope Park Mutual Water Company, Aqua-J Mutual Water Company, Averydale Mutual Water Company, Baxter Mutual Water Company, Bleich Flat Mutual Water Company, Colorado Mutual Water Co., El Dorado Mutual Water Company, Evergreen Mutual Water Company, Land Projects Mutual Water Co., Landale Mutual Water Co., Shadow Acres Mutual Water Company, Sundale Mutual Water Company, Sunnyside Farms Mutual Water Company, Inc., Tierra Bonita Mutual Water Company, West Side Park Mutual Water Co. and White Fence Farms Mutual Water Co., together with the successor(s)-in-interest to any member thereof. Each of the members of the Antelope Valley United Mutuals Group was formed when the owner(s) of the lands that were being developed incorporated the mutual water company and transferred their water rights to the mutual water company in exchange for shares of common stock. The mutual water company owns, operates and maintains the infrastructure for the production, storage, distribution and delivery of water solely to its shareholders. The shareholders of each of these mutual water companies, who are the owners of the real property that is situated within the mutual water company's service area, have the right to have water delivered to their properties, a right appurtenant to their land. [*See, Erwin v. Gage Canal Company* (1964) 226 Cal.App.2d 189].

3.5.6 AVEK. The Antelope Valley–East Kern Water Agency.

3.5.7 Balance Assessment. The amount of money charged by the Watermaster on all Production Rights, excluding the United States' actual Production, to pay for the costs, not including infrastructure, to purchase, deliver, produce in lieu, or arrange for alternative pumping sources in the Basin.

3.5.8 Basin. The area adjudicated in this Action as shown on Exhibit 2, attached hereto and incorporated herein by reference, which lies within the boundaries of the line

labeled "Boundaries of the Adjudicated Area" and described therein. The Basin generally encompasses the Antelope Valley bordered on the West and South by the San Gabriel and Tehachapi Mountains, with the eastern boundary being the Los Angeles-San Bernardino County line, as determined by the Court.

3.5.9 Carry Over. The right to Produce an unproduced portion of an annual Production Right or a Right to Imported Water Return Flows in a Year subsequent to the Year in which the Production Right or Right to Imported Water Return Flows was originally available.

3.5.10 Conjunctive Use. A method of operation of a groundwater basin under which Imported Water is used or stored in the Basin in Years when it is available; allowing the Basin to refill, and more Groundwater is Produced in Years when Imported Water is less available.

3.5.11 Defaulting Party. A Party who failed to file a responsive pleading and against which a default judgment has been entered. A list of Defaulting Parties is attached as Exhibit 1.

3.5.12 Drought Program. The water management program in effect only during the Rampdown period affecting the operations and Replacement Water Assessments of the participating Public Water Suppliers.

3.5.13 Judgment. A judgment, consistent with Cal.C.C.P. §§ 577 and 1908(a)(1) and 43 U.S.C. § 666, determining all rights to Groundwater in the Basin, establishing a Physical Solution, and resolving all claims in the Action.

3.5.14 Groundwater. Water beneath the surface of the ground and within the zone of saturation, excluding water flowing through known and definite channels.

3.5.15 Imported Water. Water brought into the Basin from outside the watershed of the Basin as shown in Exhibit 9.

3.5.16 Imported Water Return Flows. Imported Water that net augments the Basin Groundwater supply after use.

3.5.17 In Lieu Production. The amount of Imported Water used by a Producer in a Year instead of Producing an equal amount of that Producer's Production Right.

3.5.18 Material Injury. Material Injury means impacts to the Basin caused by pumping or storage of Groundwater that:

3.5.18.1 Causes material physical harm to the Basin, any Subarea, or any Producer, Party or Production Right, including, but not limited to, Overdraft, degradation of water quality by introduction of contaminants to the aquifer by a Party and/or transmission of those introduced contaminants through the aquifer, liquefaction, land subsidence and other material physical injury caused by elevated or lowered Groundwater levels. Material physical harm does not include "economic injury" that results from other than direct physical causes, including any adverse effect on water rates, lease rates, or demand for water.

3.5.18.2 If fully mitigated, Material Injury shall no longer be considered to be occurring.

3.5.19 Native Safe Yield. Naturally occurring Groundwater recharge to the Basin, including "return flows" from pumping naturally occurring recharge, on an average annual basis. Imported Water Return Flows are not included in Native Safe Yield.

3.5.20 New Production. Any Production of Groundwater from the Basin not of right under this Judgment, as of the date of this Judgment.

3.5.21 Non-Overlying Production Rights. The rights held by the Parties identified in Exhibit 3, attached hereto and incorporated herein by reference.

3.5.22 Non-Pumper Class. All private (i.e., non-governmental) Persons and entities that own real property within the Basin, as adjudicated, that are not presently pumping water on their property and did not do so at any time during the five Years preceding January 18, 2006. The Non-Pumper Class includes the successors-in-interest by way of purchase, gift, inheritance, or otherwise of such Non-Pumper Class members' land within the Basin. The Non-Pumper Class excludes (1) all Persons to the extent their properties are connected to a municipal water system, public utility, or mutual water company from which they receive water

service, (2) all properties that are listed as "improved" by the Los Angeles County or Kern County Assessor's offices, unless the owners of such properties declare under penalty of perjury that they do not pump and have never pumped water on those properties, and (3) those who opted out of the Non-Pumper Class. The Non-Pumper Class does not include landowners who have been individually named under the Public Water Suppliers' cross-complaint, unless such a landowner has opted into such class.

3.5.23 Non-Pumper Class Judgment. The amended final Judgment that settled the Non-Pumper Class claims against the Public Water Suppliers approved by the Court on September 22, 2011.

3.5.24 Non-Stipulating Party. Any Party who had not executed a Stipulation for Entry of this Judgment prior to the date of approval of this Judgment by the Court.

3.5.25 Overdraft. Extractions in excess of the Safe Yield of water from an aquifer, which over time will lead to a depletion of the water supply within a groundwater basin as well as other detrimental effects, if the imbalance between pumping and extraction continues.

3.5.26 Overlying Production Rights. The rights held by the Parties identified in Exhibit 4, attached hereto and incorporated herein by reference.

3.5.27 Party (Parties). Any Person(s) that has (have) been named and served or otherwise properly joined, or has (have) become subject to this Judgment and any prior judgments of this Court in this Action and all their respective heirs, successors-in-interest and assigns. For purposes of this Judgment, a "Person" includes any natural person, firm, association, organization, joint venture, partnership, business, trust, corporation, or public entity.

3.5.28 Pre-Rampdown Production. The reasonable and beneficial use of Groundwater, excluding Imported Water Return Flows, at a time prior to this Judgment, or the Production Right, whichever is greater.

3.5.29 Produce(d). To pump Groundwater for existing and future reasonable beneficial uses.

3.5.30 Producer(s). A Party who Produces Groundwater.

3.5.31 Production. Annual amount of Groundwater Produced, stated in acre-feet of water.

3.5.32 Production Right. The amount of Native Safe Yield that may be Produced each Year free of any Replacement Water Assessment and Replacement Obligation. The total of the Production Rights decreed in this Judgment equals the Native Safe Yield. A Production Right does not include any right to Imported Water Return Flows pursuant to Paragraph 5.2.

3.5.33 Pro-Rata Increase. The proportionate increase in the amount of a Production Right, as provided in Paragraph 18.5.10, provided the total of all Production Rights does not exceed the Native Safe Yield.

3.5.34 Pro-Rata Reduction. The proportionate reduction in the amount of a Production Right, as provided in Paragraph 18.5.10, in order that the total of all Production Rights does not exceed the Native Safe Yield.

3.5.35 Public Water Suppliers. The Public Water Suppliers are Los Angeles County Waterworks District No. 40, Palmdale Water District, Quartz Hill Water District, Littlerock Creek Irrigation District, California Water Service Company, Desert Lake Community Services District, North Edwards Water District, City of Palmdale, City of Lancaster, Palm Ranch Irrigation District, Rosamond Community Services District, and West Valley County Water District.

3.5.36 Purpose of Use. The broad categories of type of water use including but not limited to municipal, irrigation, agricultural and industrial uses.

3.5.37 Rampdown. The period of time for Pre-Rampdown Production to be reduced to the Native Safe Yield in the manner described in this Judgment.

3.5.38 Recycled Water. Water that, as a result of treatment of waste, is suitable for a direct beneficial use or a controlled use that would not otherwise occur and is therefore considered a valuable resource.

3.5.39 Replacement Obligation. The obligation of a Producer to pay for Replacement Water for Production of Groundwater from the Basin in any Year in excess of the sum of such Producer's Production Right and Imported Water Return Flows.

3.5.40 Replacement Water. Water purchased by the Watermaster or otherwise provided to satisfy a Replacement Obligation.

3.5.41 Replacement Water Assessment. The amount charged by the Watermaster to pay for all costs incurred by the Watermaster related to Replacement Water.

3.5.42 Responsible Party. The Person designated by a Party as the Person responsible for purposes of filing reports and receiving notices pursuant to the provisions of this Judgment.

3.5.43 Safe Yield. The amount of annual extractions of water from the Basin over time equal to the amount of water needed to recharge the Groundwater aquifer and maintain it in equilibrium, plus any temporary surplus. [*City of Los Angeles v. City of San Fernando* (1975) 14 Cal. 3d 199, 278.]

3.5.44 Small Pumper Class. All private (i.e., non-governmental) Persons and entities that own real property within the Basin, as adjudicated, and that have been pumping less than 25 acre-feet per Year on their property during any Year from 1946 to the present. The Small Pumper Class excludes the defendants in *Wood v. Los Angeles Co. Waterworks Dist. 40, et al.*, any Person, firm, trust, corporation, or other entity in which any such defendants has a controlling interest or which is related to or affiliated with any such defendants, and the representatives, heirs, affiliates, successors-in-interest or assigns of any such excluded party. The Small Pumper Class also excludes all Persons and entities that are shareholders in a mutual water company**.** The Small Pumper Class does not include those who opted out of the Small Pumper Class.

3.5.45 Small Pumper Class Members. Individual members of the Small Pumper Class who meet the Small Pumper Class definition, and for purposes of this Judgment and any terms pertaining to water rights, where two or more Small Pumper Class Members reside

in the same household, they shall be treated as a single Small Pumper Class Member for purposes of determining water rights.

3.5.46 State of California. As used herein, State of California shall mean the State of California acting by and through the following State agencies, departments and associations: (1) The California Department of Water Resources; (2) The California Department of Parks and Recreation; (3) The California Department of Transportation; (4) The California State Lands Commission; (5) The California Department of Corrections and Rehabilitation; (6) The 50th District Agricultural Association; (7) The California Department of Veteran Affairs; (8) The California Highway Patrol; and, (9) The California Department of Military.

3.5.47 State Water Project. Water storage and conveyance facilities operated by the State of California Department of Water Resources from which it delivers water diverted from the Feather River and the Sacramento-San Joaquin Delta via the California Aqueduct to public agencies it has contracted with.

3.5.48 Stipulating Party. Any Party who has executed a Stipulation for Entry of this Judgment prior to the date of approval of this Judgment by the Court.

3.5.49 Stored Water. Water held in storage in the Basin, as a result of direct spreading or other methods, for subsequent withdrawal and use pursuant to agreement with the Watermaster and as provided for in this Judgment. Stored Water does not include Imported Water Return Flows.

3.5.50 Subareas. Portions of the Basin, as described in this document, divided for management purposes.

3.5.51 Total Safe Yield. The amount of Groundwater that may be safely pumped from the Basin on a long-term basis. Total Safe Yield is the sum of the Native Safe Yield plus the Imported Water Return Flows.

3.5.52 Watermaster. The Person(s) appointed by the Court to administer the provisions of this Judgment.

3.5.53 Watermaster Engineer. The engineering or hydrology expert or firm retained by the Watermaster to perform engineering and technical analysis and water administration functions as provided for in this Judgment.

3.5.54 District No. 40. Los Angeles County Waterworks District No. 40.

3.5.55 Year. Calendar year.

4. SAFE YIELD AND OVERDRAFT

4.1 Safe Yield: The Native Safe Yield of the Basin is 82,300 acre-feet per Year. With the addition of Imported Water Return Flows, the Total Safe Yield is approximately 110,000 acre-feet per Year, but will vary annually depending on the volume of Imported Water.

4.2 Overdraft: In its Phase 3 trial decision, the Court held that the Basin, defined by the Court's March 12, 2007 Revised Order After Hearing On Jurisdictional Boundaries, is in a state of overdraft based on estimate of extraction and recharge, corroborated by physical evidence of conditions in the Basin. Reliable estimates of the long-term extractions from the Basin have exceeded reliable estimates of the Basin's recharge by significant margins, and empirical evidence of overdraft in the Basin corroborates that conclusion. Portions of the aquifer have sustained a significant loss of Groundwater storage since 1951. The evidence is persuasive that current extractions exceed recharge and therefore that the Basin is in a state of overdraft. The Court's full Phase 3 trial decision is attached as Exhibit 5 and is incorporated herein by reference.

5. PRODUCTION RIGHTS

5.1 Allocation of Rights to Native Safe Yield. Consistent with the goals of this Judgment and to maximize reasonable and beneficial use of the Groundwater of the Basin pursuant to Article X, section 2 of the California Constitution, all the Production Rights established by this Judgment are of equal priority, except the Federal Reserved Water Right which is addressed in Paragraph 5.1.4, and with the reservation of the Small Pumper Class Members' right to claim a priority under Water Code section 106.

5.1.1 Overlying Production Rights. The Parties listed in Exhibit 4, attached hereto and incorporated herein by reference, have Overlying Production Rights. Exhibit 4 sets forth the following for each Overlying Production Right: (1) the Pre-Rampdown Production; (2) the Production Right; and (3) the percentage of the Production from the Adjusted Native Safe Yield.

5.1.1.1 The Parties listed on Exhibit 4 have the right to Produce Groundwater, on an annual basis, up to their Overlying Production Right set forth in Exhibit 4 for each Party. Each Party's Overlying Production Right is subject to the following conditions and limitations:

5.1.1.2 Pursuant to the terms of this Judgment, the Parties listed on Exhibit 4 have the right to Produce their Overlying Production Right for use on land they own or lease and without the need for Watermaster approval.

5.1.1.3 Overlying Production Rights may be transferred pursuant to the provisions of Paragraph 16 of this Judgment.

5.1.1.4 Overlying Production Rights are subject to Pro-Rata Reduction or Increase only pursuant to Paragraph 18.5.10.

5.1.2 Non-Pumper Class Rights. The Non-Pumper Class members claim the right to Produce Groundwater from the Native Safe Yield for reasonable and beneficial uses on their overlying land as provided for in this Judgment. On September 22, 2011, the Court approved the Non-Pumper Class Stipulation of Settlement through an amended final judgment that settled the Non-Pumper Class' claims against the Public Water Suppliers ("Non-Pumper Class Judgment"). A copy of the Non-Pumper Class Judgment and the Non-Pumper Class Stipulation of Settlement are attached for reference only as Appendices A and B. This Judgment is consistent with the Non-Pumper Class Stipulation of Settlement and Judgment. Future Production by a member of the Non-Pumper Class is addressed in the Physical Solution.

5.1.2.1 The Non-Pumper Class members shall have no right to transfer water pursuant to this Judgment.

5.1.3 Small Pumper Class Production Rights. Subject only to the closure of the Small Pumper Class membership, the Small Pumper Class's aggregate Production Right is 3806.4 acre-feet per Year. Allocation of water to the Small Pumper Class is set at an average Small Pumper Class Member amount of 1.2 acre-feet per existing household or parcel based upon the 3172 known Small Pumper Class Member parcels at the time of this Judgment. Any Small Pumper Class Member may Produce up to and including 3 acre-feet per Year per existing household for reasonable and beneficial use on their overlying land, and such Production will not be subject to Replacement Water Assessment. Production by any Small Pumper Class Member above 3 acre-feet per Year per household or parcel will be subject to Replacement Water Assessment, as set forth in this Judgment. Administrative Assessments for unmetered Production by Small Pumper Class Members shall be set based upon the allocation of 1.2 acre-feet per Year per household or parcel, whichever is the case; metered Production shall be assessed in accord with the actual Production. A Small Pumper Class Member who is lawfully, by permit, operating a shared well with an adjoining Small Pumper Class Member, shall have all of the same rights and obligations under this Judgment without regard to the location of the shared well, and such shared use is not considered a prohibited transfer of a pumping right under Paragraph 5.1.3.3.

5.1.3.1 The Production of Small Pumper Class Members of up to 3 acre-feet per Year of Groundwater per household or per parcel for reasonable and beneficial use shall only be subject to reduction if: (1) the reduction is based upon a statistically credible study and analysis of the Small Pumper Class' actual Native Safe Yield Production, as well as the nature of the use of such Native Safe Yield, over at least a three Year period; and (2) the reduction is mandated by Court order after notice to the Small Pumper Class Members affording a reasonable opportunity for the Court to hear any Small Pumper Class Member objections to such reduction, including a determination that Water Code section 106 may apply so as to prevent a reduction.

5.1.3.2 The primary means for monitoring the Small Pumper Class Members' Groundwater use under the Physical Solution will be based on physical inspection by

the Watermaster, including the use of aerial photographs and satellite imagery. All Small Pumper Class Members agree to permit the Watermaster to subpoena the electrical meter records associated with their Groundwater wells on an annual basis. Should the Watermaster develop a reasonable belief that a Small Pumper Class Member household is using in excess of 3 acre-feet per Year, the Watermaster may cause to be installed a meter on such Small Pumper Class Member's well at the Small Pumper Class Member's expense.

5.1.3.3 The pumping rights of Small Pumper Class Members are not transferable separately from the parcel of property on which the water is pumped, provided however a Small Pumper Class Member may move their water right to another parcel owned by that Small Pumper Class Member with approval of the Court. If a Small Pumper Class Member parcel is sold, absent a written contract stating otherwise and subject to the provisions of this Judgment, the water right for that Small Pumper Class Member parcel shall transfer to the new owners of that Small Pumper Class Member parcel. The pumping rights of Small Pumper Class Members may not be aggregated for use by a purchaser of more than one Small Pumper Class Member's property.

5.1.3.4 Defaults or default judgments entered against any Small Pumper Class Member who did not opt out of the Small Pumper Class are hereby deemed non-operative and vacated *nunc pro tunc*, but only with respect to their ownership of real property meeting the Small Pumper Class definition.

5.1.3.5 The Small Pumper Class shall be permanently closed to new membership upon issuance by the Court of its order granting final approval of the Small Pumper Class Settlement (the "Class Closure Date"), after the provision of notice to the Class of the Class Closure Date. Any Person or entity that does not meet the Small Pumper Class definition prior to the Class Closure Date is not a Member of the Small Pumper Class. Similarly, any additional household constructed on a Small Pumper Class Member parcel after the Class Closure Date is not entitled to a Production Right as set forth in Paragraphs 5.1.3 and 5.1.3.1.

5.1.3.6 Unknown Small Pumper Class Members are defined as: (1) those Persons or entities that are not identified on the list of known Small Pumper Class Members maintained by class counsel and supervised and controlled by the Court as of the Class Closure Date; and (2) any unidentified households existing on a Small Pumper Class Member parcel prior to the Class Closure Date. Within ten (10) Court days of the Class Closure Date, class counsel for the Small Pumper Class shall publish to the Court website and file with the Court a list of the known Small Pumper Class Members.

5.1.3.7 Given the limited number of additions to the Small Pumper Class during the more than five Years since the initial notice was provided to the Class, the Court finds that the number of potentially unknown Small Pumper Class Members and their associated water use is likely very low, and any Production by unknown Small Pumper Class Members is hereby deemed to be *de minimis* in the context of this Physical Solution and shall not alter the Production Rights decreed in this Judgment. However, whenever the identity of any unknown Small Pumper Class Member becomes known, that Small Pumper Class Member shall be bound by all provisions of this Judgment, including without limitation, the assessment obligations applicable to Small Pumper Class Members.

5.1.3.8 In recognition of his service as class representative, Richard Wood has a Production Right of up to five 5 acre-feet per Year for reasonable and beneficial use on his parcel free of Replacement Water Assessment. This Production Right shall not be transferable and is otherwise subject to the provisions of this Judgment.

5.1.4 Federal Reserved Water Right. The United States has a right to Produce 7,600 acre-feet per Year from the Native Safe Yield as a Federal Reserved Water Right for use for military purposes at Edwards Air Force Base and Air Force Plant 42. *See Cappaert v. United States*, 426 U.S. 128, 138 (1976); *United States v. New Mexico*, 438 U.S. 696, 700 (1978). Maps of the boundaries of Edwards Air Force Base and Plant 42 are attached hereto as Exhibits 6 and 7. The United States may Produce any or all of this water at any time for uses consistent with the purposes of its Federal Reserved Water Right. Water uses at Edwards Air Force Base and

Plant 42 as of the date of this Judgment are consistent with the military purposes of the facilities. The Federal Reserved Water Right to Produce 7,600 acre-feet per Year is not subject to Rampdown or any reduction including Pro-Rata Reduction due to Overdraft.

5.1.4.1 In the event the United States does not Produce its entire 7,600 acre-feet in any given Year, the unused amount in any Year will be allocated to the Non-Overlying Production Rights holders, except for Boron Community Services District and West Valley County Water District, in the following Year, in proportion to Production Rights set forth in Exhibit 3. This Production of unused Federal Reserved Water Right Production does not increase any Non-Overlying Production Right holder's decreed Non-Overlying Production Right amount or percentage, and does not affect the United States' ability to fully Produce its Federal Reserved Water Right as provided in Paragraph 5.1.4 in any subsequent Year. Upon entry of a judgment confirming its Federal Reserved Water Rights consistent with this Judgment, the United States waives any rights under State law to a correlative share of the Groundwater in the Basin underlying Edwards Air Force Base and Air Force Plant 42.

5.1.4.2 The United States is not precluded from acquiring State law based Production Rights in excess of its Federal Reserved Water Right through the acquisition of Production Rights in the Basin.

5.1.5 State of California Production Rights. The State of California shall have a Production Right of 207 acre-feet per Year from the Native Safe Yield and shall have the additional right to Produce Native Safe Yield as set forth in Paragraphs 5.1.5.3 and 5.1.5.4 below. This Production of Native Safe Yield shall not be subject to Pro-Rata Reduction. Any Production by the State of California above 207 acre-feet per Year that is not Produced pursuant to Paragraphs 5.1.5.3 and 5.1.5.4 below shall be subject to Replacement Assessments. All Production by the State of California shall also be subject to the Administrative Assessment and the Balance Assessment except in emergency situations as provided in Paragraph 5.1.5.4.3 below. Any Production of Native Safe Yield pursuant to Paragraphs 5.1.5.3 and 5.1.5.4 below shall not reduce any other Party's Production Rights pursuant to this Judgment.

5.1.5.1 The State of California's Production Right in the amount of 207 acre-feet per Year is allocated separately to each of the State agencies, departments, and associations as listed below in Paragraph 5.1.5.2. Notwithstanding the separate allocations, any Production Right, or portion thereof, of one of the State agencies, departments, and associations may be transferred or used by the other State agencies, departments, and associations on parcels within the Basin. This transfer shall be done by agreement between the State agencies, departments, or associations without a Replacement Water Assessment and without the need for Watermaster approval. Prior to the transfer of another State agency, department, or association's Production Right, the State agency, department, or association receiving the ability to use the Production Right shall obtain written consent from the transferor. Further, the State agency, department, or association receiving the Production Right shall notify the Watermaster of the transfer.

5.1.5.2 The Production Rights are allocated as follows and may be exercised by the following nine (9) State agencies:

5.1.5.2.1 The California Department of Water Resources-104 acre- feet per Year.

5.1.5.2.2 The California Department of Parks and Recreation-9 acre-feet per Year.

5.1.5.2.3 The California Department of Transportation -47 acre-feet per Year.

5.1.5.2.4 The California State Lands Commission-3 acre-feet per Year

5.1.5.2.5 The California Department of Corrections and Rehabilitation-3 acre-feet per Year.

5.1.5.2.6 The 50th District Agricultural Association-32 acre-feet per Year.

5.1.5.2.7 The California Department of Veteran Affairs-3 acre-feet per Year.

5.1.5.2.8 The California Highway Patrol -3 acre- feet per Year.

5.1.5.2.9 The California Department of Military-3 acre-feet per Year.

5.1.5.3 If at any time, the amount of water supplied to the State of California by District No. 40, AVEK, or Rosamond Community Service District is no longer available or no longer available at reasonable rates to the State of California, the State of California shall have the additional right to Produce Native Safe Yield to meet its reasonable and beneficial needs up to 787 acre-feet per Year, the amount provided by District No. 40, AVEK and Rosamond Community Services District to the State of California in the Year 2013.

5.1.5.4 The following provisions will also apply to each specific agency listed below:

5.1.5.4.1 California Department of Corrections & Rehabilitation (CDCR). In addition to its Production Right pursuant to Paragraphs 5.1.5.2.5 and 5.1.5.3, CDCR may also pump Groundwater: (1) to the extent necessary to conduct periodic maintenance of its well pumping equipment; and (2) as a supplementary source of drinking water or as an emergency back-up supply as set forth in Water Code section 55338.

5.1.5.4.2 California Department of Water Resources (DWR). In addition to its Production pursuant to Paragraphs 5.1.5.2.1 and 5.1.5.3 above, DWR may also pump Native Safe Yield from the area adjacent to and beneath the California Aqueduct and related facilities at a time and in an amount it determines is reasonably necessary to protect the physical integrity of the California Aqueduct and related facilities from high Groundwater. Further, notwithstanding provisions of this Judgment prohibiting the export of Native Safe Yield from the Basin, DWR may place the Native Safe Yield that it pumps for the protection of the California Aqueduct into the California Aqueduct, whether or not such Native Safe Yield is

ultimately returned to the Basin. However, DWR and AVEK shall use their best efforts to enter into an agreement allowing AVEK to recapture the Native Safe Yield DWR puts into the California Aqueduct and return it to the Basin.

5.1.5.4.3 Department of Military. The Department of Military may Produce additional Groundwater in an amount necessary to protect and promote public health and safety during an event deemed to be an emergency by the Department of Military pursuant to California Government Code sections 8567 and 8571, and California Military and Veterans Code sections 143 and 146. Such Production shall be free from any assessment, including any Administrative, Balance, or Replacement Water Assessment.

5.1.5.4.4 The California Department of Veterans Affairs. The California Department of Veteran Affairs has begun the expansion and increased occupancy project of the Veterans Home of California – Lancaster facility owned by the State of California by and on behalf of the California Department of Veterans Affairs. The California Department of Veterans Affairs fully expects that it will be able to purchase up to an additional 40 acre-feet per Year for use at this facility from District No. 40.

5.1.6 Non-Overlying Production Rights. The Parties listed in Exhibit 3 have Production Rights in the amounts listed in Exhibit 3. Exhibit 3 is attached hereto, and incorporated herein by reference. Non-Overlying Production Rights are subject to Pro-Rata Reduction or Increase only pursuant to Paragraph 18.5.10.

5.1.7 City of Lancaster. The City of Lancaster ("Lancaster") can Produce up to 500 acre-feet of Groundwater for reasonable and beneficial uses at its National Soccer Complex. Such production shall only be subject to Administrative Assessment and no other assessments. Lancaster will stop Producing Groundwater and will use Recycled Water supplied from District No. 40, when it becomes available, to meet the reasonable and beneficial water uses of the National Soccer Complex. Lancaster may continue to Produce up to 500 acre-feet of Groundwater until Recycled Water becomes available to serve the reasonable and beneficial water uses of the National Soccer Complex. Nothing in this paragraph shall be

construed as requiring Lancaster to have any responsibility for constructing, or in any way contributing to the cost of, any infrastructure necessary to deliver Recycled Water to the National Soccer Complex.

5.1.8 Antelope Valley Joint Union High School District. Antelope Valley Joint Union High School District is a public school entity duly organized and existing under the laws of the State of California. In addition to the amounts allocated to Antelope Valley Joint Union High School District ("AVJUHSD") and pursuant to Exhibit 4, AVJUHSD can additionally produce up to 29 acre-feet of Groundwater for reasonable and beneficial uses on its athletic fields and other public spaces. When recycled water becomes available to Quartz Hill High School (located at 6040 West Avenue L, Quartz Hill, CA 93535) which is a site that is part of AVJUHSD, at a price equal to or less than the lowest cost of any of the following: Replacement Obligation, Replacement Water, or other water that is delivered to AVJUHSD at Quartz Hill High School, AVJUHSD will stop producing the 29 acre-feet of Groundwater allocated to it and use recycled water as a replacement to its 29 acre-feet production. AVJUHSD retains its production rights and allocation pursuant to Exhibit 4 of this Judgment.

5.1.9 Construction of Solar Power Facilities. Any Party may Produce Groundwater in excess of its Production Right allocated to it in Exhibit 4 for the purpose of constructing a facility located on land overlying the Basin that will generate, distribute or store solar power through and including December 31, 2016 and shall not be charged a Replacement Water Assessment or incur a Replacement Obligation for such Production in excess of its Production Rights. Any amount of such production in excess of the Production Right through and including December 31, 2016 shall be reasonable to accomplish such construction but shall not exceed 500 acre-feet per Year for all Parties using such water.

5.1.10 Production Rights Claimed by Non-Stipulating Parties. Any claim to a right to Produce Groundwater from the Basin by a Non-Stipulating Party shall be subject to procedural or legal objection by any Stipulating Party. Should the Court, after taking evidence, rule that a Non-Stipulating Party has a Production Right, the Non-Stipulating Party

shall be subject to all provisions of this Judgment, including reduction in Production necessary to implement the Physical Solution and the requirements to pay assessments, but shall not be entitled to benefits provided by Stipulation, including but not limited to Carry Over pursuant to Paragraph 15 and Transfers pursuant to Paragraph 16. If the total Production by Non-Stipulating Parties is less than seven percent (7%) of the Native Safe Yield, such Production will be addressed when Native Safe Yield is reviewed pursuant to Paragraph 18.5.9. If the total Production by Non-Stipulating Parties is greater than seven percent (7%) of the Native Safe Yield, the Watermaster shall determine whether Production by Non-Stipulating Parties would cause Material Injury, in which case the Watermaster shall take action to mitigate the Material Injury, including, but not limited to, imposing a Balance Assessment, provided however, that the Watermaster shall not recommend any changes to the allocations under Exhibits 3 and 4 prior to the redetermination of Native Safe Yield pursuant to Paragraph 18.5.9. In all cases, however, whenever the Watermaster re-determines the Native Safe Yield pursuant to Paragraph 18.5.9, the Watermaster shall take action to prevent Native Safe Yield Production from exceeding the Native Safe Yield on a long-term basis.

5.2 Rights to Imported Water Return Flows.

5.2.1 Rights to Imported Water Return Flows. Return Flows from Imported Water used within the Basin which net augment the Basin Groundwater supply are not a part of the Native Safe Yield. Subject to review pursuant to Paragraph 18.5.11, Imported Water Return Flows from Agricultural Imported Water use are 34% and Imported Water Return Flows from Municipal and Industrial Imported Water use are 39% of the amount of Imported Water used.

5.2.2 Water Imported Through AVEK. The right to Produce Imported Water Return Flows from water imported through AVEK belongs exclusively to the Parties identified on Exhibit 8, attached hereto, and incorporated herein by reference. Each Party shown on Exhibit 8 shall have a right to Produce an amount of Imported Water Return Flows in any Year equal to the applicable percentage multiplied by the average amount of Imported Water used

by that Party within the Basin in the preceding five Year period (not including Imported Stored Water in the Basin). Any Party that uses Imported Water on lands outside the Basin but within the watershed of the Basin shall be entitled to Produce Imported Water Return Flows to the extent such Party establishes to the satisfaction of the Watermaster the amount that its Imported Water Return Flows augment the Basin Groundwater supply. This right shall be in addition to that Party's Overlying or Non-Overlying Production Right. Production of Imported Water Return Flows is not subject to the Replacement Water Assessment. All Imported Water Return Flows from water imported through AVEK and not allocated to Parties identified in Exhibit 8 belong exclusively to AVEK, unless otherwise agreed by AVEK. Notwithstanding the foregoing, Boron Community Services District shall have the right to Produce Imported Water Return Flows, up to 78 acre-feet annually, based on the applicable percentage multiplied by the average amount of Imported Water used by Boron Community Services District outside the Basin, but within its service area in the preceding five Year period (not including Imported Stored Water in the Basin) without having to establish that the Imported Water Return Flows augment the Basin Groundwater supply.

5.2.3 Water Not Imported Through AVEK. After entry of this Judgment, a Party other than AVEK that brings Imported Water into the Basin from a source other than AVEK shall notify the Watermaster each Year quantifying the amount and uses of the Imported Water in the prior Year. The Party bringing such Imported Water into the Basin shall have a right to Produce an amount of Imported Water Return Flows in any Year equal to the applicable percentage set forth above multiplied by the average annual amount of Imported Water used by that Party within the Basin in the preceding five Year period (not including Imported Stored Water in the Basin).

5.3 Rights to Recycled Water. The owner of a waste water treatment plant operated for the purpose of treating wastes from a sanitary sewer system shall hold the exclusive right to the Recycled Water as against anyone who has supplied the water discharged into the waste water collection and treatment system. At the time of this Judgment those Parties that

produce Recycled Water are Los Angeles County Sanitation Districts No. 14 and No. 20, Rosamond Community Services District, and Edwards Air Force Base. Nothing in this Judgment affects or impairs this ownership or any existing or future agreements for the use of Recycled Water within the Basin.

6. INJUNCTION

6.1 Injunction Against Unauthorized Production. Each and every Party, its officers, directors, agents, employees, successors, and assigns, except for the United States, is ENJOINED AND RESTRAINED from Producing Groundwater from the Basin except pursuant to this Judgment. Without waiving or foreclosing any arguments or defenses it might have, the United States agrees that nothing herein prevents or precludes the Watermaster or any Party from seeking to enjoin the United States from Producing water in excess of its 7,600 acre-foot per Year Reserved Water Right if and to the extent the United States has not paid the Replacement Assessments for such excess Production or entered into written consent to the imposition of Replacement Assessments as described in Paragraph 9.2.

6.2 Injunction Re Change in Purpose of Use Without Notice to The Watermaster. Each and every Party, its officers, directors, agents, employees, successors, and assigns, is ENJOINED AND RESTRAINED from changing its Purpose of Use of Groundwater at any time without notifying the Watermaster.

6.3 Injunction Against Unauthorized Capture of Stored Water. Each and every Party, its officers, directors, agents, employees, successors and assigns, is ENJOINED AND RESTRAINED from claiming any right to Produce the Stored Water that has been recharged in the Basin, except pursuant to a Storage Agreement with the Watermaster, and as allowed by this Judgment, or pursuant to water banking operations in existence and operating at the time of this Judgment as identified in Paragraph 14. This Paragraph does not prohibit Parties from importing water into the Basin for direct use, or from Producing or using Imported Water Return Flows owned by such Parties pursuant to Paragraph 5.2.

6.4 Injunction Against Transportation From Basin. Except upon further order of the Court, each and every Party, its officers, agents, employees, successors and assigns, is ENJOINED AND RESTRAINED from transporting Groundwater hereafter Produced from the Basin to areas outside the Basin except as provided for by the following. The United States may transport water Produced pursuant to its Federal Reserved Water Right to any portion of Edwards Air Force Base, whether or not the location of use is within the Basin. This injunction does not prevent Saint Andrew's Abbey, Inc., U.S. Borax and Tejon Ranchcorp/Tejon Ranch Company from conducting business operations on lands both inside and outside the Basin boundary, and transporting Groundwater Produced consistent with this Judgment for those operations and for use on those lands outside the Basin and within the watershed of the Basin as shown in Exhibit 9. This injunction also does not apply to any California Aqueduct protection dewatering Produced by the California Department of Water Resources. This injunction does not apply to the recovery and use of stored Imported Water by any Party that stores Imported Water in the Basin pursuant to Paragraph 14 of this Judgment.

6.4.1 Export by Boron and Phelan Piñon Hills Community Services Districts.

6.4.1.1 The injunction does not prevent Boron Community Services District from transporting Groundwater Produced consistent with this Judgment for use outside the Basin, provided such water is delivered within its service area.

6.4.1.2 The injunction does not apply to any Groundwater Produced within the Basin by Phelan Piñon Hills Community Services District and delivered to its service areas, so long as the total Production does not exceed 1,200 acre-feet per Year, such water is available for Production without causing Material Injury, and the District pays a Replacement Water Assessment pursuant to Paragraph 9.2, together with any other costs deemed necessary to protect Production Rights decreed herein, on all water Produced and exported in this manner.

6.5 Continuing Jurisdiction. The Court retains and reserves full jurisdiction, power and authority for the purpose of enabling the Court, upon a motion of a Party or Parties

noticed in accordance with the notice procedures of Paragraph 20.6 hereof, to make such further or supplemental order or directions as may be necessary or appropriate to interpret, enforce, administer or carry out this Judgment and to provide for such other matters as are not contemplated by this Judgment and which might occur in the future, and which if not provided for would defeat the purpose of this Judgment.

III. PHYSICAL SOLUTION

7. GENERAL

7.1 Purpose and Objective. The Court finds that the Physical Solution incorporated as part of this Judgment: (1) is a fair and equitable basis for satisfaction of all water rights in the Basin; (2) is in furtherance of the State Constitution mandate and the State water policy; and (3) takes into account water rights priorities, applicable public trust interests and the Federal Reserved Water Right. The Court finds that the Physical Solution establishes a legal and practical means for making the maximum reasonable and beneficial use of the waters of the Basin by providing for the long-term Conjunctive Use of all available water in order to meet the reasonable and beneficial use requirements of water users in the Basin. Therefore, the Court adopts, and orders the Parties to comply with this Physical Solution.

7.2 Need For Flexibility. This Physical Solution must provide flexibility and adaptability to allow the Court to use existing and future technological, social, institutional, and economic options in order to maximize reasonable and beneficial water use in the Basin.

7.3 General Pattern of Operations. A fundamental premise of the Physical Solution is that all Parties may Produce sufficient water to meet their reasonable and beneficial use requirements in accordance with the terms of this Judgment. To the extent that Production by a Producer exceeds such Producer's right to Produce a portion of the Total Safe Yield as provided in this Judgment, the Producer will pay a Replacement Water Assessment to the Watermaster and the Watermaster will provide Replacement Water to replace such excess production according to the methods set forth in this Judgment.

7.4 Water Rights. A Physical Solution for the Basin based upon a declaration of water rights and a formula for allocation of rights and obligations is necessary to implement the mandate of Article X, section 2 of the California Constitution. The Physical Solution requires quantifying the Producers' rights within the Basin in a manner which will reasonably allocate the Native Safe Yield and Imported Water Return Flows and which will provide for sharing Imported Water costs. Imported Water sources are or will be available in amounts which, when combined with water conservation, water reclamation, water transfers, and improved conveyance and distribution methods within the Basin, will be sufficient in quantity and quality to assure implementation of the Physical Solution. Sufficient information and data exists to allocate existing water supplies, taking into account water rights priorities, within the Basin and as among the water users. The Physical Solution provides for delivery and equitable distribution of Imported Water to the Basin.

8. RAMPDOWN

8.1 Installation of Meters. Within two (2) Years from the entry of this Judgment all Parties other than the Small Pumper Class shall install meters on their wells for monitoring Production. Each Party shall bear the cost of installing its meter(s). Monitoring or metering of Production by the Small Pumper Class shall be at the discretion of the Watermaster, subject to the provisions of Paragraph 5.1.3.2.

8.2 Rampdown Period. The "Rampdown Period" is seven Years beginning on the January 1 following entry of this Judgment and continuing for the following seven (7) Years.

8.3 Reduction of Production During Rampdown. During the first two Years of the Rampdown Period no Producer will be subject to a Replacement Water Assessment. During Years three through seven of the Rampdown Period, the amount that each Party may Produce from the Native Safe Yield will be progressively reduced, as necessary, in equal annual increments, from its Pre-Rampdown Production to its Production Right. Except as is determined to be exempt during the Rampdown period pursuant to the Drought Program provided for in

Paragraph 8.4, any amount Produced over the required reduction shall be subject to Replacement Water Assessment. The Federal Reserved Water Right is not subject to Rampdown.

8.4 Drought Program During Rampdown for Participating Public Water Suppliers. During the Rampdown period a drought water management program ("Drought Program") will be implemented by District No. 40, Quartz Hill Water District, Littlerock Creek Irrigation District, California Water Service Company, Desert Lake Community Services District, North Edwards Water District, City of Palmdale, and Palm Ranch Irrigation District, (collectively, "Drought Program Participants"), as follows:

8.4.1 During the Rampdown period, District No. 40 agrees to purchase from AVEK each Year at an amount equal to 70 percent of District No. 40's total annual demand if that amount is available from AVEK at no more than the then current AVEK treated water rate. If that amount is not available from AVEK, District No. 40 will purchase as much water as AVEK makes available to District No. 40 at no more than the then current AVEK treated water rate. Under no circumstances will District No. 40 be obligated to purchase more than 50,000 acre-feet of water annually from AVEK. Nothing in this Paragraph affects AVEK's water allocation procedures as established by its Board of Directors and AVEK's Act.

8.4.2 During the Rampdown period, the Drought Program Participants each agree that, in order to minimize the amount of excess Groundwater Production in the Basin, they will use all water made available by AVEK at no more than the then current AVEK treated water rate in any Year in which they Produce Groundwater in excess of their respective rights to Produce Groundwater under this Judgment. During the Rampdown period, no Production by a Drought Program Participant shall be considered excess Groundwater Production exempt from a Replacement Water Assessment under this Drought Program unless a Drought Program Participant has utilized all water supplies available to it including its Production Right to Native Safe Yield, Return Flow rights, unused Production allocation of the Federal Reserved Water Rights, Imported Water, and Production rights previously transferred from another party. Likewise, no Production by a Drought Program Participant will be considered excess

Groundwater Production exempt from a Replacement Water Assessment under this Drought Program in any Year in which the Drought Program Participant has placed water from such sources described in this Paragraph 8.4.2 into storage or has transferred such water to another Person or entity.

8.4.3 During the Rampdown period, the Drought Program Participants will be exempt from the requirement to pay a Replacement Water Assessment for Groundwater Production in excess of their respective rights to Produce Groundwater under this Judgment up to a total of 40,000 acre-feet over the Rampdown Period with a maximum of 20,000 acre-feet in any single Year for District No. 40 and a total of 5,000 acre-feet over the Rampdown Period for all other Drought Program Participants combined. During any Year that excess Groundwater is produced under this Drought Program, all Groundwater Production by the Drought Program Participants will be for the purpose of a direct delivery to customers served within their respective service areas and will not be transferred to other users within the Basin.

8.4.4 Notwithstanding the foregoing, the Drought Program Participants remain subject to the Material Injury limitation as provided in this Judgment.

8.4.5 Notwithstanding the foregoing, the Drought Program Participants remain subject to a Balance Assessment as provided in Paragraph 9.3 of this Judgment.

9. ASSESSMENTS.

9.1 Administrative Assessment. Administrative Assessments to fund the Administrative Budget adopted by the Watermaster shall be levied uniformly on an annual basis against (1) each acre foot of a Party's Production Right as described in Paragraph 5.1, (2) each acre foot of a Party's right to Produce Imported Water Return Flows as determined pursuant to Paragraph 5.2, (3) each acre foot of a Party's Production for which a Replacement Water Assessment has been imposed pursuant to Paragraph 9.2, and (4) during the Rampdown, each acre foot of a Party's Production in excess of (1)-(3), above, excluding Production from Stored Water and/or Carry Over water, except that the United States shall be subject to the Administrative Assessment only on the actual Production of the United States. During the

Rampdown the Administrative Assessment shall be no more than five (5) dollars per acre foot, or as ordered by the Court upon petition of the Watermaster. Non-Overlying Production Rights holders using the unused Production allocation of the Federal Reserved Water Right shall be subject to Administrative Assessments on water the Non-Overlying Production Rights holders Produce pursuant to Paragraph 5.1.4.1.

9.2 Replacement Water Assessment. In order to ensure that each Party may fully exercise its Production Right, there will be a Replacement Water Assessment. Except as is determined to be exempt during the Rampdown period pursuant to the Drought Program provided for in Paragraph 8.4, the Watermaster shall impose the Replacement Water Assessment on any Producer whose Production of Groundwater from the Basin in any Year is in excess of the sum of such Producer's Production Right and Imported Water Return Flow available in that Year, provided that no Replacement Water Assessment shall be imposed on the United States except upon the United States' written consent to such imposition based on the appropriation by Congress, and the apportionment by the Office of Management and Budget, of funds that are available for the purpose of, and sufficient for, paying the United States' Replacement Water Assessment. The Replacement Water Assessment shall not be imposed on the Production of Stored Water, In-Lieu Production or Production of Imported Water Return Flows. The amount of the Replacement Water Assessment shall be the amount of such excess Production multiplied by the cost to the Watermaster of Replacement Water, including any Watermaster spreading costs. All Replacement Water Assessments collected by the Watermaster shall be used to acquire Imported Water from AVEK, Littlerock Creek Irrigation District, Palmdale Water District, or other entities. AVEK shall use its best efforts to acquire as much Imported Water as possible in a timely manner. If the Watermaster encounters delays in acquiring Imported Water which, due to cost increases, results in collected assessment proceeds being insufficient to purchase all Imported Water for which the Assessments were made, the Watermaster shall purchase as much water as the proceeds will allow when the water becomes available. If available Imported Water is insufficient to fully meet the Replacement Water obligations under contracts, the Watermaster

shall allocate the Imported Water for delivery to areas on an equitable and practicable basis pursuant to the Watermaster rules and regulations.

9.2.1 The Non-Pumper Class Stipulation of Settlement, executed by its signatories and approved by the Court in the Non-Pumper Class Judgment, specifically provides for imposition of a Replacement Water Assessment on Non-Pumper Class members. This Judgment is consistent with the Non-Pumper Class Stipulation of Settlement and Judgment. The Non-Pumper Class members specifically agreed to pay a replacement assessment if that member produced "more than its annual share" of the Native Safe Yield less the amount of the Federal Reserved Right. (See Appendix B at paragraph V., section D. Replacement Water.) In approving the Non-Pumper Class Stipulation of Settlement this Court specifically held in its Order after Hearing dated November 18, 2010, that "the court determination of physical solution cannot be limited by the Class Settlement." The Court also held that the Non-Pumper Class Stipulation of Settlement "may not affect parties who are not parties to the settlement."

9.2.2 Evidence presented to the Court demonstrates that Production by one or more Public Water Suppliers satisfies the elements of prescription and that Production by overlying landowners during portion(s) of the prescriptive period exceeded the Native Safe Yield. At the time of this Judgment the entire Native Safe Yield is being applied to reasonable and beneficial uses in the Basin. Members of the Non-Pumper Class do not and have never Produced Groundwater for reasonable beneficial use as of the date of this Judgment. Pursuant to *Pasadena v. Alhambra* (1949) 33 Cal 2d 908, 931-32 and other applicable law, the failure of the Non-Pumper Class members to Produce any Groundwater under the facts here modifies their rights to Produce Groundwater except as provided in this Judgment. Because this is a comprehensive adjudication pursuant to the McCarran Amendment, consistent with the California Supreme Court decisions, including *In Re Waters of Long Valley Creek Stream System* (1979) 25 Cal. 3d 339, this Court makes the following findings: (1) certainty fosters reasonable and beneficial use of water and is called for by the mandate of Article X, section 2; (2) because of this mandate for certainty and in furtherance of the Physical Solution, any New Production, including that by a

member of the Non-Pumper Class must comply with the New Production Application Procedure specified in Paragraph 18.5.13; (3) as of this Judgment no member of the Non-Pumper Class has established a Production Right to the reasonable and beneficial use of Groundwater based on their unexercised claim of right to Produce Groundwater; (4) if in the future a member of the Non-Pumper Class proposes to Produce Groundwater for reasonable and beneficial use, the Watermaster as part of the New Production Application Procedure, has the authority to determine whether such a member has established that the proposed New Production is a reasonable and beneficial use in the context of other existing uses of Groundwater and then-current Basin conditions; and (5) the Watermaster's determinations as to the approval, scope, nature and priority of any New Production is reasonably necessary to the promotion of the State's interest in fostering the most reasonable and beneficial use of its scarce water resources. All provisions of this Judgment regarding the administration, use and enforcement of the Replacement Water Assessment shall apply to each Non-Pumper Class member that Produces Groundwater. Prior to the commencement of Production, each Producing Non-Pumper Class member shall install a meter and report Production to the Watermaster. The Court finds that this Judgment is consistent with the Non-Pumper Stipulation of Settlement and Judgment.

9.3 Balance Assessment. In order to ensure that after Rampdown each Party may fully exercise its Production Right, there may be a Balance Assessment imposed by the Watermaster. The Balance Assessment shall be assessed on all Production Rights, excluding the United States' actual Production, but including that portion of the Federal Reserved Right Produced by other Parties, in an amount determined by the Watermaster. A Balance Assessment may not be imposed until after the end of the Rampdown. In determining whether to adopt a Balance Assessment, and in what amount, the Watermaster Engineer shall consider current Basin conditions as well as then-current pumping existing after Rampdown exclusive of any consideration of an effect on then-current Basin conditions relating to Production of Groundwater pursuant to the Drought Program which occurred during the Rampdown, and shall only assess a

Balance Assessment or curtail a Party's Production under section 9.3.4 below, to avoid or mitigate Material Injury that is caused by Production after the completion of the Rampdown.

9.3.1 Any proceeds of the Balance Assessment will be used to purchase, deliver, produce in lieu, or arrange for alternative pumping sources of water in the Basin, but shall not include infrastructure costs.

9.3.2 The Watermaster Engineer shall determine and collect from any Party receiving direct benefit of the Balance Assessment proceeds an amount equal to that Party's avoided Production costs.

9.3.3 The Balance Assessment shall not be used to benefit the United States unless the United States participates in paying the Balance Assessment.

9.3.4 The Watermaster Engineer may curtail the exercise of a Party's Production Right under this Judgment, except the United States' Production, if it is determined necessary to avoid or mitigate a Material Injury to the Basin and provided that the Watermaster provides an equivalent quantity of water to such Party as a substitute water supply, with such water paid for from the Balance Assessment proceeds.

10. SUBAREAS. Subject to modification by the Watermaster the following Subareas are recognized:

10.1 Central Antelope Valley Subarea. The Central Antelope Valley Subarea is the largest of the five Subareas and underlies Rosamond, Quartz Hill, Lancaster, Edwards AFB and much of Palmdale. This Subarea also contains the largest amount of remaining agricultural land use in the Basin. The distinctive geological features of the Central Antelope Valley Subarea are the presence of surficial playa and pluvial lake deposits; the widespread occurrence of thick, older pluvial lake bed deposits; and alluvial deposits from which Groundwater is produced above and below the lake bed deposits. The Central Antelope Valley Subarea is defined to be east of the largely buried ridge of older granitic and tertiary rocks exposed at Antelope Buttes and extending beyond Little Buttes and Tropico Hill. The Central Subarea is defined to be southwest and

northeast of the extension of the Buttes Fault, and northwest of an unnamed fault historically identified from Groundwater level differences, as shown on Exhibit 10.

10.2 **West Antelope Valley Subarea**. The West Antelope Valley Subarea is the second largest subarea. The area is characterized by a lack of surficial lake bed deposits, and little evidence of widespread subsurface lake beds, and thick alluvial deposits. The Western Antelope Valley Subarea is defined to be south of the Willow Springs-Cottonwood Fault and west of a largely buried ridge of older granitic and tertiary rocks that are exposed at Antelope Buttes and Little Buttes, and continue to Tropico Hill, as shown on Exhibit 10.

10.3 **South East Subarea**. The South East Subarea is characterized by granitic buttes to the north, shallow granitic rocks in the southwest, and a lack of lake bed deposits. The South East Subarea is defined to encompass the remainder of the Basin from the unnamed fault between the Central and South East subareas, to the county-line boundary of the Basin. Notably, this area contains Littlerock and Big Rock creeks that emanate from the mountains to the south and discharge onto the valley floor.

10.4 **Willow Springs Subarea.** The Willow Springs Subarea is separated from the West Antelope Subarea primarily because the Willow Springs fault shows some signs of recent movement and there is substantial Groundwater hydraulic separation between the two adjacent areas, suggesting that the fault significantly impedes Groundwater flow from the Willow Springs to the lower West Antelope Subarea. Otherwise, the Willow Springs Subarea is comparable in land use to the West Antelope Subarea, with some limited agricultural land use and no municipal development, as shown on Exhibit 10.

10.5 **Rogers Lake Subarea**. The Rogers Lake Subarea is characterized by surficial pluvial Lake Thompson and playa deposits, and a narrow, fault-bound, central trough filled with alluvial deposits. The area is divided into north and south subareas on opposite sides of a buried ridge of granite rock in the north lake, as shown on Exhibit 10.

11. INCREASE IN PRODUCTION BY THE UNITED STATES.

11.1 Notice of Increase of Production Under Federal Reserved Water Right. After the date of entry of this Judgment, the United States shall provide the Watermaster with at least ninety (90) days advanced notice if Production by the United States is reasonably anticipated to increase more than 200 acre-feet per Year in a following 12 month period.

11.2 Water Substitution to Reduce Production by United States. The United States agrees that maximizing Imported Water is essential to improving the Basin's health and agrees that its increased demand can be met by either increasing its Production or by accepting deliveries of Imported Water of sufficient quality to meet the purpose of its Federal Reserved Water Right under the conditions provided for herein. Any Party may propose a water substitution or replacement to the United States to secure a reduction in Groundwater Production by the United States. Such an arrangement would be at the United States' sole discretion and subject to applicable federal law, regulations and other requirements. If such a substitution or replacement arrangement is agreed upon, the United States shall reduce Production by the amount of Replacement Water provided to it, and the Party providing such substitution or replacement of water to the United States may Produce a corresponding amount of Native Safe Yield free from Replacement Water Assessment in addition to their Production Right.

12. MOVEMENT OF PUBLIC WATER SUPPLIERS PRODUCTION FACILITIES.

12.1 No Requirement to Move Public Water Suppliers' Production Wells. One or more of the Public Water Suppliers intend to seek Federal or State legislation to pay for all costs related to moving the Public Water Suppliers Production wells to areas that will reduce the impact of Public Water Supplier Production on the United States' current Production wells. The Public Water Suppliers shall have no responsibility to move any Production wells until Federal or State legislation fully funding the costs of moving the wells is effective or until required to do so by order of this Court which order shall not be considered or made by this Court until the seventeenth (17th) Year after entry of this Judgment. The Court may only make such an order if it finds that the Public Water Supplier Production from those wells is causing Material

Injury. The Court shall not impose the cost of moving the Public Water Supplier Production Facilities on any non-Public Water Supplier Party to this Judgment.

13. FEDERAL APPROVAL. This Judgment is contingent on final approval by the Department of Justice. Such approval will be sought upon final agreement of the terms of this Judgment by the settling Parties. Nothing in this Judgment shall be interpreted or construed as a commitment or requirement that the United States obligate or pay funds in contravention of the Anti-Deficiency Act, 31 U.S.C. § 1341, or any other applicable provision of law. Nothing in this Judgment, specifically including Paragraphs 9.1, 9.2 and 9.3, shall be construed to deprive any federal official of the authority to revise, amend, or promulgate regulations. Nothing in this Judgment shall be deemed to limit the authority of the executive branch to make recommendations to Congress on any particular piece of legislation. Nothing in this Judgment shall be construed to commit a federal official to expend federal funds not appropriated by Congress. To the extent that the expenditure or advance of any money or the performance of any obligation of the United States under this Judgment is to be funded by appropriation of funds by Congress, the expenditure, advance, or performance shall be contingent upon the appropriation of funds by Congress that are available for this purpose and the apportionment of such funds by the Office of Management and Budget and certification by the appropriate Air Force official that funding is available for this purpose, and an affirmative obligation of the funds for payment made by the appropriate Air Force official. No breach of this Judgment shall result and no liability shall accrue to the United States in the event such funds are not appropriated or apportioned.

14. STORAGE. All Parties shall have the right to store water in the Basin pursuant to a Storage Agreement with the Watermaster. If Littlerock Creek Irrigation District or Palmdale Water District stores Imported Water in the Basin it shall not export from its service area that Stored Water. AVEK, Littlerock Creek Irrigation District or Palmdale Water District may enter into exchanges of their State Water Project "Table A" Amounts. Nothing in this Judgment limits or modifies operation of preexisting banking projects (including AVEK, District No. 40, Antelope Valley Water Storage LLC, Tejon Ranchcorp and Tejon Ranch Company, Sheep Creek Water

Co., Rosamond Community Services District and Palmdale Water District) or performance of preexisting exchange agreements of the Parties. The Watermaster shall promptly enter into Storage Agreements with the Parties at their request. The Watermaster shall not enter into Storage Agreements with non-Parties unless such non-Parties become expressly subject to the provisions of this Judgment and the jurisdiction of the Court. Storage Agreements shall expressly preclude operations which will cause a Material Injury on any Producer. If, pursuant to a Storage Agreement, a Party has provided for pre-delivery or post-delivery of Replacement Water for the Party's use, the Watermaster shall credit such water to the Party's Replacement Water Obligation at the Party's request. Any Stored Water that originated as State Water Project water imported by AVEK, Palmdale Water District or Littlerock Creek Irrigation District may be exported from the Basin for use in a portion of the service area of any city or public agency, including State Water Project Contractors, that are Parties to this action at the time of this Judgment and whose service area includes land outside the Basin. AVEK may export any of its Stored State Project Water to any area outside its jurisdictional boundaries and the Basin provided that all water demands within AVEK's jurisdictional boundaries are met. Any Stored Water that originated as other Imported Water may be exported from the Basin, subject to a requirement that the Watermaster make a technical determination of the percentage of the Stored Water that is unrecoverable and that such unrecoverable Stored Water is dedicated to the Basin.

15. CARRY OVER

15.1 In Lieu Production Right Carry Over. Any Producer identified in Paragraph 5.1.1, 5.1.5 and 5.1.6 can utilize In Lieu Production by purchasing Imported Water and foregoing Production of a corresponding amount of the annual Production of Native Safe Yield provided for in Paragraph 5 herein. In Lieu Production must result in a net reduction of annual Production from the Native Safe Yield in order to be entitled to the corresponding Carry Over benefits under this paragraph. In Lieu Production does not make additional water from the Native Safe Yield available to any other Producer. If a Producer foregoes pumping and uses Imported Water In Lieu of Production, the Producer may Carry Over its right to the unproduced portion of

its Production Right for up to ten (10) Years. A Producer must Produce its full current Year's Production Right before any Carry Over water is Produced. Carry Over water will be Produced on a first-in, first-out basis. At the end of the Carry Over period, the Producer may enter into a Storage Agreement with the Watermaster to store unproduced portions, subject to terms and conditions in the Watermaster's discretion. Any such Storage Agreements shall expressly preclude operations, including the rate and amount of extraction, which will cause a Material Injury to another Producer or Party, any subarea or the Basin. If not converted to a Storage Agreement, Carry Over water not Produced by the end of the tenth Year reverts to the benefit of the Basin and the Producer no longer has a right to the Carry Over water. The Producer may transfer any Carry Over water or Carry Over water stored pursuant to a Storage Agreement.

15.2 Imported Water Return Flow Carry Over. If a Producer identified in Paragraph 5.1.1, 5.1.5 and 5.1.6 fails to Produce its full amount of Imported Water Return Flows in the Year following the Year in which the Imported Water was brought into the Basin, the Producer may Carry Over its right to the unproduced portion of its Imported Water Return Flows for up to ten (10) Years. A Producer must Produce its full Production Right before any Carry Over water, or any other water, is Produced. Carry Over water will be Produced on a first-in, first-out basis. At the end of the Carry Over period, the Producer may enter into a Storage Agreement with the Watermaster to store unproduced portions, subject to terms and conditions in the Watermaster's discretion. Any such Storage Agreements shall expressly preclude operations, including the rate and amount of extraction, which will cause a Material Injury to another Producer or Party, any subarea or the Basin. If not converted to a Storage Agreement, Carry Over water not Produced by the end of the tenth Year reverts to the benefit of the Basin and the Producer no longer has a right to the Carry Over water. The Producer may transfer any Carry Over water or Carry Over water stored pursuant to a Storage Agreement.

15.3 Production Right Carry Over. If a Producer identified in Paragraph 5.1.1, 5.1.5 and 5.1.6 fails to Produce its full Production Right in any Year, the Producer may Carry Over its right to the unproduced portion of its Production Right for up to ten (10) Years. A

Producer must Produce its full Production Right before any Carry Over water, or any other water, is Produced. Carry Over water will be Produced on a first-in, first-out basis. At the end of the Carry Over period, the Producer may enter into a Storage Agreement with the Watermaster to store unproduced portions, subject to terms and conditions in the Watermaster's discretion. Any such Storage Agreements shall expressly preclude operations, including the rate and amount of extraction, which will cause a Material Injury to another Producer or Party, any subarea or the Basin. If not converted to a Storage Agreement, Carry Over water not Produced by the end of the tenth Year reverts to the benefit of the Basin and the Producer no longer has a right to the Carry Over water. The Producer may transfer any Carry Over water or Carry Over water stored pursuant to a Storage Agreement.

16. TRANSFERS.

16.1 When Transfers are Permitted. Pursuant to terms and conditions to be set forth in the Watermaster rules and regulations, and except as otherwise provided in this Judgment, Parties may transfer all or any portion of their Production Right to another Party so long as such transfer does not cause Material Injury. All transfers are subject to hydrologic review by the Watermaster Engineer.

16.2 Transfers to Non-Overlying Production Right Holders. Overlying Production Rights that are transferred to Non-Overlying Production Right holders shall remain on Exhibit 4 and be subject to adjustment as provided in Paragraph 18.5.10, but may be used anywhere in the transferee's service area.

16.3 Limitation on Transfers of Water by Antelope Valley United Mutuals Group. After the date of this Judgment, any Overlying Production Rights pursuant to Paragraph 5.1.1, rights to Imported Water Return Flows pursuant to Paragraph 5.2, rights to Recycled Water pursuant to Paragraph 5.3 and Carry Over water pursuant to Paragraph 15 (including any water banked pursuant to a Storage Agreement with the Watermaster) that are at any time held by any member of the Antelope Valley United Mutuals Group may only be transferred to or amongst other members of the Antelope Valley United Mutuals Group, except as provided in Paragraph

16.3.1. Transfers amongst members of the Antelope Valley United Mutuals Group shall be separately reported in the Annual Report of the Watermaster pursuant to Paragraphs 18.4.8 and 18.5.17. Transfers amongst members of the Antelope Valley United Mutuals Group shall not be deemed to constitute an abandonment of any member's non-transferred rights.

16.3.1 Nothing in Paragraph 16.3 shall prevent Antelope Valley United Mutuals Group members from transferring Overlying Production Rights to Public Water Suppliers who assume service of an Antelope Valley United Mutuals Group member's shareholders.

16.4 Notwithstanding section 16.1, the Production Right of Boron Community Services District shall not be transferable. If and when Boron Community Services District permanently ceases all Production of Groundwater from the Basin, its Production Right shall be allocated to the other holders of Non-Overlying Production Rights, except for West Valley County Water District, in proportion to those rights.

17. CHANGES IN POINT OF EXTRACTION AND NEW WELLS. Parties may change the point of extraction for any Production Right to another point of extraction so long as such change of the point of extraction does not cause Material Injury. A replacement well for an existing point of extraction which is located within 300 feet of a Party's existing well shall not be considered a change in point of extraction.

17.1 Notice of New Well. Any Party seeking to construct a new well in order to change the point of extraction for any Production Right to another point of extraction shall notify the Watermaster at least 90 days in advance of drilling any well of the location of the new point of extraction and the intended place of use of the water Produced.

17.2 Change in Point of Extraction by the United States. The point(s) of extraction for the Federal Reserved Water Right may be changed, at the sole discretion of the United States, and not subject to the preceding limitation on Material Injury, to any point or points within the boundaries of Edwards Air Force Base or Plant 42. The point(s) of extraction for the Federal Reserved Water Right may be changed to points outside the boundaries of

Edwards Air Force Base or Plant 42, provided such change in the point of extraction does not cause Material Injury. In exercising its discretion under this Paragraph 17.2, the United States shall consider information in its possession regarding the effect of Production from the intended new point of extraction on the Basin, and on other Producers. Any such change in point(s) of extraction shall be at the expense of the United States. Nothing in this Paragraph is intended to waive any monetary claim(s) another Party may have against the United States in federal court based upon any change in point of extraction by the United States.

18. WATERMASTER

18.1 Appointment of Initial Watermaster.

18.1.1 Appointment and Composition: The Court hereby appoints a Watermaster. The Watermaster shall be a five (5) member board composed of one representative each from AVEK and District No. 40, a second Public Water Supplier representative selected by District No. 40, Palmdale Water District, Quartz Hill Water District, Littlerock Creek Irrigation District, California Water Service Company, Desert Lake Community Services District, North Edwards Water District, City of Palmdale, City of Lancaster, Palm Ranch Irrigation District, and Rosamond Community Services District, and two (2) landowner Parties, exclusive of public agencies and members of the Non-Pumper and Small Pumper Classes, selected by majority vote of the landowners identified on Exhibit 4 (or their successors in interest) based on their proportionate share of the total Production Rights identified in Exhibit 4. The United States may also appoint a non-voting Department of Defense (DoD) Liaison to the Watermaster committee to represent DoD interests. Participation by the DoD Liaison shall be governed by Joint Ethics Regulation 3-201. The opinions or actions of the DoD liaison in participating in or contributing to Watermaster proceedings cannot bind DoD or any of its components.

18.1.2 Voting Protocol for Watermaster Actions:

18.1.2.1 The Watermaster shall make decisions by unanimous vote for the purpose of selecting or dismissing the Watermaster Engineer.

18.1.2.2 The Watermaster shall determine by unanimous vote, after consultation with the Watermaster Engineer, the types of decisions that shall require unanimous vote and those that shall require only a simple majority vote.

18.1.2.3 All decisions of the Watermaster, other than those specifically designated as being subject to a simple majority vote, shall be by a unanimous vote.

18.1.2.4 All board members must be present to make any decision requiring a unanimous vote.

18.1.3 In carrying out this appointment, the Watermaster shall segregate and separately exercise in all respects the Watermaster powers delegated by the Court under this Judgment. All funds received, held, and disbursed by the Watermaster shall be by way of separate Watermaster accounts, subject to separate accounting and auditing. Meetings and hearings held by the Watermaster shall be noticed and conducted separately.

18.1.4 Pursuant to duly adopted Watermaster rules, Watermaster staff and administrative functions may be accomplished by AVEK, subject to strict time and cost accounting principles so that this Judgment does not subsidize, and is not subsidized by AVEK.

18.2 Standard of Performance. The Watermaster shall carry out its duties, powers and responsibilities in an impartial manner without favor or prejudice to any Subarea, Producer, Party, or Purpose of Use.

18.3 Removal of Watermaster. The Court retains and reserves full jurisdiction, power, and authority to remove any Watermaster for good cause and substitute a new Watermaster in its place, upon its own motion or upon motion of any Party in accordance with the notice and hearing procedures set forth in Paragraph 20.6. The Court shall find good cause for the removal of a Watermaster upon a showing that the Watermaster has: (1) failed to exercise its powers or perform its duties; (2) performed its powers in a biased manner; or (3) otherwise failed to act in the manner consistent with the provisions set forth in this Judgment or subsequent order of the Court.

18.4 Powers and Duties of the Watermaster. Subject to the continuing supervision and control of the Court, the Watermaster shall have and may exercise the following express powers and duties, together with any specific powers and duties set forth elsewhere in this Judgment or ordered by the Court:

18.4.1 Selection of the Watermaster Engineer. The Watermaster shall select the Watermaster Engineer with the advice of the Advisory Committee described in Paragraph 19.

18.4.2 Adoption of Rules and Regulations. The Court may adopt appropriate rules and regulations prepared by the Watermaster Engineer and proposed by the Watermaster for conduct pursuant to this Judgment. Before proposing rules and regulations, the Watermaster shall hold a public hearing. Thirty (30) days prior to the date of the hearing, the Watermaster shall send to all Parties notice of the hearing and a copy of the proposed rules and regulations or amendments thereto. All Watermaster rules and regulations, and any amendments to the Watermaster rules and regulations, shall be consistent with this Judgment and are subject to approval by the Court, for cause shown, after consideration of the objections of any Party.

18.4.3 Employment of Experts and Agents. The Watermaster may employ such administrative personnel, engineering, legal, accounting, or other specialty services, and consulting assistants as appropriate in carrying out the terms of this Judgment.

18.4.4 Notice List. The Watermaster shall maintain a current list of Parties to receive notice. The Parties have an affirmative obligation to provide the Watermaster with their current contact information. For Small Pumper Class Members, the Watermaster shall initially use the contact information contained in the list of Small Pumper Class members filed with the Court by class counsel.

18.4.5 Annual Administrative Budget. The Watermaster shall prepare a proposed administrative budget for each Year. The Watermaster shall hold a public hearing regarding the proposed administrative budget and adopt an administrative budget. The administrative budget shall set forth budgeted items and Administrative Assessments in sufficient

detail to show the allocation of the expense among the Producers. Following the adoption of the budget, the Watermaster may make expenditures within budgeted items in the exercise of powers herein granted, as a matter of course.

18.4.6 Investment of Funds. The Watermaster may hold and invest any funds in investments authorized from time to time for public agencies in the State of California. All funds shall be held in separate accounts and not comingled with the Watermaster's personal funds.

18.4.7 Borrowing. The Watermaster may borrow in anticipation of receipt of proceeds from any assessments authorized in Paragraph 9 in an amount not to exceed the annual amount of assessments.

18.4.8 Transfers. On an annual basis, the Watermaster shall prepare and maintain a report or record of any transfer of Production Rights among Parties. Upon reasonable request, the Watermaster shall make such report or record available for inspection by any Party. A report or records of transfer of Production Rights under this Paragraph shall be considered a ministerial act.

18.4.9 New Production Applications. The Watermaster shall consider and determine whether to approve applications for New Production after consideration of the recommendation of the Watermaster Engineer.

18.4.10 Unauthorized Actions. The Watermaster shall bring such action or motion as is necessary to enjoin any conduct prohibited by this Judgment.

18.4.11 Meetings and Records. Watermaster shall provide notice of and conduct all meetings and hearings in a manner consistent with the standards and timetables set forth in the Ralph M. Brown Act, Government Code sections 54950, et seq. Watermaster shall make its files and records available to any Person consistent with the standards and timetables set forth in the Public Records Act, Government Code sections 6200, et seq.

18.4.12 Assessment Procedure. Each Party hereto is ordered to pay the assessments authorized in Paragraph 9 of this Judgment, which shall be levied and collected in

accordance with the procedures and schedules determined by the Watermaster. Any assessment which becomes delinquent, as defined by rules and regulations promulgated by the Watermaster shall bear interest at the then current real property tax delinquency rate for the county in which the property of the delinquent Party is located. The United States shall not be subject to payment of interest absent congressional waiver of immunity for the imposition of such interest. This interest rate shall apply to any said delinquent assessment from the due date thereof until paid. The delinquent assessment, together with interest thereon, costs of suit, attorneys fees and reasonable costs of collection, may be collected pursuant to (1) motion by the Watermaster giving notice to the delinquent Party only; (2) Order to Show Cause proceeding, or (3) such other lawful proceeding as may be instituted by the Watermaster or the Court. The United States shall not be subject to costs and fees absent congressional waiver of immunity for such costs and fees. The delinquent assessment shall constitute a lien on the property of the Party as of the same time and in the same manner as does the tax lien securing county property taxes. The property of the United States shall not be subject to any lien. The Watermaster shall annually certify a list of all such unpaid delinquent assessments. The Watermaster shall include the names of those Parties and the amounts of the liens in its list to the County Assessor's Office in the same manner and at the same time as it does its Administrative Assessments. Watermaster shall account for receipt of all collections of assessments collected pursuant to this Judgment, and shall pay such amounts collected pursuant to this Judgment to the Watermaster. The Watermaster shall also have the ability to seek to enjoin Production of those Parties, other than the United States, who do not pay assessments pursuant to this Judgment.

18.5 **Watermaster Engineer.** The Watermaster Engineer shall have the following duties:

18.5.1 **Monitoring of Safe Yield.** The Watermaster Engineer shall monitor all the Safe Yield components and include them in the annual report for Court approval. The annual report shall include all relevant data for the Basin.

18.5.2 Reduction in Groundwater Production. The Watermaster Engineer shall ensure that reductions of Groundwater Production to the Native Safe Yield (Rampdown) take place pursuant to the terms of this Judgment and any orders by the Court.

18.5.3 Determination of Replacement Obligations. The Watermaster Engineer shall determine Replacement Obligations for each Producer, pursuant to the terms of this Judgment.

18.5.4 Balance Obligations. The Watermaster Engineer shall determine Balance Assessment obligations for each Producer pursuant to the terms of this Judgment. In addition, the Watermaster Engineer shall determine the amount of water derived from the Balance Assessment that shall be allocated to any Producer to enable that Producer to fully exercise its Production Right.

18.5.5 Measuring Devices, Etc. The Watermaster Engineer shall propose, and the Watermaster shall adopt and maintain, rules and regulations regarding determination of Production amounts and installation of individual water meters. The rules and regulations shall set forth approved devices or methods to measure or estimate Production. Producers who meter Production on the date of entry of this Judgment shall continue to meter Production. The Watermaster rules and regulations shall require Producers who do not meter Production on the effective date of entry of this Judgment, except the Small Pumper Class, to install water meters within two Years.

18.5.6 Hydrologic Data Collection. The Watermaster Engineer shall (1) operate, and maintain such wells, measuring devices, and/or meters necessary to monitor stream flow, precipitation, Groundwater levels, and Basin Subareas, and (2) to obtain such other data as may be necessary to carry out this Judgment.

18.5.7 Purchases of and Recharge with Replacement Water. To the extent Imported Water is available, the Watermaster Engineer shall use Replacement Water Assessment proceeds to purchase Replacement Water, and deliver such water to the area deemed most appropriate as soon as practicable. The Watermaster Engineer may pre-purchase

Replacement Water and apply subsequent assessments towards the costs of such pre-purchases. The Watermaster Engineer shall reasonably and equitably actively manage the Basin to protect and enhance the health of the Basin.

18.5.8 Water Quality. The Watermaster Engineer shall take all reasonable steps to assist and encourage appropriate regulatory agencies to enforce reasonable water quality regulations affecting the Basin, including regulation of solid and liquid waste disposal, and establishing Memorandums of Understanding with Kern and Los Angeles Counties regarding well drilling ordinances and reporting.

18.5.9 Native Safe Yield. Ten (10) Years following the end of the seven Year Rampdown period, in the seventeenth (17th) Year, or any time thereafter, the Watermaster Engineer may recommend to the Court an increase or reduction of the Native Safe Yield. The Watermaster Engineer shall initiate no recommendation to change Native Safe Yield prior to the end of the seventeenth (17th) Year. In the event the Watermaster Engineer recommends in its report to the Court that the Native Safe Yield be revised based on the best available science, the Court shall conduct a hearing regarding the recommendations and may order a change in Native Safe Yield. Watermaster shall give notice of the hearing pursuant to Paragraph 20.3.2. The most recent Native Safe Yield shall remain in effect until revised by Court order according to this paragraph. If the Court approves a reduction in the Native Safe Yield, it shall impose a Pro-Rata Reduction as set forth herein, such reduction to be implemented over a seven (7) Year period. If the Court approves an increase in the Native Safe Yield, it shall impose a Pro-Rata Increase as set forth herein, such increase to be implemented immediately. Only the Court can change the Native Safe Yield.

18.5.10 Change in Production Rights in Response to Change in Native Safe Yield. In the event the Court changes the Native Safe Yield pursuant to Paragraph 18.5.9, the increase or decrease will be allocated among the Producers in the agreed percentages listed in Exhibits 3 and 4, except that the Federal Reserved Water Right of the United States is not subject to any increase or decrease.

18.5.11 Review of Calculation of Imported Water Return Flow Percentages. Ten (10) Years following the end of the Rampdown, in the seventeenth (17th) Year, or any time thereafter, the Watermaster Engineer may recommend to the Court an increase or decrease of Imported Water Return Flow percentages. The Watermaster Engineer shall initiate no recommendation to change Imported Water Return Flow percentages prior to end of the seventeenth (17th) Year. In the event the Watermaster Engineer recommends in its report to the Court that Imported Water Return Flow percentages for the Basin may need to be revised based on the best available science, the Court shall conduct a hearing regarding the recommendations and may order a change in Imported Water Return Flow percentages. Watermaster shall give notice of the hearing pursuant to Paragraph 20.6. The Imported Water Return Flow percentages set forth in Paragraph 5.2 shall remain in effect unless revised by Court order according to this Paragraph. If the Court approves a reduction in the Imported Water Return Flow percentages, such reduction shall be implemented over a seven (7) Year period. Only the Court can change the Imported Water Return Flow percentages.

18.5.12 Production Reports. The Watermaster Engineer shall require each Producer, other than unmetered Small Pumper Class Members, to file an annual Production report with the Watermaster. Producers shall prepare the Production reports in a form prescribed by the rules and regulations. The Production reports shall state the total Production for the reporting Party, including Production per well, rounded off to the nearest tenth of an acre foot for each reporting period. The Production reports shall include such additional information and supporting documentation as the rules and regulations may reasonably require.

18.5.13 New Production Application Procedure. The Watermaster Engineer shall determine whether a Party or Person seeking to commence New Production has established the reasonableness of the New Production in the context of all other uses of Groundwater in the Basin at the time of the application, including whether all of the Native Safe Yield is then currently being used reasonably and beneficially. Considering common law water rights and priorities, the mandate of certainty in Article X, section 2, and all other relevant

factors, the Watermaster Engineer has authority to recommend that the application for New Production be denied, or approved on condition of payment of a Replacement Water Assessment. The Watermaster Engineer shall consider, investigate and recommend to the Watermaster whether an application to commence New Production of Groundwater may be approved as follows:

18.5.13.1 All Parties or Person(s) seeking approval from the Watermaster to commence New Production of Groundwater shall submit a written application to the Watermaster Engineer which shall include the following:

18.5.13.1.1 Payment of an application fee sufficient to recover all costs of application review, field investigation, reporting, and hearing, and other associated costs, incurred by the Watermaster and Watermaster Engineer in processing the application for New Production;

18.5.13.1.2 Written summary describing the proposed quantity, sources of supply, season of use, Purpose of Use, place of use, manner of delivery, and other pertinent information regarding the New Production;

18.5.13.1.3 Maps identifying the location of the proposed New Production, including Basin Subarea;

18.5.13.1.4 Copy of any water well permits, specifications and well-log reports, pump specifications and testing results, and water meter specifications associated with the New Production;

18.5.13.1.5 Written confirmation that the applicant has obtained all applicable Federal, State, County, and local land use entitlements and other permits necessary to commence the New Production;

18.5.13.1.6 Written confirmation that the applicant has complied with all applicable Federal, State, County, and local laws, rules and regulations, including but not limited to, the California Environmental Quality Act (Public Resources Code §§ 21000, et. seq.);

18.5.13.1.7 Preparation of a water conservation plan, approved and stamped by a California licensed and registered professional civil engineer, demonstrating that the New Production will be designed, constructed and implemented consistent with California best water management practices.

18.5.13.1.8 Preparation of an analysis of the economic impact of the New Production on the Basin and other Producers in the Subarea of the Basin;

18.5.13.1.9 Preparation of an analysis of the physical impact of the New Production on the Basin and other Producers in the Subarea of the Basin;

18.5.13.1.10 A written statement, signed by a California licensed and registered professional civil engineer, determining that the New Production will not cause Material Injury;

18.5.13.1.11 Written confirmation that the applicant agrees to pay the applicable Replacement Water Assessment for any New Production.

18.5.13.1.12 Other pertinent information which the Watermaster Engineer may require.

18.5.13.2 Finding of No Material Injury. The Watermaster Engineer shall not make recommendation for approval of an application to commence New Production of Groundwater unless the Watermaster Engineer finds, after considering all the facts and circumstances including any requirement that the applicant pay a Replacement Water Assessment required by this Judgment or determined by the Watermaster Engineer to be required under the circumstances, that such New Production will not cause Material Injury. If the New Production is limited to domestic use for one single-family household, the Watermaster Engineer has the authority to determine the New Production to be *de minimis* and waive payment of a Replacement Water Assessment; *provided*, the right to Produce such *de minimis* Groundwater is not transferable, and shall not alter the Production Rights decreed in this Judgment.

18.5.13.3 New Production. No Party or Person shall commence New Production of Groundwater from the Basin absent recommendation by the Watermaster Engineer and approval by the Watermaster.

18.5.13.4 Court Review. Court review of a Watermaster decision on a New Production application shall be pursuant to Paragraph 20.3.

18.5.14 Storage Agreements. The Watermaster shall adopt uniformly applicable rules for Storage Agreements. The Watermaster Engineer shall calculate additions, extractions and losses of water stored under Storage Agreements and maintain an Annual account of all such water. Accounting done by the Watermaster Engineer under this Paragraph shall be considered ministerial.

18.5.15 Diversion of Storm Flow. No Party may undertake or cause the construction of any project within the Watershed of the Basin that will reduce the amount of storm flows that would otherwise enter the Basin and contribute to the Native Safe Yield, without prior notification to the Watermaster Engineer. The Watermaster Engineer may seek an injunction or to otherwise impose restrictions or limitations on such project in order to prevent reduction to Native Safe Yield. The Party sought to be enjoined or otherwise restricted or limited is entitled to notice and an opportunity for the Party to respond prior to the imposition of any restriction or limitation. Any Person may take emergency action as may be necessary to protect the physical safety of its residents and personnel and its structures from flooding. Any such action shall be done in a manner that will minimize any reduction in the quantity of Storm Flows.

18.5.16 Data, Estimates and Procedures. The Watermaster Engineer shall rely on and use the best available science, records and data to support the implementation of this Judgment. Where actual records of data are not available, the Watermaster Engineer shall rely on and use sound scientific and engineering estimates. The Watermaster Engineer may use preliminary records of measurements, and, if revisions are subsequently made, may reflect such revisions in subsequent accounting.

18.5.17 Filing of Annual Report. The Watermaster Engineer shall prepare an Annual Report for filing with the Court not later than April 1 of each Year, beginning April 1 following the first full Year after entry of this Judgment. Prior to filing the Annual Report with the Court, Watermaster shall notify all Parties that a draft of the Annual Report is available for review by the Parties. Watermaster shall provide notice to all Parties of a public hearing to receive comments and recommendations for changes in the Annual Report. The public hearing shall be conducted pursuant to rules and regulations promulgated by the Watermaster. The notice of public hearing may include such summary of the draft Annual Report as Watermaster may deem appropriate. Watermaster shall distribute the Annual Report to any Parties requesting copies.

18.5.18 Annual Report to Court. The Annual Report shall include an Annual fiscal report of the preceding Year's operation; details regarding the operation of each of the Subareas; an audit of all Assessments and expenditures; and a review of Watermaster activities. The Annual Report shall include a compilation of at least the following:

18.5.18.1 Replacement Obligations;

18.5.18.2 Hydrologic Data Collection;

18.5.18.3 Purchase and Recharge of Imported Water;

18.5.18.4 Notice List;

18.5.18.5 New Production Applications

18.5.18.6 Rules and Regulations;

18.5.18.7 Measuring Devices, etc;

18.5.18.8 Storage Agreements;

18.5.18.9 Annual Administrative Budget;

18.5.18.10 Transfers;

18.5.18.11 Production Reports;

18.5.18.12 Prior Year Report;

18.5.18.13 Amount of Stored Water owned by each Party;

18.5.18.14 Amount of Stored Imported Water owned by each Party;

18.5.18.15 Amount of unused Imported Water Return Flows owned by each Party;

18.5.18.16 Amount of Carry Over Water owned by each Party;

18.5.18.17 All changes in use.

18.6 Recommendations of the Watermaster Engineer. Unless otherwise determined pursuant to Paragraph 18.1.2.2, all recommendations of the Watermaster Engineer must be approved by unanimous vote of all members of the Watermaster. If there is not unanimous vote among Watermaster members, Watermaster Engineer recommendations must be presented to the Court for action and implementation.

18.7 Interim Approvals by the Court. Until the Court approves rules and regulations proposed by the Watermaster, the Court, upon noticed motion, may take or approve any actions that the Watermaster or the Watermaster Engineer otherwise would be authorized to take or approve under this Judgment.

19. ADVISORY COMMITTEE

19.1 Authorization. The Producers are authorized and directed to cause a committee of Producer representatives to be organized and to act as an Advisory Committee.

19.2 Compensation. The Advisory Committee members shall serve without compensation.

19.3 Powers and Functions. The Advisory Committee shall act in an advisory capacity only and shall have the duty to study, review, and make recommendations on all discretionary determinations by Watermaster. Parties shall only provide input to the Watermaster through the Advisory Committee.

19.4 Advisory Committee Meetings. The Advisory Committee shall 1) meet on a regular basis; 2) review Watermaster's activities pursuant to this Judgment on at least a semi-annual basis; and 3) receive and make advisory recommendations to Watermaster. Advisory Committee Meetings shall be open to all members of the public. Edwards Air Force

Base and the State of California shall be ex officio members of the committee. The United States may also appoint a DoD Liaison to the Watermaster pursuant to Joint Ethics Regulation 3-201.

19.5 Subarea Advisory Management Committees. Subarea Advisory Management Committees will meet on a regular basis and at least semi-annually with the Watermaster Engineer to review Watermaster activities pursuant to this Judgment and to submit advisory recommendations.

19.5.1 Authorization. The Producers in each of the five Management Subareas are hereby authorized and directed to cause committees of Producer representatives to be organized and to act as Subarea Management Advisory Committees.

19.5.2 Composition and Election. Each Management Subarea Management Advisory Committee shall consist of five (5) Persons who shall be called Management Advisors. In the election of Management Advisors, every Party shall be entitled to one vote for every acre-foot of Production Right for that Party in that particular subarea. Parties may cumulate their votes and give one candidate a number of votes equal to the number of advisors to be elected, multiplied by the number of votes to which the Party is normally entitled, or distribute the Party's votes on the same principle among as many candidates as the Party thinks fit. In any election of advisors, the candidates receiving the highest number of affirmative votes of the Parties are elected. Elections shall be held upon entry of this Judgment and thereafter every third Year. In the event a vacancy arises, a temporary advisor shall be appointed by unanimous decision of the other four advisors to continue in office until the next scheduled election. Rules and regulations regarding organization, meetings and other activities shall be at the discretion of the individual Subarea Advisory Committees, except that all meetings of the committees shall be open to the public.

19.5.3 Compensation. The Subarea Management Advisory Committee shall serve without compensation.

19.5.4 Powers and Functions. The Subarea Management Advisory Committee for each subarea shall act in an advisory capacity only and shall have the duty to

study, review and make recommendations on all discretionary determinations made or to be made hereunder by Watermaster Engineer which may affect that subarea.

20. MISCELLANEOUS PROVISIONS.

20.1 Water Quality. Nothing in this Judgment shall be interpreted as relieving any Party of its responsibilities to comply with State or Federal laws for the protection of water quality or the provisions of any permits, standards, requirements, or orders promulgated thereunder.

20.2 Actions Not Subject to CEQA Regulation. Nothing in this Judgment or the Physical Solution, or in the implementation thereof, or the decisions of the Watermaster acting under the authority of this Judgment shall be deemed a "project" subject to the California Environmental Quality Act (CEQA). See e.g., *California American Water v. City of Seaside* (2010) 183 Cal.App.4th 471, and *Hillside Memorial Park & Mortuary v. Golden State Water Co*. (2011) 205 Cal.App.4th 534. Neither the Watermaster, the Watermaster Engineer, the Advisory Committee, any Subarea Management Committee, nor any other Board or committee formed pursuant to the Physical Solution and under the authority of this Judgment shall be deemed a "public agency" subject to CEQA. (See Public Resources Code section 21063.)

20.3 Court Review of Watermaster Actions. Any action, decision, rule, regulation, or procedure of Watermaster or the Watermaster Engineer pursuant to this Judgment shall be subject to review by the Court on its own motion or on timely motion by any Party as follows:

20.3.1 Effective Date of Watermaster Action. Any order, decision or action of Watermaster or Watermaster Engineer pursuant to this Judgment on noticed specific agenda items shall be deemed to have occurred on the date of the order, decision or action.

20.3.2 Notice of Motion. Any Party may move the Court for review of an action or decision pursuant to this Judgment by way of a noticed motion. The motion shall be served pursuant to Paragraph 20.7 of this Judgment. The moving Party shall ensure that the Watermaster is served with the motion under that Paragraph 20.7 or, if electronic service of the

Watermaster is not possible, by overnight mail with prepaid next-day delivery. Unless ordered by the Court, any such petition shall not operate to stay the effect of any action or decision which is challenged.

20.3.3 Time for Motion. A Party shall file a motion to review any action or decision within ninety (90) days after such action or decision, except that motions to review assessments hereunder shall be filed within thirty (30) days of Watermaster mailing notice of the assessment.

20.3.4 De Novo Nature of Proceeding. Upon filing of a motion to review a decision or action, the Watermaster shall notify the Parties of a date for a hearing at which time the Court shall take evidence and hear argument. The Court's review shall be *de novo* and the Watermaster's decision or action shall have no evidentiary weight in such proceeding.

20.3.5 Decision. The decision of the Court in such proceeding shall be an appealable supplemental order in this case. When the Court's decision is final, it shall be binding upon Watermaster and the Parties.

20.4 Multiple Production Rights. A Party simultaneously may be a member of the Small Pumper Class and hold an Overlying Production Right by virtue of owning land other than the parcel(s) meeting the Small Pumper Class definition. The Small Pumper Class definition shall be construed in accordance with Paragraph 3.5.44 and 3.5.45.

20.5 Payment of Assessments. Payment of assessments levied by Watermaster hereunder shall be made pursuant to the time schedule developed by the Watermaster, notwithstanding any motion for review of Watermaster actions, decisions, rules or procedures, including review of assessments implemented by the Watermaster.

20.6 Designation of Address for Notice and Service. Each Party shall designate a name and address to be used for purposes of all subsequent notices and service herein, either by its endorsement on this Judgment or by a separate designation to be filed within thirty (30) days after judgment has been entered. A Party may change its designation by filing a written notice of such change with Watermaster. A Party that desires to be relieved of receiving notices

of Watermaster activity may file a waiver of notice in a form to be provided by Watermaster. At all times, Watermaster shall maintain a current list of Parties to whom notices are to be sent and their addresses for purpose of service. Watermaster shall also maintain a full current list of said names and addresses of all Parties or their successors, as filed herein. Watermaster shall make copies of such lists available to any requesting Person. If no designation is made, a Party's designee shall be deemed to be, in order of priority: (1) the Party's attorney of record; (2) if the Party does not have an attorney of record, the Party itself at the address on the Watermaster list; (3) for Small Pumper Class Members, after this Judgment is final, the individual Small Pumper Class Members at the service address maintained by the Watermaster.

20.7 Service of Documents. Unless otherwise ordered by the Court, delivery to or service to any Party by the Court or any Party of any document required to be served upon or delivered to a Party pursuant to this Judgment shall be deemed made if made by e-filing on the Court's website at www.scefiling.org. All Parties agree to waive service by mail if they receive notifications via electronic filing at the above identified website.

20.8 No Abandonment of Rights. In the interest of the Basin and its water supply, and the principle of reasonable and beneficial use, no Party shall be encouraged to Produce and use more water in any Year than is reasonably required. Failure to Produce all of the Groundwater to which a Party is entitled shall not, in and of itself, be deemed or constitute an abandonment of such Party's right, in whole or in part, except as specified in Paragraph 15.

20.9 Intervention After Judgment. Any Person who is not a Party or successor to a Party and who proposes to Produce Groundwater from the Basin, to store water in the Basin, to acquire a Production Right or to otherwise take actions that may affect the Basin's Groundwater is required to seek to become a Party subject to this Judgment through a noticed motion to intervene in this Judgment prior to commencing Production. Prior to filing such a motion, a proposed intervenor shall consult with the Watermaster Engineer and seek the Watermaster's stipulation to the proposed intervention. A proposed intervenor's failure to consult

with the Watermaster Engineer may be grounds for denying the intervention motion. Thereafter, if approved by the Court, such intervenor shall be a Party bound by this Judgment.

20.10 Judgment Binding on Successors, etc. Subject to specific provisions hereinbefore contained, this Judgment applies to and is binding upon, and inures to the benefit of the Parties to this Action and all their respective heirs, successors-in-interest and assigns.

20.11 Costs. Except subject to any existing court orders, each Party shall bear its own costs and attorneys fees arising from the Action.

20.12 Headings; Paragraph References. Captions and headings appearing in this Judgment are inserted solely as reference aids for ease and convenience; they shall not be deemed to define or limit the scope or substance of the provisions they introduce, nor shall they be used in construing the intent or effect of such provisions.

20.13 No Third Party Beneficiaries. There are no intended third party beneficiaries of any right or obligation of the Parties.

20.14 Severability. Except as specifically provided herein, the provisions of this Judgment are not severable.

20.15 Cooperation; Further Acts. The Parties shall fully cooperate with one another, and shall take any additional acts or sign any additional documents as may be necessary, appropriate or convenient to attain the purposes of this Judgment.

20.16 Exhibits and Other Writings. Any and all exhibits, documents, instruments, certificates or other writings attached hereto or required or provided for by this Judgment, if any, shall be part of this Judgment and shall be considered set forth in full at each reference thereto in this Judgment.

Dated: _____

_____
JUDGE OF THE SUPERIOR COURT

DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
3	Jacqueline Ackermann	3/23/2012	5/8/2013
4	ADVINCULA, CENON S	3/23/2012	5/8/2013
5	ADVINCULA, OLIVA M	3/23/2012	5/8/2013
6	ALDAIS, MARWAN M.	3/23/2012	5/8/2013
7	AGUSTINES, ANTONIO U	3/23/2012	5/8/2013
7	Allen Alevy	3/23/2012	5/8/2013
8	ARCHER, GEORGINE J.	3/23/2012	5/8/2013
8	Allen Alevy and Alevy Family Trust	3/23/2012	5/8/2013
9	ARCHER GEORGINE J as Trustee for the Georgine J. Archer Trust	3/23/2012	5/8/2013
10	BARKS, GUSS A. JR.	3/23/2012	5/8/2013
11	BRONSTON, LEROY DANIEL	3/23/2012	5/8/2013
12	BAYANI, ILDEFONSO S.	3/23/2012	5/8/2013
13	Castle Butte Dev. Corp	3/23/2012	5/8/2013
13	BAYANI, NILDA V.	3/23/2012	5/8/2013
16	FUNK, JOAN A	3/23/2012	5/8/2013
19	GENUS L P	3/23/2012	5/8/2013
24	Illy King	3/23/2012	5/8/2013
24	Melinda E Cameron	3/23/2012	5/8/2013
25	Illy King Family Trust	3/23/2012	5/8/2013
25	Catellus Development Corporation	3/23/2012	5/8/2013
26	KUTU INVESTMENT CO - Suspended	3/23/2012	5/8/2013
26	BONG S. CHANG	9/17/2015	10/16/2015
27	LAI, EVA	3/23/2012	5/8/2013
27	CHANG, JEANNA Y.	3/23/2012	5/8/2013
28	LAI, PAUL	3/23/2012	5/8/2013
28	MOON S. CHANG	9/17/2015	10/16/2015
29	CHETRIT, JACOB	3/23/2012	5/8/2013
31	Pei Chi Lin	3/23/2012	5/8/2013
31	Lee Shiow Chiou	3/23/2012	5/8/2013
32	CHUNG, M S	3/23/2012	5/8/2013
35	COLE, C.C. THELMA	3/23/2012	5/8/2013
36	COLE, J.	3/23/2012	5/8/2013
36	RUDNICK, OSCAR	9/16/2015	10/16/2015
37	RUDNICK, REBECCA	3/23/2012	5/8/2013
37	J. & C. C. Thelma Cole and T. J. Cole Trust (J. Cole as Trustee for the T. J. Cole Trust)	3/23/2012	5/8/2013
41	CUMMING, RUTH A	9/17/2015	10/16/2015
43	DAVIS, CATHARINE M	3/23/2012	5/8/2013
44	Milton S. Davis	3/23/2012	5/8/2013
46	Sarkis Djanibekyan	3/23/2012	5/8/2013
47	DONG, HONG	3/23/2012	5/8/2013
48	DONG, YING X.	3/23/2012	5/8/2013
51	FOROUGHI, MORTEZA	9/17/2015	10/16/2015
52	MORTEZA M. FOROUGHI AND FOROUGHI FAMILY TRUST	9/17/2015	10/16/2015
53	Lewis Friedrichsen	3/23/2012	5/8/2013
54	Lewis Friedrichsen as Trustee of the Friedrichsen Family Trust	3/23/2012	5/8/2013
55	Aurora P Gabuya	3/23/2012	5/8/2013
58	Betty Gluckstein	3/23/2012	5/8/2013
59	Joseph H Gluckstein	9/17/2015	10/16/2015
60	GLUCKSTEIN,MORRIS	3/23/2012	5/8/2013
61	GLUCKSTEIN, ROSE	3/23/2012	5/8/2013

DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
66	GORRINDO, L.	3/23/2012	5/8/2013
71	HAUKE,ANDREAS	3/23/2012	5/8/2013
72	HAUKE, MARILYN	3/23/2012	5/8/2013
75	HIGELMIRE,DONNA	3/23/2012	5/8/2013
76	Michael N. Higelmire	3/23/2012	5/8/2013
78	Hooshpack Dev Inc	3/23/2012	5/8/2013
79	Chi S Huang	3/23/2012	5/8/2013
80	HUANG, SUCHU T.	3/23/2012	5/8/2013
81	Hypericum Interest LLC	3/23/2012	5/8/2013
82	IRANINEZHAD, DARYUSH	3/23/2012	5/8/2013
83	IRANINEZHAD, MINOO	3/23/2012	5/8/2013
84	KADIVAR,ESFANDIAR	3/23/2012	5/8/2013
85	KADIVAR FAMILY TRUST (Esfandiar Kadivar as Trustee of the Kadivar Family Trust)	3/23/2012	5/8/2013
88	Cheng Lin Kang	3/23/2012	5/8/2013
94	YOSHIMATSU, KAZUKO	3/23/2012	5/8/2013
95	Billy H. Kim	3/23/2012	5/8/2013
106	LAWRENCE, CHARLES TRUST	3/23/2012	5/8/2013
108	Light Andrew & Youngnam	3/23/2012	5/8/2013
109	Man C Lo	3/23/2012	5/8/2013
110	SHIUNG, RU	3/23/2012	5/8/2013
111	Lyman C. Miles	3/23/2012	5/8/2013
112	Lyman C. Miles as Trustee for the Miles Family Trust	3/23/2012	5/8/2013
114	Mission Bell Ranch Development	3/23/2012	5/8/2013
118	M R Nasir	3/23/2012	5/8/2013
119	Souad R Nasir	3/23/2012	5/8/2013
121	Simin C. Neman	3/23/2012	5/8/2013
123	Frank T. Nguyen	3/23/2012	5/8/2013
124	Juanita R Nichols	3/23/2012	5/8/2013
125	Oliver Nichols	3/23/2012	5/8/2013
126	Oliver Nichols as Trustee of the Nichols Family Trust	3/23/2012	5/8/2013
128	POULSEN,NORMAN L	3/23/2012	5/8/2013
130	Victoria Rahimi	3/23/2012	5/8/2013
132	Veronika Reinelt	3/23/2012	5/8/2013
133	Reinelt Rosenloecher Corp PSP	3/23/2012	5/8/2013
140	Rosemount Equities LLC Series	3/23/2012	5/8/2013
141	Royal Investors Group	3/23/2012	5/8/2013
142	ROYAL WESTERN PROPERTIES LLC - ACTIVE	3/23/2012	5/8/2013
145	Daniel Saparzadeh	3/23/2012	5/8/2013
149	SCHWARTZ, MARTIN	3/23/2012	5/8/2013
151	SEVEN STAR UNITED LLC	3/23/2012	5/8/2013
155	Donna L Simpson	3/23/2012	5/8/2013
156	Gareth L Simpson	3/23/2012	5/8/2013
157	Simpson Family Trust (Gareth L. Simpson as Trustee of the Simpson Family Trust)	3/23/2012	5/8/2013
164	GEORGE L STIMSON JR TRUST (George L. Stimson, Jr. as Trustee of the George L. Stimson, Jr. Trust)	3/23/2012	5/8/2013
167	TIU TIONG D.	3/23/2012	5/8/2013
172	Wilma D. Trueblood	3/23/2012	5/8/2013

DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
173	Wilma D. Trueblood as Trustee of the Trueblood Family Trust	3/23/2012	5/8/2013
177	WALES, KEITH E.	3/23/2012	5/8/2013
180	Alex Wodchis	3/23/2012	5/8/2013
181	WONG, ELIZABETH	3/23/2012	5/8/2013
182	WONG, MARY	3/23/2012	5/8/2013
183	WU, MIKE M.	3/23/2012	5/8/2013
184	WU FAMILY (MIKE M. WU AS TRUSTEE OF THE WU FAMILY TRUST)	3/23/2012	5/8/2013
202	GREEN GROVE MUTUAL WATER COMPANY, INC.	3/23/2012	5/8/2013
206	LLANO FARMS MUTUAL WATER COMPANY	3/23/2012	5/8/2013
208	PIUTE MUTUAL WATER COMPANY	3/23/2012	5/8/2013
210	Wilsona Gardens Mutual Water Company	3/23/2012	5/8/2013
211	Edgemont Acres Mutual Water Company	3/23/2012	5/8/2013
213	ROSAMOND MUTUAL WATER COMPANY	3/23/2012	5/8/2013
Roe 234	Aceh Capital LLC	3/23/2012	5/8/2013
Roe 235	Ehsan Afaghi	3/23/2012	5/8/2013
Roe 237	Bruce Allen	3/23/2012	5/8/2013
Roe 238	Ana Verde Canyon Limited	3/23/2012	5/8/2013
Roe 240	Clinton Edwards Andrews	3/23/2012	5/8/2013
Roe 244	AV Foothills LLC	3/23/2012	5/8/2013
Roe 246	C and P Lancaster Properties, L.L.C.	3/23/2012	5/8/2013
Roe 248	California Springs Land & Development, Inc.	3/23/2012	5/8/2013
Roe 250	Capital Pacific Homes	3/23/2012	5/8/2013
Roe 253	Moon S. Chang and Bong S. Chang, Trustees	9/17/2015	10/16/2015
Roe 254	Theodore His-En and Wen-Hui C. Chen, as Co-Trustees of the Chen Family Trust (Established October 27, 1989)	3/23/2012	5/8/2013
Roe 255	Andrew J. Chitiea	3/23/2012	5/8/2013
Roe 256	Joan K Chitiea	3/23/2012	5/8/2013
Roe 257	Myron Z. Chlavin, Trustee	3/23/2012	5/8/2013
Roe 259	Richard L. Clark and Elaine M. Clark, Trs.	3/23/2012	5/8/2013
Roe 260	Menandro M. Marcelo and Ofelia or their Successors, as Trustees of the Menandro and Ofelia Marcelo Family Trust Dated June 2, 2006	3/23/2012	5/8/2013
Roe 261	CPH Tehachapi 280 LLC	3/23/2012	5/8/2013
Roe 264	Cyrstalaire Country Club	3/23/2012	5/8/2013
Roe 266	Kristeen Cua	3/23/2012	5/8/2013
Roe 267	Lita Davies	3/23/2012	5/8/2013
Roe 268	Richard Daniel De La Matyr	3/23/2012	5/8/2013
Roe 269	Long Deng	3/23/2012	5/8/2013
Roe 270	Dr Horton Los Angeles Holding, Inc.	3/23/2012	5/8/2013
Roe 272	Discountland Inc.	3/23/2012	5/8/2013
Roe 273	Dowhen Family	3/23/2012	5/8/2013
Roe 274	Mohammed Naji Elhayek	3/23/2012	5/8/2013
Roe 276	Farhad Alnd	3/23/2012	5/8/2013
Roe 277	Vera V. Farwell	3/23/2012	5/8/2013
Roe 279	Hersell Alnd	3/23/2012	5/8/2013
Roe 281	James H. Gisbrecht and Mary L. Gisbrecht, Trustees	3/23/2012	5/8/2013
Roe 282	Harry C. Godshall, Trustee	3/23/2012	5/8/2013
Roe 284	Sam Haskins	3/23/2012	5/8/2013

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Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 285	Yoram Hassid and Yael Hassid, Trustees	3/23/2012	5/8/2013
Roe 286	David J. Hester, Trustee	3/23/2012	5/8/2013
Roe 287	Jack D. Hilton	3/23/2012	5/8/2013
Roe 288	Rita Hilton	3/23/2012	5/8/2013
Roe 289	Clement L. Hirsch, Jr., Trustee	3/23/2012	5/8/2013
Roe 290	Carol A. Hooper	3/23/2012	5/8/2013
Roe 291	Thomas J. Hooper	3/23/2012	5/8/2013
Roe 292	David W. Hopkins	3/23/2012	5/8/2013
Roe 293	Gerald P Hopkins	3/23/2012	5/8/2013
Roe 294	Sumei P Hsi Trust	3/23/2012	5/8/2013
Roe 295	Ja Bin Hsu, Co-Trustee	3/23/2012	5/8/2013
Roe 296	Kangle Huang	3/23/2012	5/8/2013
Roe 297	Yiling Lin	3/23/2012	5/8/2013
Roe 299	James A. Hunter	3/23/2012	5/8/2013
Roe 300	Cyrus Serry	3/23/2012	5/8/2013
Roe 301	J and J General Partnership	3/23/2012	5/8/2013
Roe 302	J P Eliopulos Enterprises Inc.	3/23/2012	5/8/2013
Roe 303	Jensen Trust	3/23/2012	5/8/2013
Roe 304	Thomas Jones, Trustee	3/23/2012	5/8/2013
Roe 305	Joshua Ranch Development Inc	3/23/2012	5/8/2013
Roe 309	Kathryn T. Karlakis	3/23/2012	5/8/2013
Roe 310	James Kim	3/23/2012	5/8/2013
Roe 311	Glenn K. Kim Family LLC	3/23/2012	5/8/2013
Roe 312	Rose M Kolstad	3/23/2012	5/8/2013
Roe 313	Korda	3/23/2012	5/8/2013
Roe 314	Sarah Korda	3/23/2012	5/8/2013
Roe 315	Lancaster and 120 111 LLC	3/23/2012	5/8/2013
Roe 317	George R. Lazenby	3/23/2012	5/8/2013
Roe 318	Samuel Lee	3/23/2012	5/8/2013
Roe 319	Youngsin Lee	3/23/2012	5/8/2013
Roe 320	Leona Valley Hunting Club	3/23/2012	5/8/2013
Roe 321	Sue Levine	3/23/2012	5/8/2013
Roe 322	Phillip W. Lewis, Co-Trustee	3/23/2012	5/8/2013
Roe 323	David H. Li	3/23/2012	5/8/2013
Roe 325	Michael Lin	3/23/2012	5/8/2013
Roe 326	Linda L. Yang	3/23/2012	5/8/2013
Roe 330	Lucky 360 Investments LLC	3/23/2012	5/8/2013
Roe 331	Janet L Lyman	3/23/2012	5/8/2013
Roe 332	S. K. Madan	3/23/2012	5/8/2013
Roe 333	Laurie F. Magbanua	3/23/2012	5/8/2013
Roe 339	Lim S Mov	3/23/2012	5/8/2013
Roe 340	MRN Family Limited Partnership	3/23/2012	5/8/2013
Roe 341	Gay E Naiditch	3/23/2012	5/8/2013
Roe 343	Chester Nigra, Co-Trustee	3/23/2012	5/8/2013
Roe 344	Richard J. Nigra, Sr., Custodian	3/23/2012	5/8/2013
Roe 345	Neil Nissing	3/23/2012	5/8/2013
Roe 346	Masaaki Okamoto	3/23/2012	5/8/2013
Roe 347	Keiko Okamoto	3/23/2012	5/8/2013
Roe 348	Noriyuki Okamoto	3/23/2012	5/8/2013
Roe 349	Shoji Okamoto	3/23/2012	5/8/2013
Roe 350	Pacific American Inv Ltd Inc	3/23/2012	5/8/2013
Roe 352	Palmdale 1000 Associates LLC	3/23/2012	5/8/2013
Roe 354	Marvin R Perriseau	3/23/2012	5/8/2013
Roe 355	Karen L. Perriseau	3/23/2012	5/8/2013

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Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 356	Frank W. Pritchard	3/23/2012	5/8/2013
Roe 357	Margaret F Pritchard	3/23/2012	5/8/2013
Roe 358	Petersen Properties	3/23/2012	5/8/2013
Roe 359	Thang D Pham	3/23/2012	5/8/2013
Roe 361	John W. Phelps	3/23/2012	5/8/2013
Roe 362	James S. Phelps	3/23/2012	5/8/2013
Roe 365	Efren Reyes	3/23/2012	5/8/2013
Roe 366	RMG Property Holding Two LLC	3/23/2012	5/8/2013
Roe 367	Steffany J Rohn	3/23/2012	5/8/2013
Roe 369	Melvin K. Rust, Trustee	3/23/2012	5/8/2013
Roe 370	San Ho Huang	3/23/2012	5/8/2013
Roe 371	Chi Shiou Huang - Published as "Chi Shious Huang"	3/23/2012	5/8/2013
Roe 373	SCS Family Limited Partnership	3/23/2012	5/8/2013
Roe 374	Thomas P. Sherrill	3/23/2012	5/8/2013
Roe 375	Rachel M. Sherrill	3/23/2012	5/8/2013
Roe 376	Patricia C. Simi, Trustee	3/23/2012	5/8/2013
Roe 379	Columbia M. Stenberg, Trustee	3/23/2012	5/8/2013
Roe 382	Christopher S. Sun, Trustee	3/23/2012	5/8/2013
Roe 383	John S. Sun, Trustee	3/23/2012	5/8/2013
Roe 385	Alyce A Togonotti	3/23/2012	5/8/2013
Roe 389	USA Golden Land Investment LLC	3/23/2012	5/8/2013
Roe 392	Roy C. Wang	3/23/2012	5/8/2013
Roe 393	Lucy B. Wang	3/23/2012	5/8/2013
Roe 394	Warm Springs Investments Ltd.	3/23/2012	5/8/2013
Roe 398	West Coast Land Corporation	3/23/2012	5/8/2013
Roe 399	Laurie S. Whicher	3/23/2012	5/8/2013
Roe 400	Joyce P. Whiteside, Trustee	3/23/2012	5/8/2013
Roe 401	Harry Z. Wilson	3/23/2012	5/8/2013
Roe 403	ABC Diamonds Inc.	3/23/2012	5/8/2013
Roe 404	Alesso Lawrence V & Mardean Trust	3/23/2012	5/8/2013
Roe 405	Charles A. Amento	3/23/2012	5/8/2013
Roe 406	Sheila D. Amento	3/23/2012	5/8/2013
Roe 407	Sigitas F. Babusis	3/23/2012	5/8/2013
Roe 408	Banducci Enterprises	3/23/2012	5/8/2013
Roe 409	Banducci Land, L.L.C.	3/23/2012	5/8/2013
Roe 410	Janet Starr Berkey	3/23/2012	5/8/2013
Roe 411	Leslie C. Blenkhorn	3/23/2012	5/8/2013
Roe 412	Cherilyn M. Blenkhorn	3/23/2012	5/8/2013
Roe 414	Mark F. Bramlett	3/23/2012	5/8/2013
Roe 422	Sallie Lynne Chatterton	3/23/2012	5/8/2013
Roe 423	Michael C. Cheiky	3/23/2012	5/8/2013
Roe 424	Charity S. Cheiky	3/23/2012	5/8/2013
Roe 425	Chitiea Family Trust	9/21/2015	10/13/2015
Roe 426	Joel Chitiea	9/17/2015	10/16/2015
Roe 427	Vivian A. Chitiea	3/23/2012	5/8/2013
Roe 428	Yong See Cho	3/23/2012	5/8/2013
Roe 429	CJH Real Properties LLC	3/23/2012	5/8/2013
Roe 431	William Cordova	3/23/2012	5/8/2013
Roe 432	Virginia C. Cordova	3/23/2012	5/8/2013
Roe 433	Eric M Coyle	3/23/2012	5/8/2013
Roe 434	CPH Rosamond LP	3/23/2012	5/8/2013
Roe 435	Susan Elise Simonelli Crockett	3/23/2012	5/8/2013
Roe 438	Jeannette Damron	3/23/2012	5/8/2013

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Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 439	De Pietro Limited	3/23/2012	5/8/2013
Roe 441	Dora Land	3/23/2012	5/8/2013
Roe 442	Duncan M.B. Separate Prop Trust	3/23/2012	5/8/2013
Roe 443	Carol A. Durst, Trustee	3/23/2012	5/8/2013
Roe 444	Eagle Meadows of No Edwards 435 LLC	3/23/2012	5/8/2013
Roe 445	East Kern Prop LLC	3/23/2012	5/8/2013
Roe 446	East West Land Invs. Inc.	3/23/2012	5/8/2013
Roe 447	George M. Eastley	9/17/2015	10/16/2015
Roe 449	Sammy L. Edwards	3/23/2012	5/8/2013
Roe 450	Linda D. Edwards	3/23/2012	5/8/2013
Roe 454	Nancy H Evans	3/23/2012	5/8/2013
Roe 459	Farm Estates of the World	3/23/2012	5/8/2013
Roe 460	Fernandez Family Liv Trust	3/23/2012	5/8/2013
Roe 462	Fischer Grandchildrens Trust	3/23/2012	5/8/2013
Roe 463	Fogler, Ronald & Irene P. Trust	3/23/2012	5/8/2013
Roe 468	Mansoor Ghaneeian and Fariba Ghaneeian Trust	3/23/2012	5/8/2013
Roe 469	Gill Family Trust 1999	3/23/2012	5/8/2013
Roe 470	Gleason Trust	3/23/2012	5/8/2013
Roe 471	Gold Sky Prop. LLC	3/23/2012	5/8/2013
Roe 473	Guerrant Family Trust	3/23/2012	5/8/2013
Roe 474	Jose Guzman	3/23/2012	5/8/2013
Roe 475	Norma Guzman	3/23/2012	5/8/2013
Roe 478	Mary Lou Byerly Harrell	3/23/2012	5/8/2013
Roe 481	Sam Haskins Trust	3/23/2012	5/8/2013
Roe 482	Bob D. Helton Living Trust	3/23/2012	5/8/2013
Roe 483	Herrmann Family Trust	3/23/2012	5/8/2013
Roe 484	HET 2440 LLC	3/23/2012	5/8/2013
Roe 485	Susan B. Hills Family Trust	3/23/2012	5/8/2013
Roe 486	Ho Giang	3/23/2012	5/8/2013
Roe 487	Mylinh Phan	3/23/2012	5/8/2013
Roe 488	Jennifer Chang Ho Family Trust	3/23/2012	5/8/2013
Roe 489	Fela Holzman	9/17/2015	10/16/2015
Roe 490	Jerome I. Holzman	9/17/2015	10/16/2015
Roe 491	H.J. Holzman	9/17/2015	10/16/2015
Roe 492	Horizon Sumitt LLC	3/23/2012	5/8/2013
Roe 493	James T Hsu	3/23/2012	5/8/2013
Roe 494	H Huffnagle	3/23/2012	5/8/2013
Roe 495	Maynard R Huffnagle	3/23/2012	5/8/2013
Roe 498	Iglesia De Dio Pentecostla Mi	3/23/2012	5/8/2013
Roe 499	Invescorp Ltd	3/23/2012	5/8/2013
Roe 503	Javid Investments, L.L.C.	3/23/2012	5/8/2013
Roe 504	Emma Lou Johnson	3/23/2012	5/8/2013
Roe 505	Annette F. Kam	3/23/2012	5/8/2013
Roe 509	Richard M. & Sandra A Lang Family Trust	3/23/2012	5/8/2013
Roe 512	Daniel Bronston Leroy	3/23/2012	5/8/2013
Roe 513	Mary Ann Lewis	3/23/2012	5/8/2013
Roe 514	Lien Family Survivors Trust	3/23/2012	5/8/2013
Roe 515	Christine Lin	3/23/2012	5/8/2013
Roe 516	Los Angeles Land Investment	3/23/2012	5/8/2013
Roe 517	Loyola Marymount University	3/23/2012	5/8/2013
Roe 518	Clark C Lu	3/23/2012	5/8/2013
Roe 519	Danny C Lu	3/23/2012	5/8/2013

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Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 520	Douglas R. McAvoy and Amy M. McAvoy Trust	3/23/2012	5/8/2013
Roe 521	Roberta Merry Family Trust	3/23/2012	5/8/2013
Roe 522	Hans Peter Meyer	3/23/2012	5/8/2013
Roe 523	Ipbi Kim Meyer	3/23/2012	5/8/2013
Roe 525	S Huth-Tanner	3/23/2012	5/8/2013
Roe 526	Jamie Miller	3/23/2012	5/8/2013
Roe 527	Mojave & Tropico LLC	3/23/2012	5/8/2013
Roe 530	Elaine L. Morales	3/23/2012	5/8/2013
Roe 531	Mary B Mower	3/23/2012	5/8/2013
Roe 533	Louise Nichols	9/17/2015	10/16/2015
Roe 535	Joan D. Perkolup	9/17/2015	10/16/2015
Roe 536	Florence A. Perkolup	9/17/2015	10/16/2015
Roe 537	Fred Piwenitzky	3/23/2012	5/8/2013
Roe 538	Sachiko Piwenitzky	3/23/2012	5/8/2013
Roe 539	Pledge Investment LLC	3/23/2012	5/8/2013
Roe 540	Lulu Edna Pollock	3/23/2012	5/8/2013
Roe 541	Popinjay Corp. N V	3/23/2012	5/8/2013
Roe 542	Donald L. Purviance	3/23/2012	5/8/2013
Roe 544	Ronald A Ralphs	3/23/2012	5/8/2013
Roe 545	Ramos Trust	3/23/2012	5/8/2013
Roe 547	Edgar Reinoso	3/23/2012	5/8/2013
Roe 551	Lori March Scourby	3/23/2012	5/8/2013
Roe 552	Sellsite & United LLC	3/23/2012	5/8/2013
Roe 554	SF Pacific Properties Inc	3/23/2012	5/8/2013
Roe 557	Theodore H Sims, Jr.	3/23/2012	5/8/2013
Roe 559	Mi R Song	3/23/2012	5/8/2013
Roe 560	John Stern and Eleanor Stern Trust	3/23/2012	5/8/2013
Roe 561	Helen H. Stookey	3/23/2012	5/8/2013
Roe 563	John Su	3/23/2012	5/8/2013
Roe 564	Chen Su	3/23/2012	5/8/2013
Roe 565	Supermed Health Inc.	3/23/2012	5/8/2013
Roe 566	Sylvan Vista Development Co.	3/23/2012	5/8/2013
Roe 567	Tamkin Family Trust	3/23/2012	5/8/2013
Roe 569	Tazman, A Limited Liability Company	3/23/2012	5/8/2013
Roe 571	United Customhouse Brokers Inc.	3/23/2012	5/8/2013
Roe 574	Francom G. Watson, Jr.	3/23/2012	5/8/2013
Roe 575	A. Watson	3/23/2012	5/8/2013
Roe 576	Wells Fargo Bank NA	3/23/2012	5/8/2013
Roe 577	Richard A. White and Valerie K. White Trust	3/23/2012	5/8/2013
Roe 578	Wood Family Trust	3/23/2012	5/8/2013
Roe 580	Yeh Vivian Hwa	3/23/2012	5/8/2013
Roe 581	Lincoln Chu Kuen Yung	3/23/2012	5/8/2013
Roe 583	American Landmark Group LLC	3/23/2012	5/8/2013
Roe 585	190th Avenue West, LLC	3/23/2012	5/8/2013
Roe 589	John S. Alesso Jr.	9/17/2015	10/16/2015
Roe 596	Karla Bushnell	3/23/2012	5/8/2013
Roe 597	David Bushnell	3/23/2012	5/8/2013
Roe 601	Dorothy Etta Delia	3/23/2012	5/8/2013
Roe 602	John P Rusk	3/23/2012	5/8/2013
Roe 603	EPIC	3/23/2012	5/8/2013
Roe 604	Smith Development Co.	3/23/2012	5/8/2013
Roe 606	Hamid Ameri	3/23/2012	5/8/2013
Roe 607	Lutz Issleib	3/23/2012	5/8/2013

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Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 609	Erlinda Koo	3/23/2012	5/8/2013
Roe 610	Twyla Lake	3/23/2012	5/8/2013
Roe 612	Frank A Lane	3/23/2012	5/8/2013
Roe 613	High Desert Investments LLC.	3/23/2012	5/8/2013
Roe 614	Sol LeShin	3/23/2012	5/8/2013
Roe 615	Carl Proctor Jr.	3/23/2012	5/8/2013
Roe 616	Qwest Engineering Inc.	3/23/2012	5/8/2013
Roe 617	Retlaw Enterprises LLC	3/23/2012	5/8/2013
Roe 619	Robert A. Stoner Properties	3/23/2012	5/8/2013
Roe 620	Ronald H. Carter/Audrey M. Carter Family Trust	3/23/2012	5/8/2013
Roe 621	Clarence E Shetler	3/23/2012	5/8/2013
Roe 625	1st and 41st West LLC	3/23/2012	5/8/2013
Roe 626	20th Street Properties	3/23/2012	5/8/2013
Roe 629	Mehran Abolmoluki	3/23/2012	5/8/2013
Roe 630	Antonio Acosta	3/23/2012	5/8/2013
Roe 631	Miriam Adams	3/23/2012	5/8/2013
Roe 632	Arnold Adicoff	3/23/2012	5/8/2013
Roe 633	James Agalsoff	3/23/2012	5/8/2013
Roe 635	Carlito Aguilar	3/23/2012	5/8/2013
Roe 636	Carmen Aguilar	3/23/2012	5/8/2013
Roe 638	Valentin Aguilar	3/23/2012	5/8/2013
Roe 639	Yolanda Aguilar	3/23/2012	5/8/2013
Roe 641	Martha Akin	3/23/2012	5/8/2013
Roe 642	Jack Albright	3/23/2012	5/8/2013
Roe 644	Casey Alesso	3/23/2012	5/8/2013
Roe 645	Donald Alexander	3/23/2012	5/8/2013
Roe 647	Betty Allen	3/23/2012	5/8/2013
Roe 648	Brunette Allen	3/23/2012	5/8/2013
Roe 649	George Allen	3/23/2012	5/8/2013
Roe 650	Guadalupe Allen	3/23/2012	5/8/2013
Roe 651	Ronald Allen	3/23/2012	5/8/2013
Roe 652	Paul Allison	3/23/2012	5/8/2013
Roe 653	Yvonne Allison	3/23/2012	5/8/2013
Roe 654	Deborah Alluis	3/23/2012	5/8/2013
Roe 655	Jack Alluis	3/23/2012	5/8/2013
Roe 656	Mary Almarez	3/23/2012	5/8/2013
Roe 657	Jorge Alonso	3/23/2012	5/8/2013
Roe 658	Laura Alonso	3/23/2012	5/8/2013
Roe 659	ALP Equipment Sales Inc	3/23/2012	5/8/2013
Roe 660	Felipe Alvarez	3/23/2012	5/8/2013
Roe 661	Roberto Alvarez	3/23/2012	5/8/2013
Roe 663	Mary Alvidrez	3/23/2012	5/8/2013
Roe 664	Richard Alvidrez	3/23/2012	5/8/2013
Roe 666	An Van Phan Tr	3/23/2012	5/8/2013
Roe 667	Beatrice Anderson	3/23/2012	5/8/2013
Roe 670	Renee Anderson	3/23/2012	5/8/2013
Roe 671	Franklin Andrews	3/23/2012	5/8/2013
Roe 672	Treba Andrews	3/23/2012	5/8/2013
Roe 674	Sharon Annis	3/23/2012	5/8/2013
Roe 676	Antelope Valley Allied Arts Assn	3/23/2012	5/8/2013
Roe 677	Antelope Valley Florist Inc	3/23/2012	5/8/2013
Roe 684	Keiko Aoki	3/23/2012	5/8/2013
Roe 685	Jovencio Apostol	3/23/2012	5/8/2013

DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 686	Frances Appleby	3/23/2012	5/8/2013
Roe 687	Thomas Appleby	3/23/2012	5/8/2013
Roe 689	Benedicto Arevalo	3/23/2012	5/8/2013
Roe 690	Nora Arevalo	3/23/2012	5/8/2013
Roe 693	Florence Arnold	3/23/2012	5/8/2013
Roe 694	Lucita Arquileta	3/23/2012	5/8/2013
Roe 695	Rufino Arquileta	3/23/2012	5/8/2013
Roe 697	Arroyo Family Trust	3/23/2012	5/8/2013
Roe 698	Patricia Artigas	3/23/2012	5/8/2013
Roe 699	Noboru Asato	3/23/2012	5/8/2013
Roe 700	Jesus Ascencio	3/23/2012	5/8/2013
Roe 701	Aliza Asher	3/23/2012	5/8/2013
Roe 702	Shaul Asher	3/23/2012	5/8/2013
Roe 705	Gerard Auyong	3/23/2012	5/8/2013
Roe 706	Jane Aveni	3/23/2012	5/8/2013
Roe 707	Lloyd Avery	3/23/2012	5/8/2013
Roe 708	Alan Avrick	3/23/2012	5/8/2013
Roe 711	Jack Baerlein	3/23/2012	5/8/2013
Roe 716	Maria Balice	3/23/2012	5/8/2013
Roe 718	Emiliano Ballesteros	3/23/2012	5/8/2013
Roe 719	Rafael Banales	3/23/2012	5/8/2013
Roe 720	Bernardo Banuelos	3/23/2012	5/8/2013
Roe 721	Rosario Banuelos	3/23/2012	5/8/2013
Roe 723	Ron Banuk	3/23/2012	5/8/2013
Roe 725	Irene Barbeau	3/23/2012	5/8/2013
Roe 726	Ann Barnes	3/23/2012	5/8/2013
Roe 727	Wayne Barnes	3/23/2012	5/8/2013
Roe 728	Terri Baron	3/23/2012	5/8/2013
Roe 729	Joseph Bartfay	3/23/2012	5/8/2013
Roe 730	Selma Bartfay	3/23/2012	5/8/2013
Roe 731	Basrock Woodcreek Gardens	3/23/2012	5/8/2013
Roe 732	Francisco Batino	9/21/2015	10/13/2015
Roe 733	Nancy Bauer	3/23/2012	5/8/2013
Roe 734	A Beasley	3/23/2012	5/8/2013
Roe 735	Teresa Becarra	3/23/2012	5/8/2013
Roe 737	Ikuko Becker	3/23/2012	5/8/2013
Roe 738	James Becker	3/23/2012	5/8/2013
Roe 739	Betty Bederio	3/23/2012	5/8/2013
Roe 740	Beatriz Belisario	3/23/2012	5/8/2013
Roe 741	Luis Belisario	3/23/2012	5/8/2013
Roe 742	Bell Tr	3/23/2012	5/8/2013
Roe 743	Beverly Bellanca	3/23/2012	5/8/2013
Roe 744	Cecilia Beltran	3/23/2012	5/8/2013
Roe 745	Victoria Benner	3/23/2012	5/8/2013
Roe 746	Bensky Living Trust	3/23/2012	5/8/2013
Roe 748	Nancy Benz	3/23/2012	5/8/2013
Roe 750	Gaylyn Berglund	3/23/2012	5/8/2013
Roe 751	Kenneth Berglund	3/23/2012	5/8/2013
Roe 752	Amante Bermundo	3/23/2012	5/8/2013
Roe 754	Ary Biers	3/23/2012	5/8/2013
Roe 755	Robert Biers	3/23/2012	5/8/2013
Roe 756	Sylvia Bigornia	3/23/2012	5/8/2013
Roe 758	Alfons Bimbiris	3/23/2012	5/8/2013
Roe 759	Vera Bimbiris	3/23/2012	5/8/2013

DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 760	Melvin Bittner	3/23/2012	5/8/2013
Roe 763	Catherine Black	3/23/2012	5/8/2013
Roe 764	Anita Blanchard	3/23/2012	5/8/2013
Roe 767	Betty Bliley	3/23/2012	5/8/2013
Roe 768	Eugene Bliley	3/23/2012	5/8/2013
Roe 770	Jose Bocanegra	3/23/2012	5/8/2013
Roe 771	James Bodkin	3/23/2012	5/8/2013
Roe 772	Frank Bodolai	3/23/2012	5/8/2013
Roe 773	Magdalena Bodolai	3/23/2012	5/8/2013
Roe 775	Minh Bosque	3/23/2012	5/8/2013
Roe 776	Gayle Bovee	3/23/2012	5/8/2013
Roe 777	Vicki Bovee	3/23/2012	5/8/2013
Roe 778	Donna Boyer	3/23/2012	5/8/2013
Roe 781	BPP Valley Central	3/23/2012	5/8/2013
Roe 784	Bradley Family Tr	3/23/2012	5/8/2013
Roe 785	Dennis Braly	3/23/2012	5/8/2013
Roe 787	Brasel Family Tr	3/23/2012	5/8/2013
Roe 788	Flora Braun	3/23/2012	5/8/2013
Roe 789	Joe Brewer	3/23/2012	5/8/2013
Roe 794	Patricia Brooks	3/23/2012	5/8/2013
Roe 795	Mary Brosky	3/23/2012	5/8/2013
Roe 796	Vera Brown	3/23/2012	5/8/2013
Roe 797	Evelyn Bruno	3/23/2012	5/8/2013
Roe 798	Thomas Bryk	3/23/2012	5/8/2013
Roe 799	Eugene Buckley	3/23/2012	5/8/2013
Roe 800	Jeanne Buckley	3/23/2012	5/8/2013
Roe 801	Philip Bucknor	3/23/2012	5/8/2013
Roe 802	Donald Buhrmann	3/23/2012	5/8/2013
Roe 803	June Buhrmann	3/23/2012	5/8/2013
Roe 804	Washington Bumanglag	3/23/2012	5/8/2013
Roe 805	Walter Bunch	3/23/2012	5/8/2013
Roe 807	Karen Burgess	3/23/2012	5/8/2013
Roe 808	Randy Burgess	3/23/2012	5/8/2013
Roe 809	Raymond Burns	3/23/2012	5/8/2013
Roe 810	Doretha Burrell	3/23/2012	5/8/2013
Roe 814	Buytkus Family Trust	3/23/2012	5/8/2013
Roe 815	Daniel Byrne	3/23/2012	5/8/2013
Roe 816	David Byrne	3/23/2012	5/8/2013
Roe 820	Belva Caldwell	3/23/2012	5/8/2013
Roe 824	Marvin Calmeson	3/23/2012	5/8/2013
Roe 825	Herminia Camacho	3/23/2012	5/8/2013
Roe 826	Julian Camacho	3/23/2012	5/8/2013
Roe 827	Ricardo Camarena	3/23/2012	5/8/2013
Roe 828	Cambridge Homes, Inc.	3/23/2012	5/8/2013
Roe 829	Bonnie Cameron	3/23/2012	5/8/2013
Roe 830	James Cameron	3/23/2012	5/8/2013
Roe 832	Erika Campbell	3/23/2012	5/8/2013
Roe 837	Lynda Capel	3/23/2012	5/8/2013
Roe 839	Barbara Carey	3/23/2012	5/8/2013
Roe 840	Donald Carey	3/23/2012	5/8/2013
Roe 841	Ernest Caringi	3/23/2012	5/8/2013
Roe 842	Violet Carlisle	3/23/2012	5/8/2013
Roe 843	Timothy Carney	3/23/2012	5/8/2013
Roe 844	Rosendo Carranza	3/23/2012	5/8/2013

DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 847	Toribio Carrasco	3/23/2012	5/8/2013
Roe 848	Irene Carroll	3/23/2012	5/8/2013
Roe 849	James Carroll	3/23/2012	5/8/2013
Roe 850	Bera Carruthers	3/23/2012	5/8/2013
Roe 851	James B Caskey	3/23/2012	5/8/2013
Roe 852	Ruby J Caskey	3/23/2012	5/8/2013
Roe 853	Eugenia Carter	3/23/2012	5/8/2013
Roe 855	Terry Carter	3/23/2012	5/8/2013
Roe 856	Gary Castelan	3/23/2012	5/8/2013
Roe 857	Sharon Castelan	3/23/2012	5/8/2013
Roe 861	Jose Castillo	3/23/2012	5/8/2013
Roe 862	Remedios Castillo	3/23/2012	5/8/2013
Roe 864	Robert & Norma Caudle	3/23/2012	5/8/2013
Roe 865	Aurelia Cayetano	3/23/2012	5/8/2013
Roe 866	Edgardo Cayetano	3/23/2012	5/8/2013
Roe 867	Julia Cecil	3/23/2012	5/8/2013
Roe 868	Ken Cecil	3/23/2012	5/8/2013
Roe 869	Gilbert Ceniceros	3/23/2012	5/8/2013
Roe 870	Edward Cernicky	3/23/2012	5/8/2013
Roe 871	Florence Cernicky	3/23/2012	5/8/2013
Roe 872	Marc Chachuat	3/23/2012	5/8/2013
Roe 873	Sukhdev Chahal	3/23/2012	5/8/2013
Roe 877	Siu Chan	3/23/2012	5/8/2013
Roe 878	Beverly Chandler	3/23/2012	5/8/2013
Roe 879	Burton Chandler	3/23/2012	5/8/2013
Roe 880	Moon Chang	9/17/2015	10/16/2015
Roe 881	Py Chao	3/23/2012	5/8/2013
Roe 883	Christopher Cheung	3/23/2012	5/8/2013
Roe 886	Hu Chi Yu	3/23/2012	5/8/2013
Roe 887	Chou Chiang	3/23/2012	5/8/2013
Roe 888	Tim Chiu	3/23/2012	5/8/2013
Roe 889	Mi Choe	3/23/2012	5/8/2013
Roe 890	Pyong Choe	3/23/2012	5/8/2013
Roe 891	Kenneth Choi	3/23/2012	5/8/2013
Roe 892	Edwin Chong	3/23/2012	5/8/2013
Roe 894	Boniface Choy	3/23/2012	5/8/2013
Roe 898	John Christie	3/23/2012	5/8/2013
Roe 900	Ardathe Christopher	3/23/2012	5/8/2013
Roe 901	Daphne Chu	3/23/2012	5/8/2013
Roe 905	Fred Chung	3/23/2012	5/8/2013
Roe 906	Gabrielle Chung	3/23/2012	5/8/2013
Roe 907	John Cinfio	3/23/2012	5/8/2013
Roe 908	James Cipollone	3/23/2012	5/8/2013
Roe 909	Richard Clark	3/23/2012	5/8/2013
Roe 911	Russell Clawson	3/23/2012	5/8/2013
Roe 912	Gail Clutter	3/23/2012	5/8/2013
Roe 913	Ralph Clutter	3/23/2012	5/8/2013
Roe 914	Lap Co	3/23/2012	5/8/2013
Roe 916	Marc Cole	3/23/2012	5/8/2013
Roe 918	William Collicutt	3/23/2012	5/8/2013
Roe 919	Beatrice Collins	3/23/2012	5/8/2013
Roe 921	Charles Colton	3/23/2012	5/8/2013
Roe 922	Larry Connelly	3/23/2012	5/8/2013
Roe 923	Leo Connelly	3/23/2012	5/8/2013

DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 925	Alan Cook	3/23/2012	5/8/2013
Roe 926	Regina Cooley	3/23/2012	5/8/2013
Roe 927	Denise Cope	3/23/2012	5/8/2013
Roe 928	Thomas Cope	3/23/2012	5/8/2013
Roe 929	Ruby Corder	3/23/2012	5/8/2013
Roe 930	Alfredo Corrales	3/23/2012	5/8/2013
Roe 932	Calvin Cox	3/23/2012	5/8/2013
Roe 935	Ronald Cronk	3/23/2012	5/8/2013
Roe 937	Cora Cruz	3/23/2012	5/8/2013
Roe 938	Felina Cruz	3/23/2012	5/8/2013
Roe 939	Nicasio Cruz	3/23/2012	5/8/2013
Roe 940	Roger Cruz	3/23/2012	5/8/2013
Roe 941	Mike Culha	3/23/2012	5/8/2013
Roe 944	Florin D Souza	3/23/2012	5/8/2013
Roe 945	Anita Dacles	3/23/2012	5/8/2013
Roe 946	Simplicio Dacles	3/23/2012	5/8/2013
Roe 949	Helga Dalley	3/23/2012	5/8/2013
Roe 950	Manfred Dalley	3/23/2012	5/8/2013
Roe 956	Mohammad Daood	3/23/2012	5/8/2013
Roe 957	Saleem Daood	3/23/2012	5/8/2013
Roe 958	Adib Daoud	3/23/2012	5/8/2013
Roe 959	Donna Daugherty	3/23/2012	5/8/2013
Roe 960	Anita Davalos	3/23/2012	5/8/2013
Roe 961	Dominador Davalos	3/23/2012	5/8/2013
Roe 962	Alfred David	3/23/2012	5/8/2013
Roe 965	Douglas Davis	3/23/2012	5/8/2013
Roe 966	James Davis	3/23/2012	5/8/2013
Roe 968	Davis Sibs Inc	3/23/2012	5/8/2013
Roe 977	Sefey Debotoun	3/23/2012	5/8/2013
Roe 978	Angelito Dedios	3/23/2012	5/8/2013
Roe 979	Bruno Deluca	3/23/2012	5/8/2013
Roe 981	Olin Derrick	3/23/2012	5/8/2013
Roe 982	Deneen Deschene	3/23/2012	5/8/2013
Roe 983	Desert Lake L P	3/23/2012	5/8/2013
Roe 984	Juan Diaz	3/23/2012	5/8/2013
Roe 987	Gary Dicks	3/23/2012	5/8/2013
Roe 988	Nick Digiulio	3/23/2012	5/8/2013
Roe 989	Richard Dioli	3/23/2012	5/8/2013
Roe 990	Lonzo Dixon	3/23/2012	5/8/2013
Roe 991	Mae Dixon	3/23/2012	5/8/2013
Roe 992	Adelaida Dizon	3/23/2012	5/8/2013
Roe 994	Esteban Donis	3/23/2012	5/8/2013
Roe 995	Mauro Donis	3/23/2012	5/8/2013
Roe 996	Rosalina Donis	3/23/2012	5/8/2013
Roe 997	Virginia Donis	3/23/2012	5/8/2013
Roe 999	Michael Douglas	3/23/2012	5/8/2013
Roe 1000	Katherine Douglass	3/23/2012	5/8/2013
Roe 1001	Borom Douk	3/23/2012	5/8/2013
Roe 1002	S&B Douk	3/23/2012	5/8/2013
Roe 1003	Sokhom Douk	3/23/2012	5/8/2013
Roe 1004	James Downing	3/23/2012	5/8/2013
Roe 1005	Gary Downs	3/23/2012	5/8/2013
Roe 1006	Romnia Drever	3/23/2012	5/8/2013
Roe 1009	Eliseo Dumbrique	3/23/2012	5/8/2013

DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 1010	Cynthia Dunlop	3/23/2012	5/8/2013
Roe 1011	James Dunn	3/23/2012	5/8/2013
Roe 1012	Raymond Dunning	3/23/2012	5/8/2013
Roe 1013	Loc Duong	3/23/2012	5/8/2013
Roe 1014	Harold Dykstra	3/23/2012	5/8/2013
Roe 1015	Teresa Dykstra	3/23/2012	5/8/2013
Roe 1016	Wilbur Dykstra	3/23/2012	5/8/2013
Roe 1017	Dykstra Family Trust	3/23/2012	5/8/2013
Roe 1018	E I C Group et al	3/23/2012	5/8/2013
Roe 1019	Dorothy Earl	3/23/2012	5/8/2013
Roe 1020	Jack Earl	3/23/2012	5/8/2013
Roe 1021	David Earwood	3/23/2012	5/8/2013
Roe 1022	Benjamin Easter	3/23/2012	5/8/2013
Roe 1023	Joanne Ebert	3/23/2012	5/8/2013
Roe 1024	David Eckberg	3/23/2012	5/8/2013
Roe 1025	Paula Eckberg	3/23/2012	5/8/2013
Roe 1026	Dale Eckles	3/23/2012	5/8/2013
Roe 1027	Jean Economou	3/23/2012	5/8/2013
Roe 1028	John Edmonds	3/23/2012	5/8/2013
Roe 1034	Theodore Elness	3/23/2012	5/8/2013
Roe 1035	Rosa Elumba	3/23/2012	5/8/2013
Roe 1036	Zenaida Emms	3/23/2012	5/8/2013
Roe 1037	Rosario Empert	3/23/2012	5/8/2013
Roe 1039	Lorin Ensminger	3/23/2012	5/8/2013
Roe 1040	Catherine Erazim	3/23/2012	5/8/2013
Roe 1041	Catherine Erazim	3/23/2012	5/8/2013
Roe 1043	John Escobar	3/23/2012	5/8/2013
Roe 1044	Rose Esparza	3/23/2012	5/8/2013
Roe 1045	Filomena Espiritu	3/23/2012	5/8/2013
Roe 1046	William Espiritu	3/23/2012	5/8/2013
Roe 1047	Basilio Esquivel	3/23/2012	5/8/2013
Roe 1048	Irma Koburn as Beneficiary of the Estate of Zelda C Schliske Decd	3/23/2012	5/8/2013
Roe 1049	Edelmira Estrada	3/23/2012	5/8/2013
Roe 1050	Hervi Estrada	3/23/2012	5/8/2013
Roe 1053	Carl Fabrizio	3/23/2012	5/8/2013
Roe 1054	Fairview Development LLC	3/23/2012	5/8/2013
Roe 1058	Richard Faria	3/23/2012	5/8/2013
Roe 1060	Deborah Feliciano	3/23/2012	5/8/2013
Roe 1061	Denese Felts	3/23/2012	5/8/2013
Roe 1062	Douglas Felts	3/23/2012	5/8/2013
Roe 1068	Ruth Fike	3/23/2012	5/8/2013
Roe 1069	Claudia Finkel	3/23/2012	5/8/2013
Roe 1071	Mary Fiorito	3/23/2012	5/8/2013
Roe 1073	Joanne Fletcher	3/23/2012	5/8/2013
Roe 1074	Gayle Flores	3/23/2012	5/8/2013
Roe 1075	Maria Flores	3/23/2012	5/8/2013
Roe 1077	Herbert Floyd	3/23/2012	5/8/2013
Roe 1078	Larry Fogleman	3/23/2012	5/8/2013
Roe 1079	Alejandro Fontillas	3/23/2012	5/8/2013
Roe 1080	John Ford	3/23/2012	5/8/2013
Roe 1082	Antonia Fowler	3/23/2012	5/8/2013
Roe 1084	Kevin Frane	3/23/2012	5/8/2013
Roe 1085	Laurel Frane	3/23/2012	5/8/2013

DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 1086	Stephenie Fredrick	3/23/2012	5/8/2013
Roe 1087	Esther Friedman	3/23/2012	5/8/2013
Roe 1088	Joanne Fu	3/23/2012	5/8/2013
Roe 1089	Yoshi Fujisawa	3/23/2012	5/8/2013
Roe 1090	Michi Fukumoto	3/23/2012	5/8/2013
Roe 1093	Jeff Galieti	3/23/2012	5/8/2013
Roe 1094	Jose Galvez	3/23/2012	5/8/2013
Roe 1095	Betty Gambone	3/23/2012	5/8/2013
Roe 1099	Martha Garcia	3/23/2012	5/8/2013
Roe 1101	Rodolfo Garcia	3/23/2012	5/8/2013
Roe 1103	Eduardo Garde	3/23/2012	5/8/2013
Roe 1104	Russellend Garde	3/23/2012	5/8/2013
Roe 1105	Garde Fmly Rev Tr	3/23/2012	5/8/2013
Roe 1107	Hung Gee	3/23/2012	5/8/2013
Roe 1111	Stefan Ghika Budesti	3/23/2012	5/8/2013
Roe 1112	Paul Giang	3/23/2012	5/8/2013
Roe 1114	Gilbraltar Homes LLC	3/23/2012	5/8/2013
Roe 1116	George Gillingham	3/23/2012	5/8/2013
Roe 1117	Gisele Schroeder Liv Tr	3/23/2012	5/8/2013
Roe 1118	Drena Glauser	3/23/2012	5/8/2013
Roe 1119	Gary Glenn	3/23/2012	5/8/2013
Roe 1120	Paul Glessner	3/23/2012	5/8/2013
Roe 1122	Benito Gonzales	3/23/2012	5/8/2013
Roe 1123	Erminio Gonzales	3/23/2012	5/8/2013
Roe 1125	Quach Gonzales	3/23/2012	5/8/2013
Roe 1126	Carlos Conzalez	3/23/2012	5/8/2013
Roe 1127	Frances Gonzalez	3/23/2012	5/8/2013
Roe 1128	Gloria Gonzalez	3/23/2012	5/8/2013
Roe 1130	Roque Gonzalez	3/23/2012	5/8/2013
Roe 1131	Tina Gonzalez	3/23/2012	5/8/2013
Roe 1135	Vicente Gose	3/23/2012	5/8/2013
Roe 1136	Christina Goya	3/23/2012	5/8/2013
Roe 1142	William Grant	3/23/2012	5/8/2013
Roe 1144	Barbara Green	3/23/2012	5/8/2013
Roe 1145	Hilda Green	3/23/2012	5/8/2013
Roe 1147	Donna Greenman	3/23/2012	5/8/2013
Roe 1148	Pierre Grember	3/23/2012	5/8/2013
Roe 1150	John Griffin	3/23/2012	5/8/2013
Roe 1154	Gerald Groff	3/23/2012	5/8/2013
Roe 1155	Marian Groff	3/23/2012	5/8/2013
Roe 1156	Lillian Groom	3/23/2012	5/8/2013
Roe 1158	Marge Groven	3/23/2012	5/8/2013
Roe 1159	Lucena Guiang	3/23/2012	5/8/2013
Roe 1160	Cristoval Guillen	3/23/2012	5/8/2013
Roe 1162	Alvaro Gutierrez	3/23/2012	5/8/2013
Roe 1164	Santos Gutierrez	3/23/2012	5/8/2013
Roe 1165	Socorro Gutierrez	3/23/2012	5/8/2013
Roe 1166	Ovidio Guzman	3/23/2012	5/8/2013
Roe 1167	Jin Ha	3/23/2012	5/8/2013
Roe 1168	Young Ha	3/23/2012	5/8/2013
Roe 1170	Susan Hahn	3/23/2012	5/8/2013
Roe 1171	Homa Hamidi	3/23/2012	5/8/2013
Roe 1172	Carrie Hamson	3/23/2012	5/8/2013
Roe 1173	David Hamson	3/23/2012	5/8/2013

DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 1174	Dean Hanano	3/23/2012	5/8/2013
Roe 1175	James Hanlon	3/23/2012	5/8/2013
Roe 1176	James Hanlon	3/23/2012	5/8/2013
Roe 1177	Harald Hansen	3/23/2012	5/8/2013
Roe 1178	Christine Hanson	3/23/2012	5/8/2013
Roe 1180	Willis Hard	3/23/2012	5/8/2013
Roe 1181	Joseph Harnik	3/23/2012	5/8/2013
Roe 1182	David Harper	3/23/2012	5/8/2013
Roe 1183	Diane Harris	3/23/2012	5/8/2013
Roe 1184	James Harris	3/23/2012	5/8/2013
Roe 1185	Karen Harris	3/23/2012	5/8/2013
Roe 1186	Karen Hart	3/23/2012	5/8/2013
Roe 1187	Harvell Family Tr	3/23/2012	5/8/2013
Roe 1188	Gary Hathaway	3/23/2012	5/8/2013
Roe 1190	Donald Haydon	3/23/2012	5/8/2013
Roe 1191	Fusako Hazama	3/23/2012	5/8/2013
Roe 1192	Hideo Hazama	3/23/2012	5/8/2013
Roe 1193	Alice Heggen	3/23/2012	5/8/2013
Roe 1195	James Hemming	9/21/2015	10/13/2015
Roe 1197	Corine Henninger	3/23/2012	5/8/2013
Roe 1198	Antonio Hernandez	3/23/2012	5/8/2013
Roe 1199	Carol Herr	3/23/2012	5/8/2013
Roe 1200	Ronald Hetzner	3/23/2012	5/8/2013
Roe 1201	Geraldine Heynen	3/23/2012	5/8/2013
Roe 1202	HGJ LLC	3/23/2012	5/8/2013
Roe 1207	Eric Hillerman	3/23/2012	5/8/2013
Roe 1208	Marilyn Hinck	3/23/2012	5/8/2013
Roe 1212	Thong Ho	3/23/2012	5/8/2013
Roe 1214	Albert Hobayan	3/23/2012	5/8/2013
Roe 1215	Violeta Hobayan	3/23/2012	5/8/2013
Roe 1216	Paul Hodges	3/23/2012	5/8/2013
Roe 1217	Debra Hodsdon	3/23/2012	5/8/2013
Roe 1218	Steve Hodsdon	3/23/2012	5/8/2013
Roe 1219	Wilbert E. Decd Est of Hoffman	3/23/2012	5/8/2013
Roe 1220	Soledad Holguin	3/23/2012	5/8/2013
Roe 1221	Clarissia Holland	3/23/2012	5/8/2013
Roe 1225	Linda Homan	3/23/2012	5/8/2013
Roe 1226	Mathew Homan	3/23/2012	5/8/2013
Roe 1227	Che Hong	3/23/2012	5/8/2013
Roe 1229	Khai Hong	3/23/2012	5/8/2013
Roe 1231	Tony Hong	3/23/2012	5/8/2013
Roe 1232	Martha Hooper	3/23/2012	5/8/2013
Roe 1233	Gary Hoover	3/23/2012	5/8/2013
Roe 1234	Marilyn Hoover	3/23/2012	5/8/2013
Roe 1235	J Hopper	3/23/2012	5/8/2013
Roe 1240	William Hoskins	3/23/2012	5/8/2013
Roe 1243	Janette Hourani	3/23/2012	5/8/2013
Roe 1244	Leslie Howe	3/23/2012	5/8/2013
Roe 1245	Hsiaoni Chang	3/23/2012	5/8/2013
Roe 1247	Marie Hubbard	3/23/2012	5/8/2013
Roe 1248	Cresencio Huerta	3/23/2012	5/8/2013
Roe 1249	Romeo Hughes	3/23/2012	5/8/2013
Roe 1251	Norman Hines	9/21/2015	10/13/2015
Roe 1252	Robert Hunt	3/23/2012	5/8/2013

DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 1256	Amy Hwang	3/23/2012	5/8/2013
Roe 1258	Hyun Chul Lee	3/23/2012	5/8/2013
Roe 1259	Kiyoshi Ige	3/23/2012	5/8/2013
Roe 1260	Isidro Ignacio	3/23/2012	5/8/2013
Roe 1262	Veronica Ingersoll	3/23/2012	5/8/2013
Roe 1263	Martin Ingram	3/23/2012	5/8/2013
Roe 1265	Pasquale Ioele	3/23/2012	5/8/2013
Roe 1266	Joy Irish	3/23/2012	5/8/2013
Roe 1267	Robert Irish	3/23/2012	5/8/2013
Roe 1271	Fukuyo Twamoto	3/23/2012	5/8/2013
Roe 1274	Dietra Jackson	3/23/2012	5/8/2013
Roe 1276	Arnold Jacobsen	3/23/2012	5/8/2013
Roe 1277	Jagatri L and Xantha Dhawan	3/23/2012	5/8/2013
Roe 1278	Richard James	3/23/2012	5/8/2013
Roe 1279	David Jauregui	3/23/2012	5/8/2013
Roe 1280	Isaura Jauregui	3/23/2012	5/8/2013
Roe 1283	Enid Jeffrey	3/23/2012	5/8/2013
Roe 1286	Bobby Jennings	3/23/2012	5/8/2013
Roe 1287	Patricia Jennings	3/23/2012	5/8/2013
Roe 1289	Enrique Jimenez	3/23/2012	5/8/2013
Roe 1291	Henry Johnson	3/23/2012	5/8/2013
Roe 1294	Betty Jones	3/23/2012	5/8/2013
Roe 1295	Christine Jones	3/23/2012	5/8/2013
Roe 1296	David Jones	3/23/2012	5/8/2013
Roe 1297	Esther Jones	3/23/2012	5/8/2013
Roe 1298	Harold Jones	3/23/2012	5/8/2013
Roe 1301	Morton Juhl	3/23/2012	5/8/2013
Roe 1302	K A Investment Co LLC	3/23/2012	5/8/2013
Roe 1303	Isako Kagehiro	3/23/2012	5/8/2013
Roe 1304	Kenichi Kagehiro	3/23/2012	5/8/2013
Roe 1305	Mitsue Kanamori	3/23/2012	5/8/2013
Roe 1307	Katsuko Kariya	3/23/2012	5/8/2013
Roe 1308	Katsumi Kariya	3/23/2012	5/8/2013
Roe 1309	Nicholas Karthas	3/23/2012	5/8/2013
Roe 1310	Colleen Kasper	3/23/2012	5/8/2013
Roe 1311	Gordon Katsion	3/23/2012	5/8/2013
Roe 1312	Kaufler Trust	3/23/2012	5/8/2013
Roe 1313	Wayne Kawamoto	3/23/2012	5/8/2013
Roe 1314	Nancy Kawamura	3/23/2012	5/8/2013
Roe 1315	Yasuko Kawamura	3/23/2012	5/8/2013
Roe 1316	Keast Fmly Tr	3/23/2012	5/8/2013
Roe 1317	Keck Fmly Tr	3/23/2012	5/8/2013
Roe 1319	Arpineh Keklikian	3/23/2012	5/8/2013
Roe 1320	Missak Keklikian	3/23/2012	5/8/2013
Roe 1321	Marie Kendrick	3/23/2012	5/8/2013
Roe 1324	Joel Kettenring	3/23/2012	5/8/2013
Roe 1325	Pauline Kettenring	3/23/2012	5/8/2013
Roe 1326	Harriet Kettles	3/23/2012	5/8/2013
Roe 1327	Sandra Key	3/23/2012	5/8/2013
Roe 1331	Fadi Khater	3/23/2012	5/8/2013
Roe 1332	Lorna Kila	3/23/2012	5/8/2013
Roe 1334	Soo Kim	3/23/2012	5/8/2013
Roe 1337	Carol Kinat	3/23/2012	5/8/2013
Roe 1338	Chun King	3/23/2012	5/8/2013

DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 1339	William King	3/23/2012	5/8/2013
Roe 1341	Freda Kirkland	3/23/2012	5/8/2013
Roe 1345	Howard Klekar	3/23/2012	5/8/2013
Roe 1346	Frank Klojda	3/23/2012	5/8/2013
Roe 1348	Irene Knapp	3/23/2012	5/8/2013
Roe 1349	Kobayashi Family Trust	3/23/2012	5/8/2013
Roe 1351	Josephine Kollar	3/23/2012	5/8/2013
Roe 1352	William Kooken	3/23/2012	5/8/2013
Roe 1353	John Kostszewa	3/23/2012	5/8/2013
Roe 1354	Marlene Kostszewa	3/23/2012	5/8/2013
Roe 1356	Pamela Kousen	3/23/2012	5/8/2013
Roe 1358	Robert Kramer	3/23/2012	5/8/2013
Roe 1359	David Ku	3/23/2012	5/8/2013
Roe 1360	Sou Ku	3/23/2012	5/8/2013
Roe 1362	Terry Kuchta	3/23/2012	5/8/2013
Roe 1363	Seishi Kumagai	3/23/2012	5/8/2013
Roe 1364	Wei Kung	3/23/2012	5/8/2013
Roe 1366	Julia Kyle	3/23/2012	5/8/2013
Roe 1367	Jean La Porte	3/23/2012	5/8/2013
Roe 1368	Lilia Laguerta	3/23/2012	5/8/2013
Roe 1369	Deloris Lambert	3/23/2012	5/8/2013
Roe 1370	Nancy Lambert	3/23/2012	5/8/2013
Roe 1371	Lancaster Blvd	3/23/2012	5/8/2013
Roe 1372	Lancaster Blvd and 42nd St West	3/23/2012	5/8/2013
Roe 1373	Lancaster New Horizons	3/23/2012	5/8/2013
Roe 1374	Pearl Landau	3/23/2012	5/8/2013
Roe 1375	William Landau	3/23/2012	5/8/2013
Roe 1376	Jesus Landeverde	3/23/2012	5/8/2013
Roe 1378	Roberto Landeros	3/23/2012	5/8/2013
Roe 1382	William Lanier	3/23/2012	5/8/2013
Roe 1383	Ann Lanktree	3/23/2012	5/8/2013
Roe 1386	Bonnie Large	3/23/2012	5/8/2013
Roe 1387	Robert Large	3/23/2012	5/8/2013
Roe 1388	Samson Larranaga	3/23/2012	5/8/2013
Roe 1390	Alton Law	3/23/2012	5/8/2013
Roe 1391	Michael Lawrence	3/23/2012	5/8/2013
Roe 1392	Louie Laymance	3/23/2012	5/8/2013
Roe 1395	Conrado Lazo	3/23/2012	5/8/2013
Roe 1396	Elizabeth Lazo	3/23/2012	5/8/2013
Roe 1398	Loi Le	3/23/2012	5/8/2013
Roe 1400	Suong Le	3/23/2012	5/8/2013
Roe 1401	Yen Le	3/23/2012	5/8/2013
Roe 1402	Cornelius Leary	3/23/2012	5/8/2013
Roe 1404	Margaret Lebrecht	3/23/2012	5/8/2013
Roe 1405	Chi Lee	3/23/2012	5/8/2013
Roe 1406	Delano Lee	3/23/2012	5/8/2013
Roe 1407	Jim Lee	3/23/2012	5/8/2013
Roe 1408	Mai Lee	3/23/2012	5/8/2013
Roe 1409	Ting Lee	3/23/2012	5/8/2013
Roe 1412	Aurelia Legaspi	3/23/2012	5/8/2013
Roe 1413	Felimon Legaspi	3/23/2012	5/8/2013
Roe 1415	Leighton Leno	3/23/2012	5/8/2013
Roe 1416	Nancy Leno	3/23/2012	5/8/2013
Roe 1418	Mariane Lesiak	3/23/2012	5/8/2013

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Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 1419	Max Lesiak	3/23/2012	5/8/2013
Roe 1420	Ramie Leung	3/23/2012	5/8/2013
Roe 1425	Rudolfo Libed	3/23/2012	5/8/2013
Roe 1426	Lien Family Survivors Trust	3/23/2012	5/8/2013
Roe 1427	Michael Liggett	3/23/2012	5/8/2013
Roe 1428	Camila Lim	3/23/2012	5/8/2013
Roe 1429	Leonore Limos	3/23/2012	5/8/2013
Roe 1430	Tachung Lin	3/23/2012	5/8/2013
Roe 1431	Donald Linde	3/23/2012	5/8/2013
Roe 1432	Ling Ling Fang	3/23/2012	5/8/2013
Roe 1433	Lilla Liong	3/23/2012	5/8/2013
Roe 1434	Chih Liu	3/23/2012	5/8/2013
Roe 1435	Suh Liu	3/23/2012	5/8/2013
Roe 1436	Shirley Lizotte	3/23/2012	5/8/2013
Roe 1437	Edith Llanda	3/23/2012	5/8/2013
Roe 1438	Lloyd F Avery Tr	3/23/2012	5/8/2013
Roe 1441	Carmelita Locsin	3/23/2012	5/8/2013
Roe 1442	Hilario Locsin	3/23/2012	5/8/2013
Roe 1443	Mary Logue	3/23/2012	5/8/2013
Roe 1444	Thanh Loi	3/23/2012	5/8/2013
Roe 1445	Lola R Johnson Trust	3/23/2012	5/8/2013
Roe 1446	Lombardo Fmly Rev Liv Tr	3/23/2012	5/8/2013
Roe 1448	Thomas Lopac	3/23/2012	5/8/2013
Roe 1449	Mark Lopez	3/23/2012	5/8/2013
Roe 1450	Olivia Lopez	3/23/2012	5/8/2013
Roe 1451	Victor Lopez	3/23/2012	5/8/2013
Roe 1452	Bernard Los Banos	3/23/2012	5/8/2013
Roe 1455	Charles Lowery	3/23/2012	5/8/2013
Roe 1458	Eva Lubbers	3/23/2012	5/8/2013
Roe 1459	Robert Lucero	3/23/2012	5/8/2013
Roe 1460	Maria Ludovico	3/23/2012	5/8/2013
Roe 1461	Mike Ly	3/23/2012	5/8/2013
Roe 1462	Patricia Lynch	3/23/2012	5/8/2013
Roe 1464	Christi Lyons	3/23/2012	5/8/2013
Roe 1465	John Lyons	3/23/2012	5/8/2013
Roe 1466	M14 Development LLC	3/23/2012	5/8/2013
Roe 1467	Bernadette Macadaeg	3/23/2012	5/8/2013
Roe 1468	Jeanenne Mace	3/23/2012	5/8/2013
Roe 1469	Mark Mace	3/23/2012	5/8/2013
Roe 1470	Antonio Macias	3/23/2012	5/8/2013
Roe 1471	Benjamin Macias	3/23/2012	5/8/2013
Roe 1472	Martina Macias	3/23/2012	5/8/2013
Roe 1473	James Mackel	3/23/2012	5/8/2013
Roe 1474	Antonio Madrigal	3/23/2012	5/8/2013
Roe 1475	Cecilia Magalona	3/23/2012	5/8/2013
Roe 1476	Pale Mageo	3/23/2012	5/8/2013
Roe 1477	Patrocinio Maglaya	3/23/2012	5/8/2013
Roe 1478	Robert Magliano	3/23/2012	5/8/2013
Roe 1479	Rosalin Magliano	3/23/2012	5/8/2013
Roe 1480	Rolado Magtaas	3/23/2012	5/8/2013
Roe 1482	Vanna Mak	3/23/2012	5/8/2013
Roe 1483	Angela Malay	3/23/2012	5/8/2013
Roe 1484	Narciso Malit	3/23/2012	5/8/2013
Roe 1485	Lorie Manay	3/23/2012	5/8/2013

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Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 1486	Luzviminda Mandac	3/23/2012	5/8/2013
Roe 1487	David Manery	3/23/2012	5/8/2013
Roe 1488	Carol Mannino	3/23/2012	5/8/2013
Roe 1489	Charito Manuel	3/23/2012	5/8/2013
Roe 1492	Charles Manzo	3/23/2012	5/8/2013
Roe 1493	Rudolph Maravich	3/23/2012	5/8/2013
Roe 1494	Maree J De Lano Tr.	3/23/2012	5/8/2013
Roe 1496	Helen Marotta	3/23/2012	5/8/2013
Roe 1497	Alfredo Marquez	3/23/2012	5/8/2013
Roe 1498	Manuela Marquez	3/23/2012	5/8/2013
Roe 1501	Mary Marsh	3/23/2012	5/8/2013
Roe 1503	Byrn Marshall	3/23/2012	5/8/2013
Roe 1506	Alma Martin	3/23/2012	5/8/2013
Roe 1507	Arthur Martin	3/23/2012	5/8/2013
Roe 1508	Barbara Martin	3/23/2012	5/8/2013
Roe 1509	Thomas Martin	3/23/2012	5/8/2013
Roe 1510	Francisco Martinez	3/23/2012	5/8/2013
Roe 1512	Jesus Martinez	3/23/2012	5/8/2013
Roe 1514	Maria Martinez	3/23/2012	5/8/2013
Roe 1515	Robert Martinez	3/23/2012	5/8/2013
Roe 1523	Mildred Mason	3/23/2012	5/8/2013
Roe 1524	Donald Masters	3/23/2012	5/8/2013
Roe 1526	Rosario Mata	3/23/2012	5/8/2013
Roe 1528	Sumiko Matsushima	3/23/2012	5/8/2013
Roe 1529	Fulton Matthews	3/23/2012	5/8/2013
Roe 1530	Matthew Maurice	3/23/2012	5/8/2013
Roe 1531	Shirley Maxilom	3/23/2012	5/8/2013
Roe 1532	Catherine Maxwell	3/23/2012	5/8/2013
Roe 1535	Gustauo Mazariegos	3/23/2012	5/8/2013
Roe 1536	Linda Mazariegos	3/23/2012	5/8/2013
Roe 1539	Raymond Mc Kay	3/23/2012	5/8/2013
Roe 1540	B Mc Laren	3/23/2012	5/8/2013
Roe 1541	Brian Mc Laughlin	3/23/2012	5/8/2013
Roe 1542	Rae McAllister	3/23/2012	5/8/2013
Roe 1543	Julienne McCalman	3/23/2012	5/8/2013
Roe 1544	Walter McCalman	3/23/2012	5/8/2013
Roe 1545	Loreta McClain	3/23/2012	5/8/2013
Roe 1546	Susan McCline	3/23/2012	5/8/2013
Roe 1547	Donan McClung	3/23/2012	5/8/2013
Roe 1548	Frederick McCool	3/23/2012	5/8/2013
Roe 1549	Rita McCool	3/23/2012	5/8/2013
Roe 1550	Jerrie McDowell	3/23/2012	5/8/2013
Roe 1551	Patty McGahan	3/23/2012	5/8/2013
Roe 1553	Edwin McNinch	3/23/2012	5/8/2013
Roe 1554	Margaret McNinch	3/23/2012	5/8/2013
Roe 1557	Julian Medina	3/23/2012	5/8/2013
Roe 1558	Juana Mejia	3/23/2012	5/8/2013
Roe 1559	Leonard Mellow	3/23/2012	5/8/2013
Roe 1560	Alfredo Mendoza	3/23/2012	5/8/2013
Roe 1561	Cuauhtemoc Mendoza	3/23/2012	5/8/2013
Roe 1563	Herminia Messier	3/23/2012	5/8/2013
Roe 1564	Leonard Messier	3/23/2012	5/8/2013
Roe 1565	David Meyer	3/23/2012	5/8/2013
Roe 1566	Lisa Meyer	3/23/2012	5/8/2013

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Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 1567	Meyer Crest Ltd	3/23/2012	5/8/2013
Roe 1568	Meyer Crest Ltr	3/23/2012	5/8/2013
Roe 1571	Hisao Mihara	3/23/2012	5/8/2013
Roe 1572	Molly Mikel	3/23/2012	5/8/2013
Roe 1573	Sam Mikel	3/23/2012	5/8/2013
Roe 1575	Linda Miller	3/23/2012	5/8/2013
Roe 1576	Nancy Miller	3/23/2012	5/8/2013
Roe 1577	Raymond Miller	3/23/2012	5/8/2013
Roe 1578	Richard Miller	3/23/2012	5/8/2013
Roe 1579	Steven Miller	3/23/2012	5/8/2013
Roe 1582	Roldan Mina	9/17/2015	10/16/2015
Roe 1583	Lieu Minh	3/23/2012	5/8/2013
Roe 1584	Van Minh	3/23/2012	5/8/2013
Roe 1585	Salvador Miranda	3/23/2012	5/8/2013
Roe 1586	Morteza Mirkazemi	3/23/2012	5/8/2013
Roe 1587	Susan Mirkazemi	3/23/2012	5/8/2013
Roe 1590	Janice Mitsushima	3/23/2012	5/8/2013
Roe 1593	Chiung Mo	3/23/2012	5/8/2013
Roe 1595	Bjorn Moene	3/23/2012	5/8/2013
Roe 1596	Celina Molina	3/23/2012	5/8/2013
Roe 1598	Patricio Moneda	3/23/2012	5/8/2013
Roe 1599	Saeed Monfared	3/23/2012	5/8/2013
Roe 1600	Eusebio Montemayor	3/23/2012	5/8/2013
Roe 1601	Maria Montes	3/23/2012	5/8/2013
Roe 1602	Judith Moore	3/23/2012	5/8/2013
Roe 1603	Thomas Moore	3/23/2012	5/8/2013
Roe 1604	William Moore	3/23/2012	5/8/2013
Roe 1605	Michael Moreno	3/23/2012	5/8/2013
Roe 1606	Ritsuko Mori	3/23/2012	5/8/2013
Roe 1607	John Morris	3/23/2012	5/8/2013
Roe 1609	Mary Moses	3/23/2012	5/8/2013
Roe 1610	Firouzeh Motavvef	3/23/2012	5/8/2013
Roe 1611	Mansoor Motavvef	3/23/2012	5/8/2013
Roe 1612	Girard Moughalian	3/23/2012	5/8/2013
Roe 1613	Renate Moughalian	3/23/2012	5/8/2013
Roe 1614	Marilyn Mudgett	3/23/2012	5/8/2013
Roe 1615	Brandon Mullins	3/23/2012	5/8/2013
Roe 1616	Maia Mulvena	3/23/2012	5/8/2013
Roe 1618	Emma Mungia	3/23/2012	5/8/2013
Roe 1620	Dan Munz	3/23/2012	5/8/2013
Roe 1623	Bronwyn Murdock	3/23/2012	5/8/2013
Roe 1624	Estela Muro	3/23/2012	5/8/2013
Roe 1626	Murtaugh Survivors Trust	3/23/2012	5/8/2013
Roe 1628	Duk Myung	3/23/2012	5/8/2013
Roe 1629	Hyun Myung	3/23/2012	5/8/2013
Roe 1631	Mary Nadwodny	3/23/2012	5/8/2013
Roe 1635	Satoye Nakamichi	3/23/2012	5/8/2013
Roe 1636	Yoshito Nakashima	3/23/2012	5/8/2013
Roe 1637	Shizuko Nakawatase	3/23/2012	5/8/2013
Roe 1638	Yoshitaka Nakawatase	3/23/2012	5/8/2013
Roe 1639	Jim Nanamkin	3/23/2012	5/8/2013
Roe 1640	David Naputi	3/23/2012	5/8/2013
Roe 1642	Nationwide Asset Management LP	3/23/2012	5/8/2013
Roe 1643	Charyl Naval	3/23/2012	5/8/2013

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Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 1645	Andrea Navarro	3/23/2012	5/8/2013
Roe 1647	Jose Navarro	3/23/2012	5/8/2013
Roe 1651	Dorwin Newman	3/23/2012	5/8/2013
Roe 1652	Shirley Newman	3/23/2012	5/8/2013
Roe 1653	Newsom Family Trust	3/23/2012	5/8/2013
Roe 1654	Binh Ngo	3/23/2012	5/8/2013
Roe 1655	Anthony Nguyen	3/23/2012	5/8/2013
Roe 1656	Danny Nguyen	3/23/2012	5/8/2013
Roe 1657	Frank Nguyen	3/23/2012	5/8/2013
Roe 1658	Ngoc Nguyen	3/23/2012	5/8/2013
Roe 1659	Nguyet Nguyen	3/23/2012	5/8/2013
Roe 1660	Sonnie Nguyen	3/23/2012	5/8/2013
Roe 1661	Thanh Nguyen	3/23/2012	5/8/2013
Roe 1665	Gerard Nicholson	3/23/2012	5/8/2013
Roe 1666	Marie Nicholson	3/23/2012	5/8/2013
Roe 1668	Eric Nishida	3/23/2012	5/8/2013
Roe 1670	Lydia Nixon	3/23/2012	5/8/2013
Roe 1672	Dixie Noel	3/23/2012	5/8/2013
Roe 1674	Mark Noterman	3/23/2012	5/8/2013
Roe 1675	Yvette Noterman	3/23/2012	5/8/2013
Roe 1676	Nancy Nou	3/23/2012	5/8/2013
Roe 1677	Cipriano Noveloso	3/23/2012	5/8/2013
Roe 1678	Dolores Noveloso	3/23/2012	5/8/2013
Roe 1679	Henry Nozaki	3/23/2012	5/8/2013
Roe 1680	Naomi Nozaki	3/23/2012	5/8/2013
Roe 1681	Mary Nutter	3/23/2012	5/8/2013
Roe 1682	Merle Oberg	3/23/2012	5/8/2013
Roe 1683	Timothy Oconnor	3/23/2012	5/8/2013
Roe 1684	Jessie Ohta	3/23/2012	5/8/2013
Roe 1685	Haruto Okihara	3/23/2012	5/8/2013
Roe 1687	Rick Olivas	3/23/2012	5/8/2013
Roe 1688	Olson Family Trust	3/23/2012	5/8/2013
Roe 1691	Adoracion Orara	3/23/2012	5/8/2013
Roe 1692	Francisco Orara	3/23/2012	5/8/2013
Roe 1694	Evelyn Ortega	3/23/2012	5/8/2013
Roe 1695	Joe Mari Ortega	3/23/2012	5/8/2013
Roe 1696	Pedro Ortega	3/23/2012	5/8/2013
Roe 1698	Doris Oshiro	3/23/2012	5/8/2013
Roe 1699	Firooz Oskooi	3/23/2012	5/8/2013
Roe 1705	Charlene Padgett	3/23/2012	5/8/2013
Roe 1706	Roy Padgett	3/23/2012	5/8/2013
Roe 1707	Marta Padilla	3/23/2012	5/8/2013
Roe 1708	Paz Padilla	3/23/2012	5/8/2013
Roe 1709	Claire Padua	3/23/2012	5/8/2013
Roe 1711	Leonida Pagdilao	3/23/2012	5/8/2013
Roe 1712	Julio Palacio	3/23/2012	5/8/2013
Roe 1714	Palmdale 5th Street West LLC	3/23/2012	5/8/2013
Roe 1715	Palmdale Family Housing	3/23/2012	5/8/2013
Roe 1716	Palmdale Lodging Associates LLC	3/23/2012	5/8/2013
Roe 1717	Palmdale Mobile Park LLC	3/23/2012	5/8/2013
Roe 1719	Eugenio Paredes	3/23/2012	5/8/2013
Roe 1721	Choon Park	9/21/2015	10/13/2015
Roe 1722	Inyoung Park	3/23/2012	5/8/2013
Roe 1728	Jose Pastrano	3/23/2012	5/8/2013

DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 1730	Sally Patino	3/23/2012	5/8/2013
Roe 1732	Adrian Pauling	3/23/2012	5/8/2013
Roe 1738	Vicenta Pena	3/23/2012	5/8/2013
Roe 1740	Michael Pereira	3/23/2012	5/8/2013
Roe 1741	Rosa Perez	3/23/2012	5/8/2013
Roe 1742	PH Rosamond LLC	3/23/2012	5/8/2013
Roe 1743	Orrin Phillips	3/23/2012	5/8/2013
Roe 1744	Paul Pieratt	3/23/2012	5/8/2013
Roe 1748	Arthur Pizano	3/23/2012	5/8/2013
Roe 1750	Tavil Ploryngam	3/23/2012	5/8/2013
Roe 1751	Perla Pollard	3/23/2012	5/8/2013
Roe 1752	Robert Pollard	3/23/2012	5/8/2013
Roe 1755	Poole Family Tr	3/23/2012	5/8/2013
Roe 1756	Dora Porcari	3/23/2012	5/8/2013
Roe 1760	Robert Potter	3/23/2012	5/8/2013
Roe 1762	Waraya Pratanthip	3/23/2012	5/8/2013
Roe 1764	Romano Procida	3/23/2012	5/8/2013
Roe 1765	Bruno Prodan	3/23/2012	5/8/2013
Roe 1766	Rosa Prodan	3/23/2012	5/8/2013
Roe 1767	PVK Family Limited Ptn	3/23/2012	5/8/2013
Roe 1768	Quan Quoc Pham	3/23/2012	5/8/2013
Roe 1769	Quantumcue Inc	3/23/2012	5/8/2013
Roe 1770	Bella Questin	3/23/2012	5/8/2013
Roe 1773	Mary Quinlan	3/23/2012	5/8/2013
Roe 1774	Theodore Rabena	3/23/2012	5/8/2013
Roe 1776	Armando Raguine	3/23/2012	5/8/2013
Roe 1778	Gay Ralphs	3/23/2012	5/8/2013
Roe 1779	Fred Rampe	3/23/2012	5/8/2013
Roe 1780	Felicitas Ranada	3/23/2012	5/8/2013
Roe 1782	Mahmud Rawjee	3/23/2012	5/8/2013
Roe 1783	Fereidoun Razavi	3/23/2012	5/8/2013
Roe 1784	Clarence Razer	3/23/2012	5/8/2013
Roe 1785	Jean Razer	3/23/2012	5/8/2013
Roe 1786	Joan Reach	3/23/2012	5/8/2013
Roe 1788	Robert Reed	3/23/2012	5/8/2013
Roe 1789	Barbara Reff	3/23/2012	5/8/2013
Roe 1790	Herbert Reff	3/23/2012	5/8/2013
Roe 1791	Mary Reid	3/23/2012	5/8/2013
Roe 1795	Concepcion Reyes	3/23/2012	5/8/2013
Roe 1796	Elizabeth Reyes	3/23/2012	5/8/2013
Roe 1797	Ernesto Reyes	3/23/2012	5/8/2013
Roe 1798	Vicente Reyes	3/23/2012	5/8/2013
Roe 1801	Sei Rhee	3/23/2012	5/8/2013
Roe 1803	Susan Rhoda	3/23/2012	5/8/2013
Roe 1804	Michele Rhoden	3/23/2012	5/8/2013
Roe 1805	Morris Richards	3/23/2012	5/8/2013
Roe 1807	Ronald Ricketts	3/23/2012	5/8/2013
Roe 1810	Anita Rider	3/23/2012	5/8/2013
Roe 1811	Florence Rimando	3/23/2012	5/8/2013
Roe 1812	Ruben Rimando	3/23/2012	5/8/2013
Roe 1813	Maria Rios	3/23/2012	5/8/2013
Roe 1814	Nicolas Rios	3/23/2012	5/8/2013
Roe 1815	Joyce Ripperda	3/23/2012	5/8/2013
Roe 1816	James Rippon	3/23/2012	5/8/2013

DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 1818	George Rivera	3/23/2012	5/8/2013
Roe 1820	David Robbie	3/23/2012	5/8/2013
Roe 1821	Kinue Robbie	3/23/2012	5/8/2013
Roe 1822	Tracy Roberson	3/23/2012	5/8/2013
Roe 1824	Charles Robertson	3/23/2012	5/8/2013
Roe 1825	Albert Rodarte	3/23/2012	5/8/2013
Roe 1826	Concepcion Rodriguez	3/23/2012	5/8/2013
Roe 1827	Guadalupe Rodriguez	3/23/2012	5/8/2013
Roe 1828	Ignacio Rodriguez	3/23/2012	5/8/2013
Roe 1829	John Rodriguez	3/23/2012	5/8/2013
Roe 1831	Roquemore Tr	3/23/2012	5/8/2013
Roe 1832	Russell Rosenberry	3/23/2012	5/8/2013
Roe 1835	Robert Rosenthal	3/23/2012	5/8/2013
Roe 1836	Ross Rebar Co., Inc.	3/23/2012	5/8/2013
Roe 1837	Richard Rottgering	3/23/2012	5/8/2013
Roe 1838	Trisha Rowe	3/23/2012	5/8/2013
Roe 1839	Marshall Rowen	3/23/2012	5/8/2013
Roe 1840	Myra Rowland	3/23/2012	5/8/2013
Roe 1841	Sidney Ru	3/23/2012	5/8/2013
Roe 1842	James Rubenstein	3/23/2012	5/8/2013
Roe 1846	Dewey Runkle	3/23/2012	5/8/2013
Roe 1847	Lynn Ruona	3/23/2012	5/8/2013
Roe 1848	Frederick Ruopp	3/23/2012	5/8/2013
Roe 1849	Berna Russell	3/23/2012	5/8/2013
Roe 1850	Helen Russell	3/23/2012	5/8/2013
Roe 1851	Patricia Ruston	3/23/2012	5/8/2013
Roe 1852	Tom Ruston	3/23/2012	5/8/2013
Roe 1854	Hermogenes Sacman	3/23/2012	5/8/2013
Roe 1860	Katsuji Saito	3/23/2012	5/8/2013
Roe 1861	Gabriel Salazar	3/23/2012	5/8/2013
Roe 1862	Hoger Saleh	3/23/2012	5/8/2013
Roe 1863	Betty Sallen	3/23/2012	5/8/2013
Roe 1864	Joseph Sallen	3/23/2012	5/8/2013
Roe 1865	San Diego French American	3/23/2012	5/8/2013
Roe 1867	Francisco Sanchez	3/23/2012	5/8/2013
Roe 1868	Maria Sanchez	3/23/2012	5/8/2013
Roe 1869	Gregorio Santos	3/23/2012	5/8/2013
Roe 1870	Jose Saromines	3/23/2012	5/8/2013
Roe 1872	Sasaki Family Trust 1995	3/23/2012	5/8/2013
Roe 1873	Karen Sauer	3/23/2012	5/8/2013
Roe 1874	Amy Say	3/23/2012	5/8/2013
Roe 1875	William Schad	3/23/2012	5/8/2013
Roe 1876	Alice Schaeffer	3/23/2012	5/8/2013
Roe 1877	Bud Schaeffer	3/23/2012	5/8/2013
Roe 1884	Judith Schlegel	3/23/2012	5/8/2013
Roe 1885	Stephen Schlegel	3/23/2012	5/8/2013
Roe 1887	Hazel Schoepflin	3/23/2012	5/8/2013
Roe 1888	Niel Schoepflin	3/23/2012	5/8/2013
Roe 1891	John Schulte	3/23/2012	5/8/2013
Roe 1892	Philip Schultz	3/23/2012	5/8/2013
Roe 1893	Betty Scidmore	3/23/2012	5/8/2013
Roe 1894	Robert Scott	3/23/2012	5/8/2013
Roe 1895	Patricia Scruggs	3/23/2012	5/8/2013
Roe 1897	Henry Segrove	3/23/2012	5/8/2013

DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 1898	Florence Seibert	3/23/2012	5/8/2013
Roe 1899	Alvin Selnick	3/23/2012	5/8/2013
Roe 1901	Carl Semotan	3/23/2012	5/8/2013
Roe 1903	Ralph Sexton	3/23/2012	5/8/2013
Roe 1904	Eugenia Shadd	3/23/2012	5/8/2013
Roe 1905	William Shannon	3/23/2012	5/8/2013
Roe 1908	Catherine Shearer	3/23/2012	5/8/2013
Roe 1909	Shearer Marital Trust	3/23/2012	5/8/2013
Roe 1911	Earnest Sherman	3/23/2012	5/8/2013
Roe 1912	Hajime Shibuya	3/23/2012	5/8/2013
Roe 1913	Kyoko Shibuya	3/23/2012	5/8/2013
Roe 1914	Lupe Shimabukuro	3/23/2012	5/8/2013
Roe 1915	Rodney Shimabukuro	3/23/2012	5/8/2013
Roe 1916	Yoshiaki Shimizu	3/23/2012	5/8/2013
Roe 1917	Shogo Shimomura	3/23/2012	5/8/2013
Roe 1918	Alves Shiu	3/23/2012	5/8/2013
Roe 1919	Benjamin Shlomi	3/23/2012	5/8/2013
Roe 1920	Behrouz Shokri	3/23/2012	5/8/2013
Roe 1921	Fariba Shokri	3/23/2012	5/8/2013
Roe 1924	Lolita Sicat	3/23/2012	5/8/2013
Roe 1925	Jakob Siccama	3/23/2012	5/8/2013
Roe 1928	Sierra Gateway Resolution LLC	3/23/2012	5/8/2013
Roe 1930	Edward Simon	3/23/2012	5/8/2013
Roe 1932	Gora Singh	3/23/2012	5/8/2013
Roe 1933	Tina Singh	3/23/2012	5/8/2013
Roe 1935	Esther Siville	3/23/2012	5/8/2013
Roe 1936	Siville Family Trust	3/23/2012	5/8/2013
Roe 1937	Charles Skaggs	3/23/2012	5/8/2013
Roe 1938	Rebecca Skaggs	3/23/2012	5/8/2013
Roe 1939	Georgette Skiadas	3/23/2012	5/8/2013
Roe 1941	Charles Skinner	3/23/2012	5/8/2013
Roe 1942	Sharren Skinner	3/23/2012	5/8/2013
Roe 1943	Frank Small	3/23/2012	5/8/2013
Roe 1945	Chong Smith	3/23/2012	5/8/2013
Roe 1946	Jack Smith	3/23/2012	5/8/2013
Roe 1947	James Smith	3/23/2012	5/8/2013
Roe 1948	Larry Smith	3/23/2012	5/8/2013
Roe 1951	Robert Smith	3/23/2012	5/8/2013
Roe 1953	Gary Snyder	3/23/2012	5/8/2013
Roe 1956	Konstantinos Soteropoulos	3/23/2012	5/8/2013
Roe 1957	Juan Soto	3/23/2012	5/8/2013
Roe 1958	James South	3/23/2012	5/8/2013
Roe 1961	Edward Sovich	3/23/2012	5/8/2013
Roe 1963	T Spenard	3/23/2012	5/8/2013
Roe 1964	Francis Sperling	3/23/2012	5/8/2013
Roe 1965	David Sserunkuma	3/23/2012	5/8/2013
Roe 1967	Virginia Stadler	3/23/2012	5/8/2013
Roe 1969	Alan Stenerson	3/23/2012	5/8/2013
Roe 1971	Teresita Sterkel	3/23/2012	5/8/2013
Roe 1973	Nicole Stetson	3/23/2012	5/8/2013
Roe 1975	Stipancic Tr	3/23/2012	5/8/2013
Roe 1976	Brian Stone	3/23/2012	5/8/2013
Roe 1977	Lois Stover	3/23/2012	5/8/2013
Roe 1980	Wilma Stremel	3/23/2012	5/8/2013

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Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 1981	Thomas Striegler	3/23/2012	5/8/2013
Roe 1982	Steve Stubner	3/23/2012	5/8/2013
Roe 1983	Guzel Sturm	3/23/2012	5/8/2013
Roe 1987	Jordan Sugarman	3/23/2012	5/8/2013
Roe 1988	Ruth Sugarman	3/23/2012	5/8/2013
Roe 1991	Eugene Summers	3/23/2012	5/8/2013
Roe 1993	Queenie Summers	3/23/2012	5/8/2013
Roe 1995	Frana Sunjka	3/23/2012	5/8/2013
Roe 1996	Joseph Sunjka	3/23/2012	5/8/2013
Roe 1997	Sunlight Townhome LLC	3/23/2012	5/8/2013
Roe 1998	Lenny Supa	3/23/2012	5/8/2013
Roe 2000	Fadia Sweis	3/23/2012	5/8/2013
Roe 2001	Samir Sweis	3/23/2012	5/8/2013
Roe 2002	Ethel Szeto	3/23/2012	5/8/2013
Roe 2003	T L Squared LLC	3/23/2012	5/8/2013
Roe 2005	Takashi Takagi	3/23/2012	5/8/2013
Roe 2006	Reiko Takashita	3/23/2012	5/8/2013
Roe 2008	Grover Talley	3/23/2012	5/8/2013
Roe 2009	Herbert Tam	3/23/2012	5/8/2013
Roe 2010	Cres Tamayo	3/23/2012	5/8/2013
Roe 2011	Macario Tamayo	3/23/2012	5/8/2013
Roe 2012	Corazon Tan	3/23/2012	5/8/2013
Roe 2013	Fidelino Tan	3/23/2012	5/8/2013
Roe 2014	Alice Tanaka	3/23/2012	5/8/2013
Roe 2015	Roy Tanaka	3/23/2012	5/8/2013
Roe 2017	Robin Taniguchi	3/23/2012	3/12/2014
Roe 2018	Chi-Kwang Tao	3/23/2012	3/12/2014
Roe 2019	Ting-Ning Tao	3/23/2012	3/12/2014
Roe 2020	George Tapia	3/23/2012	5/8/2013
Roe 2021	F Taylor	3/23/2012	3/12/2014
Roe 2026	Fumio Teruya	3/23/2012	3/12/2014
Roe 2027	Hisako Teruya	3/23/2012	3/12/2014
Roe 2032	Mary Thompson	3/23/2012	3/12/2014
Roe 2033	William Thompson	3/23/2012	5/8/2013
Roe 2036	Thyra Retzke Family Trust	3/23/2012	3/12/2014
Roe 2037	Ronald Tichauer	3/23/2012	5/8/2013
Roe 2038	Louise Tiendas	3/23/2012	3/12/2014
Roe 2039	Tertius Tiendas	3/23/2012	3/12/2014
Roe 2041	Chiang Ting	3/23/2012	3/12/2014
Roe 2042	Insurance Title	3/23/2012	3/12/2014
Roe 2043	Title Insurance and Trust Company	3/23/2012	3/12/2014
Roe 2044	Lynn Tivens	3/23/2012	3/12/2014
Roe 2045	Arthur Tobin	3/23/2012	3/12/2014
Roe 2046	Hilda Tobin	3/23/2012	3/12/2014
Roe 2047	Today Investment Group LLC	3/23/2012	5/8/2013
Roe 2050	Alice Tomei	3/23/2012	3/12/2014
Roe 2051	Ralph Tomei	3/23/2012	3/12/2014
Roe 2052	Glen Tomkiewicz	3/23/2012	3/12/2014
Roe 2053	Jill Tomkiewicz	3/23/2012	3/12/2014
Roe 2054	Benny Tomlinson	3/23/2012	3/12/2014
Roe 2055	Dalisay Torres	3/23/2012	3/12/2014
Roe 2056	Edilberto Torres	3/23/2012	3/12/2014
Roe 2057	Nerio Torres	3/23/2012	3/12/2014
Roe 2058	Shirley Torres	3/23/2012	3/12/2014

DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 2059	Victor Torres	3/23/2012	3/12/2014
Roe 2061	Felipe Tovar	3/23/2012	5/8/2013
Roe 2063	Huynh Tran	3/23/2012	3/12/2014
Roe 2064	Jeannie Tran	3/23/2012	3/12/2014
Roe 2065	Sharon Tremblay	3/23/2012	3/12/2014
Roe 2066	Emma Trochim	3/23/2012	3/12/2014
Roe 2069	Jenny Truong	3/23/2012	3/12/2014
Roe 2071	Liu Fang Tsen	3/23/2012	3/12/2014
Roe 2073	Gail Tsuhako	3/23/2012	3/12/2014
Roe 2074	John Tsuhako	3/23/2012	3/12/2014
Roe 2078	Arthur Ulat	3/23/2012	3/12/2014
Roe 2079	Eldena Ulat	3/23/2012	3/12/2014
Roe 2080	Richard Unfried	3/23/2012	3/12/2014
Roe 2081	Hoa Uong	3/23/2012	3/12/2014
Roe 2083	Leslie Urban	3/23/2012	3/12/2014
Roe 2084	Civ Ushigome	3/23/2012	3/12/2014
Roe 2086	Amelia Uyehara	3/23/2012	3/12/2014
Roe 2087	Eddie Uyehara	3/23/2012	3/12/2014
Roe 2090	Elpidio Valdez	3/23/2012	3/12/2014
Roe 2092	Max Van Runkle	3/23/2012	5/8/2013
Roe 2093	Evangeline Vance	3/23/2012	5/8/2013
Roe 2094	Donna Vandergroen	3/23/2012	5/8/2013
Roe 2095	Ronald Vandergroen	3/23/2012	5/8/2013
Roe 2096	Victor Varela	3/23/2012	5/8/2013
Roe 2097	Danny Vaughn	3/23/2012	5/8/2013
Roe 2098	Gil Velchez	3/23/2012	5/8/2013
Roe 2099	Lolita Velchez	3/23/2012	5/8/2013
Roe 2100	Velur Properties LLC	3/23/2012	5/8/2013
Roe 2101	Venture Industrial LLC	3/23/2012	5/8/2013
Roe 2102	Crispino Vicari	3/23/2012	5/8/2013
Roe 2103	Isaias Vicens	3/23/2012	5/8/2013
Roe 2104	Bertha Villagomez	3/23/2012	5/8/2013
Roe 2105	Jose Villalpando	3/23/2012	5/8/2013
Roe 2106	Norma Villarente	3/23/2012	5/8/2013
Roe 2107	Doris Villegas	3/23/2012	5/8/2013
Roe 2108	Gregario Villegas	3/23/2012	5/8/2013
Roe 2109	Margarita Viloria	3/23/2012	5/8/2013
Roe 2110	Edward Vilt	3/23/2012	5/8/2013
Roe 2111	Rodger Virtue	3/23/2012	5/8/2013
Roe 2112	Danny Visitacion	3/23/2012	5/8/2013
Roe 2113	Sally Visitacion	9/21/2015	10/13/2015
Roe 2117	Richard Vonborcke	3/23/2012	5/8/2013
Roe 2118	Elisa Vondra	3/23/2012	5/8/2013
Roe 2119	James Vondra	3/23/2012	5/8/2013
Roe 2121	Robert Wade	3/23/2012	5/8/2013
Roe 2124	Daniel Walden	3/23/2012	5/8/2013
Roe 2125	Cecil Walker	3/23/2012	5/8/2013
Roe 2126	Grace Walker	3/23/2012	5/8/2013
Roe 2127	Patricia Wallace	3/23/2012	5/8/2013
Roe 2128	William Wallace	3/23/2012	5/8/2013
Roe 2134	Wong Wang	3/23/2012	5/8/2013
Roe 2135	William Warmington	3/23/2012	5/8/2013
Roe 2136	James Warner	3/23/2012	5/8/2013
Roe 2137	Leigh Warner	3/23/2012	5/8/2013

DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 2138	Amy Watson	3/23/2012	5/8/2013
Roe 2139	Elizabeth Weaver	3/23/2012	5/8/2013
Roe 2140	George Webb	3/23/2012	5/8/2013
Roe 2141	Cecilia Wei	3/23/2012	5/8/2013
Roe 2142	Chung Wei	3/23/2012	5/8/2013
Roe 2143	Suhmei Wei	3/23/2012	5/8/2013
Roe 2145	Ival West	3/23/2012	5/8/2013
Roe 2147	Richard Wheaton	3/23/2012	5/8/2013
Roe 2148	Betty White	3/23/2012	5/8/2013
Roe 2149	Edward White	3/23/2012	5/8/2013
Roe 2150	James White	3/23/2012	5/8/2013
Roe 2151	Loretta White	3/23/2012	5/8/2013
Roe 2152	Vivian White	3/23/2012	5/8/2013
Roe 2153	Walt White	3/23/2012	5/8/2013
Roe 2158	Gary Wilcox	3/23/2012	5/8/2013
Roe 2160	Cynthia Williams	3/23/2012	5/8/2013
Roe 2161	Ronlld Williams	3/23/2012	5/8/2013
Roe 2162	Williams Fmly Tr	3/23/2012	5/8/2013
Roe 2164	Donald Wilson	3/23/2012	5/8/2013
Roe 2168	Wilson Family Tr	3/23/2012	5/8/2013
Roe 2169	Donald Winkler	3/23/2012	5/8/2013
Roe 2170	Susan Winkler	3/23/2012	5/8/2013
Roe 2171	Theresa Winters	3/23/2012	5/8/2013
Roe 2172	WKR360-6 LLC	3/23/2012	5/8/2013
Roe 2173	Heatwig Wloczyk	3/23/2012	5/8/2013
Roe 2175	Margaret Wolfe	3/23/2012	5/8/2013
Roe 2176	Otis Wolfe	3/23/2012	5/8/2013
Roe 2177	Gary Wong	3/23/2012	5/8/2013
Roe 2179	Mai Wong	3/23/2012	5/8/2013
Roe 2180	Karen Wonnell	3/23/2012	5/8/2013
Roe 2182	Robert Woodall	3/23/2012	5/8/2013
Roe 2185	Mary Wray	3/23/2012	5/8/2013
Roe 2186	Emiko Wright	3/23/2012	5/8/2013
Roe 2189	Robert Wright	3/23/2012	5/8/2013
Roe 2192	Roobik Yaghoubi	3/23/2012	5/8/2013
Roe 2193	Antonio Yago	3/23/2012	5/8/2013
Roe 2194	Grace Yamada	3/23/2012	5/8/2013
Roe 2195	Maria Yanez	3/23/2012	5/8/2013
Roe 2196	Wendy Yang	3/23/2012	5/8/2013
Roe 2197	Joseph Yankovich	3/23/2012	5/8/2013
Roe 2198	Monica Yeomans	3/23/2012	5/8/2013
Roe 2199	Tammy Yin	3/23/2012	5/8/2013
Roe 2201	Barney Yoshino	3/23/2012	5/8/2013
Roe 2202	Carlos Young	3/23/2012	5/8/2013
Roe 2203	Julie Young	3/23/2012	5/8/2013
Roe 2204	Kim Young	3/23/2012	5/8/2013
Roe 2205	Bob Yu	3/23/2012	5/8/2013
Roe 2206	Kyu Yu	3/23/2012	5/8/2013
Roe 2207	Brian Yung	3/23/2012	5/8/2013
Roe 2210	Coral Zedicher	3/23/2012	5/8/2013
Roe 2211	Donald Zedicher	3/23/2012	5/8/2013
Roe 2212	Hao Zhan	3/23/2012	5/8/2013
Roe 2213	Stanley Zimmerman	3/23/2012	5/8/2013
Roe 2214	Milton Zucker	3/23/2012	5/8/2013

DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 2215	Natalie Zucker	3/23/2012	5/8/2013
Roe 2218	Charlotte Zwinger	3/23/2012	5/8/2013
Roe 2219	Mark McNerney	3/23/2012	5/8/2013
Roe 2221	Jon Safranek	3/23/2012	5/8/2013
Roe 2224	Robert Jones	3/23/2012	5/8/2013
Roe 2225	James Jones	3/23/2012	5/8/2013
Roe 2226	Adriana Balderra	3/23/2012	5/8/2013
Roe 2231	Donald Johnson	3/23/2012	5/8/2013
Roe 2232	Richard Peters	3/23/2012	5/8/2013
Roe 2239	Sam Sarieddine	3/23/2012	5/8/2013
Roe 2240	Mitchell Truesdale	3/23/2012	5/8/2013
Roe 2241	Keith Calhoun	3/23/2012	5/8/2013
Roe 2242	Barbara Schultz	3/23/2012	5/8/2013
Roe 2243	Bruce Sylvies	3/23/2012	5/8/2013
Roe 2244	Philip Schultz	3/23/2012	5/8/2013
Roe 2245	Dralle	3/23/2012	5/8/2013
Roe 2248	Alba Castillo	3/23/2012	5/8/2013
Roe 2249	Selton Phillips	3/23/2012	5/8/2013
Roe 2250	Moises Merestela	3/23/2012	5/8/2013
Roe 2251	Diana Burke	3/23/2012	5/8/2013
Roe 2253	Stanley Vong	3/23/2012	5/8/2013
Roe 2254	Larry Wilborn	3/23/2012	5/8/2013
Roe 2255	Michie Wilborn	3/23/2012	5/8/2013
Roe 2256	John Lazarus	3/23/2012	5/8/2013
Roe 2257	Lambartha Vandenberg Tr	3/23/2012	5/8/2013
Roe 2260	George Sack	3/23/2012	5/8/2013
Roe 2261	Palmdale Mobile Frank LLC	3/23/2012	5/8/2013
Roe 2265	John Griffin	3/23/2012	5/8/2013
Roe 2267	Porter Sprolls	3/23/2012	5/8/2013
Roe 2268	Albert Gaba	3/23/2012	5/8/2013
Roe 2269	Delia Gaba	3/23/2012	5/8/2013
Roe 2270	Audrey Sprolls	3/23/2012	5/8/2013
Roe 2272	Francisco Batino	3/23/2012	5/8/2013
Roe 2274	Bar Or Carmit	3/23/2012	5/8/2013
Roe 2275	Joseph Kinkoopf	3/23/2012	5/8/2013
Roe 2276	Tina Kinkoopf	3/23/2012	5/8/2013
Roe 2277	Jerry F. Shotbolt / Shotbolt Family Trust	3/23/2012	5/8/2013
Roe 2279	Benjamin C Both	3/23/2012	5/8/2013
Roe 2280	Christina D Both	3/23/2012	5/8/2013
Roe 2283	Manuel Ariliano	3/23/2012	5/8/2013
Roe 2284	Leodegaria A Ariliano	3/23/2012	5/8/2013
Roe 2285	Sandra Pastor	3/23/2012	5/8/2013
Roe 2286	Erik R. Hermann / Hermann Trust	3/23/2012	5/8/2013
Roe 2287	Julia A Hermann / Hermann Trust	3/23/2012	5/8/2013
Roe 2288	Albert T Rodriguez	3/23/2012	5/8/2013
Roe 2289	Edelmira B Rodriguez	3/23/2012	5/8/2013
Roe 2292	Juan A Valenzuela	3/23/2012	5/8/2013
Roe 2294	Vicki Atkins / Atkins Trust	3/23/2012	5/8/2013
Roe 2295	Stephen D Wahl	3/23/2012	5/8/2013
Roe 2296	Mettler Valley Mutual Water Co.	3/23/2012	5/8/2013
Roe 2302	John P. Starros	8/11/2015	8/21/2015
Roe 2305	Frank A. Small	8/11/2015	8/21/2015
Roe 2316	Joshua Acres Mutual Water Company	8/11/2015	8/21/2015
Roe 2318	40th St Mutual Water Company	2/17/2015	4/1/2015

DEFAULTS ENTERED

Doe/Roe No.	Name of Roe Cross-Defendant	Default Entered	Default Posted
Roe 2323	Lucky 18 on Rosamond, LLC	2/17/2015	4/1/2015

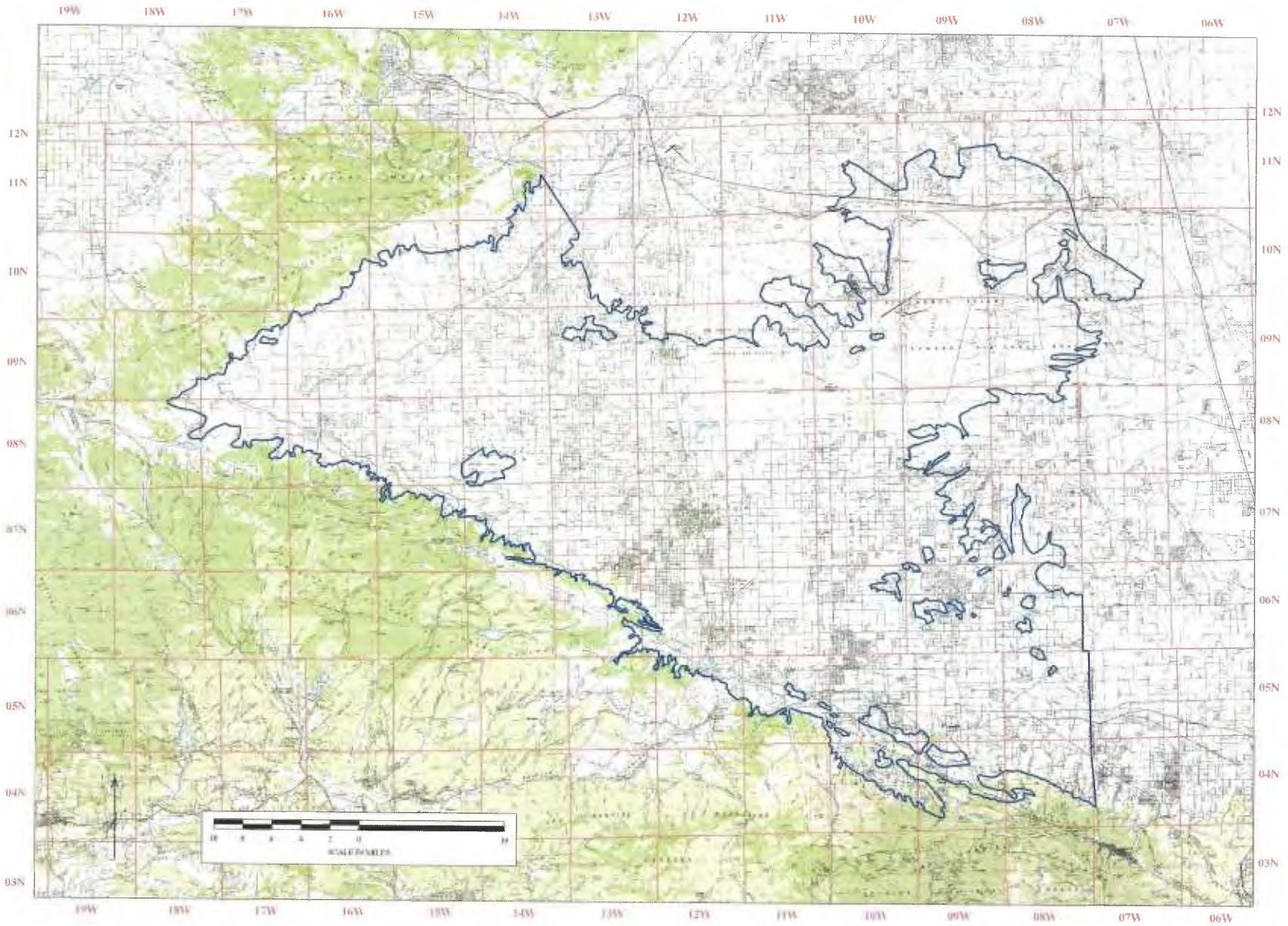


EXHIBIT 2

Jurisdictional Boundary
Antelope Valley Groundwater Adjudication

Producer Name	**Non-Overlying Production Rights (in Acre-Feet)**	**Percentage Share of Adjusted Native Safe Yield**
Los Angeles County Waterworks District No. 40	6,789.26	9.605%
Palmdale Water District	2,769.63	3.918%
Little Rock Creek Irrigation District	796.58	1.127%
Quartz Hill Water District	563.73	0.798%
Rosamond Community Services District	404.42	0.572%
Palm Ranch Irrigation District	465.69	0.659%
Desert Lake Community Services District	73.53	0.104%
California Water Service Company	343.14	0.485%
North Edwards Water District	49.02	0.069%
Boron Community Services District	50.00	0.071%
West Valley County Water District	40.00	0.057%
Total Acre Feet:	**12,345.00**	

EXHIBIT 3

Judicial Council Coordination
Proceeding No. 4408
Santa Clara Case No.: 1-05-CV-049053

Producer Name	Pre-Rampdown Production	Overlying Production Rights	Percentage Share of Adjusted Native Safe Yield
60th Street Association Water System	2.16	2.16	0.003%
Adams Bennett Investments, LLC	0.00	0.00	0.000%
Antelope Park Mutual Water Company	208.75	169.89	0.240%
Antelope Valley Joint Union High School District	71.74	41.00	0.058%
Antelope Valley Mobile Estates	19.88	8.75	0.012%
Antelope Valley Water Storage LLC	1772.00	1772.00	2.507%
Aqua-J Mutual Water Company	44.90	44.35	0.063%
AV Solar Ranch 1, LLC	96.00	96.00	0.136%
AVEK	4000.00	3550.00	5.022%
Averydale Mutual Water Company	257.95	254.35	0.360%
Gene Bahlman	5.25	5.00	0.007%
Baxter Mutual Water Company	44.75	35.02	0.050%
Mark W. and Nancy L. Benz	1.00	1.00	0.001%
Big Rock Mutual Water Company	0.00	0.00	0.000%
Bleich Flat Mutual Water Company	33.50	33.50	0.047%
Sheldon R. Blum, Trustee of the 1998 Sheldon R. Blum Family Trust	50.00	50.00	0.071%
Bolthouse Properties LLC	16805.89	9945.00	14.069%
Thomas and Julie Bookman 2007 Trust	272.50	136.00	0.192%
James and Elizabeth Bridwell	1.00	1.00	0.001%
Brittner Trust, Glen Brittner, Trustee	4.00	4.00	0.006%
Burrows/300 A40 H LLC	295.00	295.00	0.417%
John A. Calandri; Calandri Water Company, LLC; John A. Calandri and Shannon C. Calandri as cotrustees of “The John and Shannon Calandri 1992 Trust”; Katherine J. Calandri Nelson, Trustee of "The Katherine J. Calandri Nelson 2008 Trust”	3803.00	1776.00	2.512%
Sal and Connie Cardile	1.00	1.00	0.001%
Irma Ann Carle Trust, Irma-Anne Carle, Trustee	1.00	1.00	0.001%
Effren Chavez	44.00	44.00	0.062%
C. Louise R. Close Living Trust	1.00	1.00	0.001%
Colorado Mutual Water Co.	25.90	25.54	0.036%
Copa De Oro Land Company	325.00	325.00	0.460%
County Sanitation Districts of Los Angeles #14 and 20	8000.00	3400.00	4.810%
Del Sur Ranch LLC	600.00	600.00	0.849%
Diamond Farming Co. LLC/Crystal Organic LLC/Grimmway/Lapis	3354.00	1986.00	2.810%
Randall and Billie Dickey	1.00	1.00	0.001%
El Dorado Mutual Water Company	276.05	272.16	0.385%
eSolar Inc.; Red Dawn Suntower LLC	150.00	150.00	0.212%
eSolar, Inc.; Sierra Sun Tower, LLC	5.76	3.00	0.004%
eSolar Inc.; Tumbleweed Suntower LLC	0.00	0.00	0.000%
Lawrence Dean Evans, Jr. and Susan Evans	1.00	1.00	0.001%

Producer Name	Pre-Rampdown Production	Overlying Production Rights	Percentage Share of Adjusted Native Safe Yield
Evergreen Mutual Water Company	69.50	68.54	0.097%
Ruth C. Findley	1.00	1.00	0.001%
First Mutual Water Company	15.62	5.25	0.007%
Leah Frankenberg	1.00	1.00	0.001%
Denise Godde, Steven F. Godde, Pamela M. Godde and Gary M. Godde; Denise Godde and Steven Godde as Trustees of the D & S Godde Trust	1461.50	683.00	0.966%
Gorrindo Resourceful LLC	629.00	629.00	0.890%
Granite Construction Company (Big Rock Facility)	126.00	126.00	0.178%
Granite Construction Company (Little Rock Sand and Gravel, Inc.)	400.00	234.00	0.331%
LAURA GRIFFIN, trustee of the FAMILY BYPASS TRUST created under the LEONARD W. GRIFFIN AND LAURA GRIFFIN TRUST, dated July 9, 1993	1170.00	668.00	0.945%
H & N Development Co. West Inc.	1799.75	808.00	1.143%
Jane Healy and Healy Enterprises Inc.	700.00	700.00	0.990%
Gailen W. Kyle and Julie Kyle, Trustees of The Kyle Revocable Living Trust	9275.00	3670.00	5.192%
Land Projects Mutual Water Co.	622.50	613.54	0.868%
Landale Mutual Water Co.	157.75	155.57	0.220%
Landinv Inc	2000.00	969.00	1.371%
Lands of Promise Mutual Water Company	64.61	21.69	0.031%
G. Lane Family (Frank and Yvonne Lane 1993 Family Trust, Little Rock Sand and Gravel, Inc., George and Charlene Lane Family Trust) [Does not include water pumped on land leased to Granite Construction]	1402.00	773.00	1.094%
James M. Leer, III and Diana Leer	1.00	1.00	0.001%
Littlerock Aggregate Co., Inc., Holliday Rock Co., Inc.	405.00	151.00	0.214%
Llano Del Rio Water Company	572.65	279.00	0.395%
Llano Mutual Water Company	0.00	0.00	0.000%
City of Los Angeles, Department of Airports	7851.00	3975.00	5.623%
Jose M. Maritorena & Marie P. Maritorena, Trustees of the Maritorena Living Trust Dated March 16, 1993	3800.55	1775.00	2.511%
Dennis M. and Diane K. McWilliams	1.00	1.00	0.001%
Richard Miner	1089.40	999.00	1.413%
Miracle Improvement Corporation dba Golden Sands Mobile Home Park dba Golden Sands Trailer Park	45.40	27.00	0.038%
Barry and Sharon Munz 2014 Revocable Trust, Terry A. & Kathleen M. Munz	5.00	5.00	0.007%
Eugene B. Nebeker	4016.00	1775.00	2.511%

Producer Name	Pre-Rampdown Production	Overlying Production Rights	Percentage Share of Adjusted Native Safe Yield
Richard Nelson, Willow Springs Co.	180.65	135.00	0.191%
Northrop Grumman Systems Corporation	2.00	2.00	0.003%
NRG Solar Alpine, LLC	64.21	38.00	0.054%
R AND M RANCH, INC.	1458.00	686.00	0.970%
John and Adrienne Reca	501.45	251.00	0.355%
Suzanne J. Richter	1.00	1.00	0.001%
Rosamond High School	586.40	202.23	0.286%
Rosamond Ranch, LP	598.00	598.00	0.846%
Rose Villa Apartments	22.72	7.62	0.011%
Sahara Nursery and Farm	22.18	22.00	0.031%
Saint Andrew's Abbey, Inc.	175.00	102.00	0.144%
Lawrence J. Schilling and Mary P. Schilling, Trustees of the L&M Schilling 1992 Family Trust	4.00	4.00	0.006%
Lilia Mabel Selak, TTEE; Barbara Aznarez Decd Trust and Selak, Mabel Trust	150.00	150.00	0.212%
Service Rock Products, L.P.	503.00	267.00	0.378%
SGS Antelope Valley Development, LLC	57.00	57.00	0.081%
Shadow Acres Mutual Water Company	52.60	51.74	0.073%
Sheep Creek Water Co.	0.00	0.00	0.000%
Jeffrey and Nancee Siebert	200.00	106.00	0.150%
Sonrise Ranch, LLC	662.00	0.00	0.000%
Southern California Edison Company	17.75	8.00	0.011%
Sundale Mutual Water Company	472.23	472.23	0.668%
Sunnyside Farms Mutual Water Company, Inc.	75.40	74.26	0.105%
Tejon Ranchcorp and Tejon Ranch Co.	3414.00	1634.00	2.312%
Tierra Bonita Mutual Water Company	40.75	40.32	0.057%
Tierra Bonita Ranch	505.00	430.00	0.608%
Triple M Property Co.	15.00	15.00	0.021%
Turk Trust dated December 16, 1998	1.00	1.00	0.001%
Marie A. Unini and Robert J. LeClair	1.00	1.00	0.001%
U.S. Borax	1905.00	1905.00	2.695%
Craig Van Dam, Marta Van Dam, Nick Van Dam, Janet Van Dam	1037.00	640.00	0.905%
Gary Van Dam, Gertrude Van Dam, Delmar Van Dam, Delmar D. Van Dam and Gertrude J. Van Dam, as Trustees of the Delmar D. and Gertrude J. Van Dam Family Trust – 1996, Craig Van Dam, Marta Van Dam, High Desert Dairy Partnership, High Desert Dairy	9931.50	3215.00	4.548%
Vulcan Materials Co., Vulcan Lands Inc., Consolidated Rock Products Co., Calmat Land Co., and allied Concrete & Materials	519.10	260.00	0.368%
WAGAS Land Company LLC	984.15	580.00	0.821%
WDS California II, LLC	2397.00	1159.00	1.640%
Michael and Dolores A. Weatherbie	1.00	1.00	0.001%

Producer Name	Pre-Rampdown Production	Overlying Production Rights	Percentage Share of Adjusted Native Safe Yield
West Side Park Mutual Water Co.	280.75	276.86	0.392%
White Fence Farms Mutual Water Co.	783.05	772.13	1.092%
Donna Wilson	10.00	7.00	0.010%
William Fisher Memorial Water Company	4.53	4.53	0.006%
Totals	**105878.08**	**58322.23**	

CONFORMED COPY
OF ORIGINAL FILED
Los Angeles Superior Court

JUL 18 2011

John A. Clarke, Executive Officer/Clerk

By _____, Deputy
RAUL SANCHEZ

SUPERIOR COURT OF CALIFORNIA

COUNTY OF LOS ANGELES

ANTELOPE VALLEY GROUNDWATER CASES

Included Consolidated Actions:

Los Angeles County Waterworks District No. 40 v. Diamond Farming Co.
Superior Court of California
County of Los Angeles, Case No. BC 325 201

Los Angeles County Waterworks District No. 40 v. Diamond Farming Co.
Superior Court of California, County of Kern,
Case No. S-1500-CV-254-348

Wm. Bolthouse Farms, Inc. v. City of Lancaster
Diamond Farming Co. v. City of Lancaster
Diamond Farming Co. v. Palmdale Water Dist.
Superior Court of California, County of Riverside, consolidated actions, Case Nos. RIC 353 840, RIC 344 436, RIC 344 668

Rebecca Lee Willis v. Los Angeles County Waterworks District No. 40
Superior Court of California, County of Los Angeles, Case No. BC 364 553

Richard A. Wood v. Los Angeles County Waterworks District No. 40
Superior Court of California, County of Los

Judicial Council Coordination Proceeding No. 4408

Lead Case No. BC 325 201

STATEMENT OF DECISION PHASE THREE TRIAL

Judge: Honorable Jack Komar

Angeles, Case No. BC 391 869

The standard for a statement of decision as set forth in Code of Civil Procedure section 632 requires a court to explain ". . . the legal and factual basis for its decision as to each of the principal controverted issues at trial...." Case law is clear that a court must provide the factual and legal basis for the decision on those issues only closely related to the ultimate issues on the case. (See *People v. Casa Blanca Convalescent Homes* (1984) 159 Cal. App. 3d 509, 523-524.) It is also clear that a court need not respond to requests that are in the nature of "interrogatories." (See *id.* at pp. 525-526.)

The only issues at this phase of the trial were simply to determine whether the adjudication area aquifer is in a current state of overdraft and as part of that adjudication to determine the safe yield. This Statement of Decision focuses solely on those issues.

Cross-complainants Los Angeles County Waterworks District No. 40, City of Palmdale, Palmdale Water District, Littlerock Creek Irrigation District, Palm Ranch Irrigation District, Quartz Hill Water District, California Water Service Company, Rosamond Community Service District, Phelan Piñon Hills Community Services District, Desert Lake Community Services District, North Edwards Water District (collectively, the "Public Water Producers")[1] brought an action for, *inter alia*, declaratory relief, alleging that the Antelope Valley adjudication area groundwater aquifer was in a state of overdraft and required judicial intervention to provide for management of the water resources within the aquifer to prevent depletion of the aquifer and damage to the Antelope Valley basin.

Several of the cross-defendant parties (collectively, the "Land Owner Group") also sought declaratory relief in their various independent (now coordinated and consolidated) actions.

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[1] The United States and the City of Los Angeles, though not water suppliers in the Antelope Valley adjudication area, joined with the Public Water Producers. Rosamond Community Services District joined with the Land Owner Group.

The first issues to be decided in the declaratory relief cause of action are the issues of overdraft and safe yield. The remaining causes of action and issues are to be tried in a subsequent phase or phases.

This Phase Three trial commenced on January 4, 2011 and continued thereafter on various days based upon the needs of the various parties and the Court's availability. Appearances of counsel are noted in the minutes of the Court.

At the conclusion of the evidence, the Court offered counsel the opportunity to provide written final arguments and the invitation was declined by all counsel. On April 13, 2011, the Court heard oral argument and the matter was ordered submitted.

The Public Water Producers (and others) have alleged that the basin is in a condition of overdraft and have requested that the Court determine a safe yield and consider imposition of a physical solution or other remedy to prevent further depletion of the water resource and degradation of the condition of the aquifer.

Several parties in opposition to the request of the Public Water Producers have contended that while there may have been overdraft in the past, currently the aquifer has recovered and is not in overdraft. These same parties contend that it is not possible to establish a single value for safe yield; instead they have requested that the Court determine a range of values for safe yield.

The Court concludes that the Public Water Producers have the burden of proof and that the burden must be satisfied for this phase and purpose by a preponderance of the evidence. This burden of proof may or may not be appropriate to other phases of this trial. And since the findings here have no application to other phases, such as prescription or rights of appropriators, and the parties have not briefed those or other issues, the Court makes no conclusions as to what standard of proof might be applicable to such other issues or phases of trial.

The law defines overdraft as extractions in excess of the "safe yield" of water from an aquifer, which over time will lead to a depletion of the water supply within a groundwater basin as well as other detrimental effects, if the imbalance between pumping and extraction continues. (*City of Los Angeles v. City of San Fernando* (1975) 14 Cal. 3d 199; *City of*

Pasadena v. City of Alhambra (1949) 33 Cal. 2d 908, 929; *Orange County Water District v. City of Riverside* (1959) 173 Cal. App. 2d 137.) "Safe yield" is the amount of annual extractions of water from the aquifer over time equal to the amount of water needed to recharge the groundwater aquifer and maintain it in equilibrium, plus any temporary surplus. Temporary surplus is defined as that amount of water that may be pumped from an aquifer to make room to store future water that would otherwise be wasted and unavailable for use.

Determination of safe yield and overdraft requires the expert opinions of hydrologists and geologists.[2] Experts in the field of hydrogeology routinely base their opinions and conclusions concerning groundwater basin overdraft on evidence of long-term lowering of groundwater levels, loss of groundwater storage, declining water quality, seawater intrusion (not an issue in this case), land subsidence, and the like. Experts also conduct a sophisticated analysis of precipitation and its runoff, stream flow, and infiltration into the aquifer, including such things as evapotranspiration, water from other sources introduced into the aquifer (artificial recharge), as well as the nature and quantity of extractions from the aquifer and return flows therefrom.

Generally, neither overdraft nor safe yield can be determined by looking at a groundwater basin in a single year but must be determined by evaluating the basin conditions over a sufficient period of time to determine whether pumping rates have or will lead to eventual permanent lowering of the water level in the aquifer and ultimately depletion of the water supply or other harm. Recharge must equal discharge over the long term. (*City of Los Angeles v. City of San Fernando, supra*, 14 Cal. 3rd at pp. 278-279.) But having heard evidence about the aquifer as a whole, the Court is not making historical findings that would be applicable to specific areas of the aquifer or that could be used in a specific way to determine water rights in particular areas of the aquifer.

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[2] All the experts offer estimates. The American Heritage College Dictionary, Third Edition, defines an "estimate" as, *inter alia*, "[a] rough calculation, as of size" or "[a] judgment based on one's impressions; an opinion."

The location of the Antelope Valley adjudication area boundaries was the subject of the Phase One and Two trials in this matter. The Court defined the boundaries of the valley aquifer based upon evidence of hydro-connection within the aquifer. If there was no hydro-connectivity with the aquifer, an area was excluded from the adjudication. The degree of hydro-connectivity within the Antelope Valley adjudication area varies from area to area. Some areas seemingly have fairly small or nominal hydro-connectivity but must be included in this phase of the adjudication unless the connection is *de minimis*.[3] Pumping in those parts of the aquifer may be shown to have *de minimis* effect on other parts of the aquifer while pumping in other areas within the basin appear to have material impacts on adjacent parts of the basin. All areas were included within the adjudication area because they all have some level of hydro-connection, some more and some less. How to deal with those differences is ultimately a basin management decision that is well beyond the scope of this phase of trial.

Overdraft

The preponderance of the evidence presented establishes that the adjudication area aquifer is in a state of overdraft. Reliable estimates of the long-term extractions from the basin have exceeded reliable estimates of the basin's recharge by significant margins, and empirical evidence of overdraft in the basin corroborates that conclusion. Portions of the aquifer have sustained a significant loss of groundwater storage since 1951. While pumping in recent years has reduced and moderated, the margin between pumping and recharge as cultural conditions have changed and precipitation has increased (with the appearance of wetter parts of the historical cycle), pumping in some areas of the aquifer is continuing to cause harm to the basin. The evidence is persuasive that current extractions exceed recharge and therefore that the basin is

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[3] The court may exclude truly de minimis connectivity areas based upon evidence in later phases of the trial if shown to have virtually no impact on the aquifer.

in a state of overdraft. Since 1951[4] there is evidence of periods of substantial pumping (principally agricultural in the early years of the period) coinciding with periods of drought, with almost continuous lowering of water levels and severe subsidence in some areas extending to the present time, with intervals of slight rises in water levels in some areas.

Areas of increased pumping, with concomitant lowering of water levels, can have a serious effect on water rights in other areas, caused by cones of depression, which alter natural water flow gradients, causing the lowering of water levels in adjacent areas, with resulting subsidence and loss of aquifer storage capacity. Given population growth, and agricultural and industrial changes, the valley is at risk of being in an even more serious continuing overdraft in the future unless pumping is controlled.

While the lowering of current water levels has slowed, and some levels in wells in some areas have risen in recent years, significant areas within the aquifer continue to show declining levels, some slightly so, but many with material lowering of water levels.

Thus, the Antelope Valley adjudication area is in a state of overdraft based on estimates of extraction and recharge, corroborated by physical evidence of conditions in the basin, and while the annual amount of overdraft has lessened in recent years with increased precipitation and recharge, the effects of overdraft remain and are in danger of being exacerbated with increased pumping and the prospective cyclical precipitation fluctuations shown by the historical record. The physical evidence establishes that there was significant subsidence occurring in parts of the adjudication area ranging from two to six feet or more in certain areas of the valley caused by such pumping and that measurable water levels fell in a substantial part of the valley. While some of the ongoing subsidence may be attributable to residual subsidence (from earlier periods of shortfall) that would not seem to be an explanation for the extent of continued subsidence. The evidence establishes that ground water extractions in excess of recharge are a cause as well.

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[4] Precipitation and well records prior to that year are too sketchy to be relied upon.

Safe Yield

A calculation of safe yield is necessary to manage the basin or create a physical solution to a potential or actual continuing overdraft. A determination of safe yield requires an initial determination of average annual natural or native recharge to the aquifer from all sources. The only source of natural or native recharge for the Antelope Valley is precipitation that recharges the aquifer and it is therefore necessary to ascertain average annual precipitation. The calculation of annual average precipitation can only be determined by using a baseline study period that covers precipitation in periods of drought and periods of abundant precipitation over a sufficient period of time that a reliable estimate of average future recharge based on precipitation can be made.

It has been suggested that safe yield could be based on using shorter base periods or more than one base period, (the total time span of which was considerably less than the 50 year period the Court believes is more credible). If the purpose of selecting a base period is to determine average recharge over time based on precipitation, choosing two consecutive periods of time with two different average numbers would not serve that purpose and would preclude estimating a single safe yield. Likewise, selecting a base period that does not have completely representative precipitation cycles over time would not provide an accurate evaluation of conditions in the valley. A base period that calculates average precipitation over a representative period of time permits reliable predictions about future natural recharge based on regular recurring precipitation cycles. A period of precipitation fluctuations from 1951 to 2005 satisfies that standard. Shorter periods do not.

The Court finds that current extraction of water from the aquifer by all pumping ranges from 130,000 to 150,000 acre feet a year, but in any event, is in excess of average annual recharge. The major area of dispute between the parties is the average amount of natural recharge, which also involves disputes concerning return flows, the amount of native vegetation water needs, evapotranspiration, stream flow, runoff, groundwater infiltration, specific yield, lag

time, bedrock infiltration, agricultural crop needs, and the like. Other sources of recharge to the basin, including artificial recharge-water pumped into the aquifer from external sources are not in dispute.

Evidence established that during the entire historical period presented, populations increased within the valley and water use changed in a variety of ways. There has been a shift in some areas to urban uses and away from agriculture although in recent years agricultural pumping has also increased. The nature of agricultural duties has changed as well. The type of irrigation used by farmers has become more efficient and less water is needed per acre (depending on the crops grown) with more efficient uses of water. But there has also been an increase as well as a change in the nature of the type of agriculture in the valley in material quantities in recent years. More of such changes may occur and it is important to both current and future generations to ensure that the water resources within the basin are managed prudently.

The Court heard from a very large number of experts, some of whom have provided opinion testimony of what constitutes safe yield. All the experts testifying acknowledged that changes in the selection of a base study period, lag time, agricultural water duties, evapotranspiration, specific yield, runoff quantities, well level contours, bedrock infiltration, return flows, playa evaporation relating to run off and bedrock infiltration, chloride measurements, satellite imaging, and agricultural and municipal pumping estimates, among others, would affect the ultimate opinion of natural recharge and return flows.

The opinions of all the experts are estimates, based upon their professional opinion. All of the opinions were critiqued by other experts who often had different opinions. The Court recognizes the imprecision of the various estimates and the fact that an estimate by definition is imprecise. But the fact that estimates lack precision does not mean that the Court cannot rely upon such estimates. The scientific community relies upon such estimates in the field of hydrogeology and the Court must do the same.

Reasonable experts can differ as to reasonable estimates of natural recharge and virtually all other components of water budgets, computations of change of storage, and the

like, all the while using the same formulae and scientific principles to reach their conclusion. For example, all the experts could agree on the definition of "Darcy's Law" and the physics principle of "conservation of mass" but still reach different conclusions.

Some of the experts opined that the basin was not in overdraft and that recharge was in excess of or in balance with extractions so that there was a surplus in the aquifer. One expert opined that loss of storage was merely space for temporary storage. Observable conditions in the valley are inconsistent with those conclusions. If there were a surplus, even in the shortened base periods used by the some experts, there should not be subsidence of land, nor the need to drill for water at deeper and deeper levels in those parts of the aquifer most affected by the overdraft. The physical condition of the valley is inconsistent with those estimates that there is and has been a surplus of water in the aquifer.

The selection of a safe yield number for an aquifer the size of the Antelope Valley is made difficult because of not only its size but because of the complexity of its geology. As reflected above, hydro-connectivity and conductivity varies considerably between various parts of the aquifer. The hydro-connectivity between some portions of the adjudication area aquifer and others is so slight as to be almost (apparently) nonexistent. Pumping in those areas may have little or no effect on other areas of the aquifer. The Antelope Valley basin is not like a bathtub where lowering and raising of water levels is equal in all parts of the "tub."

Therefore, assigning a safe yield number (what quantity of pumping from the basin will maintain equilibrium in the aquifer) may require different numbers for different parts of the aquifer (and clearly may also provide for some level of separate management). No attempt has been made in this phase of trial to define geological differences in the valley that would justify different safe yield numbers for different parts of the valley in light of the decision in Phase Two regarding connectivity (the Phase Two trial focused on hydro-connectivity for purposes of determining necessary parties to the action).

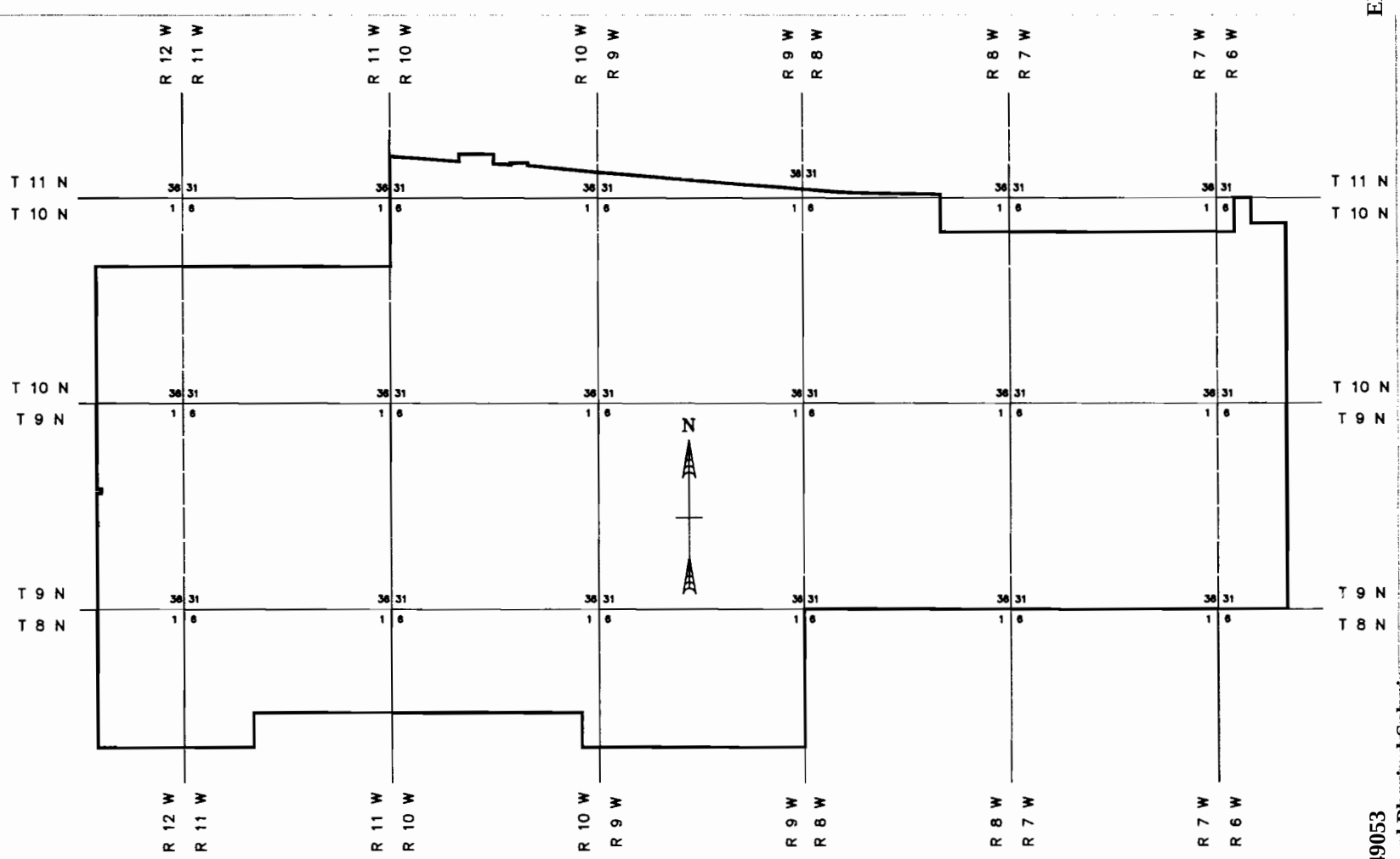
Weighing the various opinions of the experts, however, the Court finds by a preponderance of the evidence that conservatively setting a safe yield at 110,000 acre feet a

year will permit management of the valley in such a way as to preserve the rights of all parties in accordance with the Constitution and laws of the State of California. Some portions of the aquifer receive more recharge than others and pumping requirements vary. These differences require management decisions that respect the differences in both the geology and the cultural needs of the diverse parts of the valley.

It should not be assumed that the safe yield management number may not change as climate circumstances and pumping may change, or as the empirical evidence based on experience in managing the basin suggests it is either too high or too low.

Dated: JUL 13 2011

Hon. Jack Komar
Judge of the Superior Court



SCHEMATIC

NOT TO SCALE; BAR SCALE BELOW IS APPROXIMATE ONLY.

0 3 6 9 12

SCALE IN MILES

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, SOUTH PACIFIC DIVISION
LOS ANGELES DISTRICT REAL ESTATE DIVISION

EDWARDS AIR FORCE BASE
LOS ANGELES, KERN & SAN BERNARDINO COUNTIES, CA
BASE BOUNDARY (PERIMETER) DIAGRAM

9 JUNE 2000 DWG 273-M-PER

EXHIBIT 6

1-05-CV-049053

Judgment and Physical Solution

EXHIBIT 7

20th Street East

Avenue M

Site 1

Site 2

Site 3

Site 4

Avenue N

Emergency Landing Area
(See Inset A)

Sierra Highway

OL AFP 42
Site 5

OL AFP 42
Site 5

Site 8

Site 7

Site 6

LAWA
Property

Lockheed Martin
Property

15th Street East

20th Street East

25th Street East

Avenue P

LEGEND

- Air Force Plant 42 Boundary
- Industrial Plant Boundary
- RAIL LINE
- ROAD
- SECURITY FENCE
- BUILDING

GRAPHIC SCALE

700' 0' 350' 700' 1400' 2100'

SCALE 1" =700'

N

Inset A

Avenue N

10th Street West

Emergency Landing Area

Sierra Highway

MARK	DATE	DESCRIPTION	BY
REVISIONS			

PRODUCTION FLIGHT TEST INSTALLATION

UNITED STATES AIR FORCE PLANT NO. 42

PALMDALE CALIFORNIA

1941 to 2011

OPERATIONS + MAINTENANCE AF PLANT 42 PALMDALE , CALIFORNIA

PREPARED BY:
U.S. AIR FORCE, PLANT 42

PREPARED FOR:
AIR FORCE PLANT 42,
OPERATIONS AND MAINTENANCE MANAGER

APPROVED BY:
CHIEF ENGINEER, AF PLANT 42

DRAWING NO. P42XXXXX-101

AIR FORCE PLANT 42
2501 E AVENUE P
PALMDALE, CALIFORNIA 93550
(661) 272-6628 - FAX 272-6610

Integrity First, Service Before Self, and Excellence in All We Do

Air Force Plant 42
Installation Layout

DESIGNED	TRACED	JOB NO.
		420
DRAWN	CHECKED	DATE
		27 May 14

P4210242-101 SHEET 1 OF 1

1:05-CV-04953
Judgment and Physical Solution

Rights to Produce Imported Water Return Flows

A.V. MATERIALS, INC.

ANTELOPE VALLEY COUNTRY CLUB

ANTELOPE VALLEY EAST-KERN WATER AGENCY

ANTELOPE VALLEY WATER COMPANY

ANTELOPE VALLEY WATER STORAGE, LLC

BORON COMMUNITY SERVICES DISTRICT

CALIFORNIA DEPARTMENT OF PARKS

CALIFORNIA WATER SERVICE COMPANY

COPA DE ORO LAND COMPANY, A CALIFORNIA GENERAL PARTNERSHIP

CRYSTAL ORGANIC FARMS, LLC

DESERT LAKE COMMUNITY SERVICES DISTRICT

DIAMOND FARMING COMPANY

EDGEMONT ACRES MWC

EL DORADO MUTUAL WATER COMPANY

EYHERABIDE, RAY/EYHERABIDE SHEEP CO.

GEORGE LANE, AS TRUSTEE OF THE GEORGE AND CHARLENE LANE

FAMILY TRUST, DATED 12/19/2007

GOODE, FORREST G. 1998 TRUST

GRANITE CONSTRUCTION COMPANY

GRIMMWAY ENTERPRISES, INC.

H & N DEVELOPMENT CO. WEST

HARTER, SCOTT

LANDALE MUTUAL WATER CO.

LITTLEROCK CREEK IRRIGATION DISTRICT

LITTLEROCK SAND AND GRAVEL, INC.

LOS ANGELES COUNTY WATERWORKS DISTRICT NO. 40

PALMDALE WATER DISTRICT

PALM RANCH IRRIGATION DISTRICT

QUARTZ HILL WATER DISTRICT

ROSAMOND COMMUNITY SERVICES DISTRICT

SAINT ANDREW'S ABBEY, INC.

SHADOW ACRES MUTUAL WATER COMPANY.

SUNNYSIDE FARMS MUTUAL WATER COMPANY, INC.

TEJON RANCHCORP/TEJON RANCH CO.

U.S. BORAX & CHEMICAL CO.

WARNACK, A.C. AS TRUSTEE OF THE A.C. WARNACK TRUST

WEST SIDE PARK MUTUAL WATER CO.

WHITE FENCE FARMS MUTUAL WATER CO.

Antelope Valley Adjudication Area
Proposed Adjudication Boundary

- Aqueducts
- Perennial Streams
- Seasonal Streams
- Faults
- EAFB Production Wells
- Gauging Stations

NOTE:
AFA = Acre Foot Average (Annual)

- Dept of Defense
- Bureau of Land Management
- U.S. Forest Service
- Other Federal
- State-County-Municipal
- Private
- Antelope Valley Groundwater Basin Boundary
- Boundary Of The Antelope Valley Watershed Contributory To The Antelope Valley Groundwater Basin

0 5 10 15 20 25
Miles

N

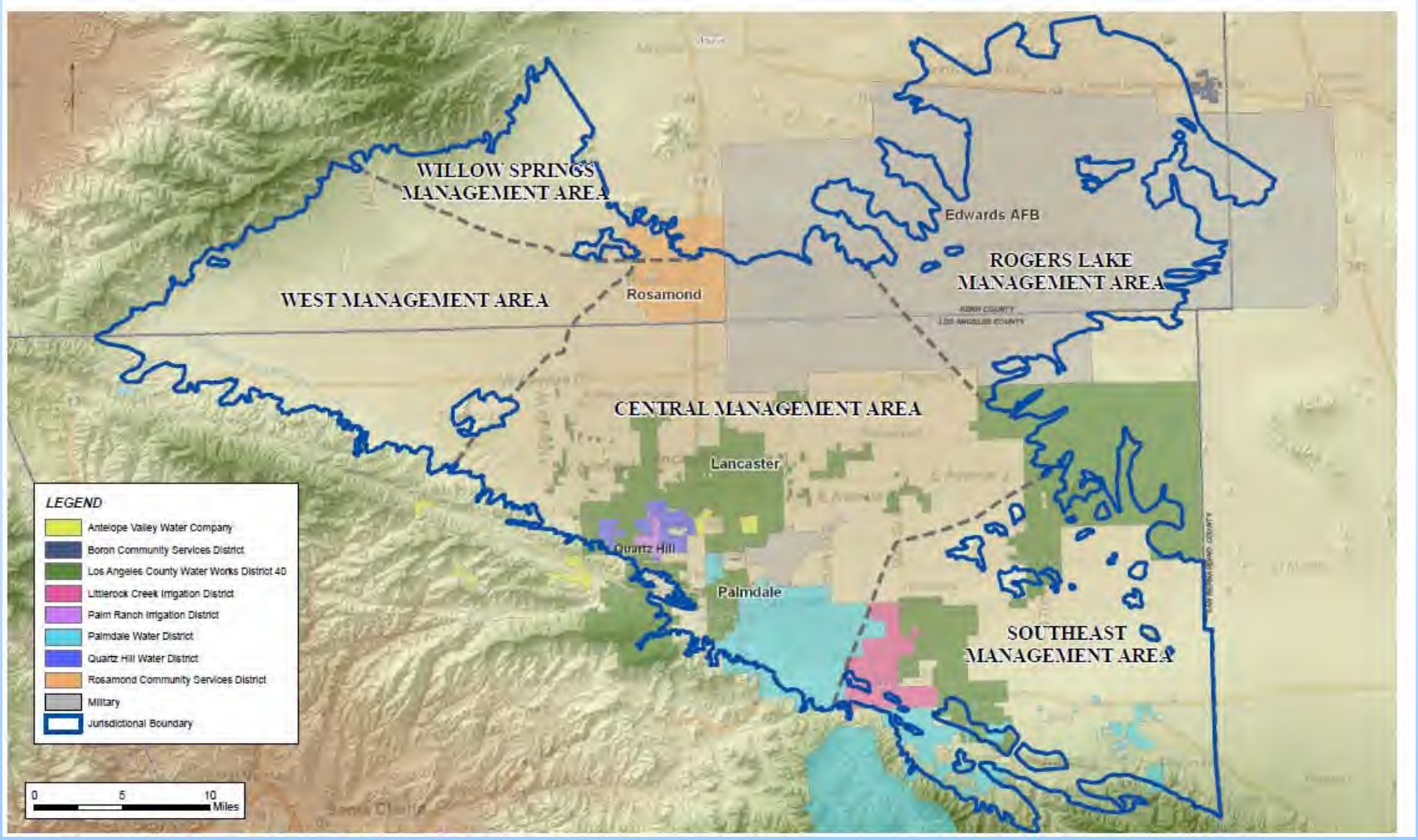
29JUN06
95ABW.CETM
ric.williams@edwards.af.mil

Attachment A

1-05-CV-049053
Judgment and Physical Solution

EXHIBIT 9

Figure 2
Management Areas



FILED
Superior Court of California
County of Los Angeles

SEP 29 2015

Sherri R. Carter, Executive Officer/Clerk
By A. Barton Deputy
A. Barton

SUPERIOR COURT OF THE STATE OF CALIFORNIA

FOR THE COUNTY OF LOS ANGELES

ANTELOPE VALLEY GROUNDWATER CASES This Pleading Relates to Included Action: REBECCA LEE WILLIS, on behalf of herself and all others similarly situated, Plaintiff, vs. LOS ANGELES COUNTY WATERWORKS DISTRICT NO. 40; CITY OF LANCASTER; CITY OF PALMDALE; PALMDALE WATER DISTRICT; LITTLEROCK CREEK IRRIGATION DISTRICT; PALM RANCH IRRIGATION DISTRICT; QUARTZ HILL WATER DISTRICT; ANTELOPE VALLEY WATER CO.; ROSAMOND COMMUNITY SERVICE DISTRICT; and DOES 1 through 1,000; Defendants.	JUDICIAL COUNCIL COORDINATION PROCEEDING NO. 4408 CASE NO. BC 364553 ~~[PROPOSED]~~ **SECOND AMENDED FINAL JUDGMENT APPROVING WILLIS CLASS ACTION SETTLEMENT** DOCUMENT FILED NUNC PRO TUNC AS OF SEPTEMBER 22, 2011 Judge: Hon. Jack Komar Coordination Trial Judge

This matter has come before the Court on the Motion of Plaintiff Rebecca Lee Willis (Willis) for Final Approval of the Proposed Class Action Settlement between and among Rebecca Lee Willis and the Willis Class, on the one hand; and Los Angeles County Waterworks District No. 40, City of Palmdale Water District, Littlerock Creek Irrigation District, Palm Ranch Irrigation District, Quartz Hill Water District, California Water Service Company,

1-05-CV-049053 APPENDIX A

Judgment and Physical Solution

Rosamond Community Service District, Phelan Pinon Hills Community Services District, Desert Lake Community Services District, and North Edwards Water District (collectively, the "Settling Defendants"), on the other hand.

By Order dated November 18, 2010, this Court granted Plaintiff's Motion for Preliminary Approval of the Proposed Settlement of this action and directed the sending of Notice to the Willis Class. After considering all arguments and submissions for and against final approval of the proposed settlement, and being fully advised of the premises, **IT IS HEREBY ORDERED, ADJUDGED AND DECREED AS FOLLOWS, PURSUANT TO SECTIONS 382 AND 664.6 OF THE CODE OF CIVIL PROCEDURE:**

1. For over 10 years, a number of actions have been pending in the Los Angeles County Superior Court and other California courts seeking an adjudication of various parties' respective rights to the groundwater underlying the Antelope Valley Groundwater Basin (the "Basin").

2. A number of cases raising such issues were coordinated by a July 11, 2005 Order of Judicial Council and assigned to the Honorable Jack Komar of the Superior Court for the County of Santa Clara (the "Court").

3. The Court held an initial phase of trial on October 2006 with respect to the boundaries of the Basin and issued an Order on November 3, 2006 defining the Basin for purposes of the litigation.

4. The Willis Class Action was filed on or about January 11, 2007 to contest certain public entities' claims that those entities had obtained prescriptive rights to a portion of the Basin's groundwater. The Willis case was subsequently coordinated with the Coordinated Cases.

5. By Order dated September 11, 2007, the Court certified the Willis Class. As

amended by Orders dated May 22, 2008 and September 2, 2008, the Willis Class is defined as follows:

> "All private (i.e., non-governmental) persons and entities that own real property within the Basin, as adjudicated, that are not presently pumping water on their property and have not done so at any prior time ("the Class"). The Class includes the successors-in-interest by way of purchase, gift, inheritance, or otherwise of such landowners.
>
> The Class excludes the defendants herein, any person, firm, trust, corporation, or other entity with which any defendant has a controlling interest or which is related to or affiliated with any of the defendants, and the representatives, heirs, affiliates, successors-in-interest or assigns of any such excluded party. The Class also excludes all persons to the extent their properties are connected and receive service from a municipal water system, public utility, or mutual water company. The Class shall [further] exclude all property(ies) that are listed as 'improved' by Los Angeles or Kern County Assesor's' office, unless the owners of such properties declare under penalty of perjury that they do not pump and have never pumped water on those properties. The Class shall [further] exclude all persons to the extent they own properties within the Basin on which they have pumped water at any time."

6. Notice of the Pendency of this action was sent to the Wilis Class in or about January 1, 2009 and the opt-out period (as extended) expired on August 30, 2009. Certain persons who opted out were subsequently permitted to rejoin the Class.

7. The persons listed on Exhibit 1 hereto validly excluded themselves from the Class in accordance with this Court's prior Orders (and have not re-joined the Class) and are not bound by the Settlement or this Judgment.

8. Counsel for the Willis Class engaged in settlement discussions with Defendants' counsel during mid 2009. On September 2, 2009, counsel participated in mediation session before the Honorable Ronald Robie. That mediation resulted in an agreement in principle amoung counsel for the Settling Parties to settle the litigation between and among their respective clients, subject to appropriate approvals.

9. By Order dated October 28, 2009, the Court stated its intent to consolidate the various Actions that were coordinated as part of JCCP No. 4408, including the Willis action.

On February 19, 2010, the Court entered an Order Transferring and Consolidating [the Coordinated] Actions for All Purposes. As provided in the Consolidation Order, this Final Judgment shall not be construed to prejudice the rights of any of the Non-Settling Parties in the Consolidated Actions nor shall it prejudice the claims and defenses that the Settling Parties may assert with respect to such Non-Settling Partties.

10. By Order dated November 18, 2010, this Court granted preliminary approval to the proposed settlement of this action and directed that Notice of the Proposed Settlement be sent to the Class.

11. Notice of the Proposed Settlement has been sent to the Willis Class by first class mail in accordance with the Court's Preliminary Approval Order. Such Notice fully and accurately informed the Class of all material terms of the proposed settlement and the opportunity to object to or comment on the Settlement. The Notice was given in an adequate and sufficient manner, constituted the best notice practicable under the circumstances, and satisfied due process.

12. The Settling Parties and each class member have irrevocably submitted to the jurisdiction of this Court for any suit, action, proceeding or dispute arising out of the Settlement Agreement.

13. It is in the best interest of the parties and the Class Members and consistent with principles of judicial economy that any dispute between any class member (including any dispute as to whether any person is a class member) and any Settling Defendant which is in any way related to the applicability or scope of the Settlement Agreement or the Final Judgment should be presented to this Court for resolution.

14. The Stipulation of Settlement submitted by the Settling Parties is hereby finally approved as fair, reasonable, and in the best interests of the Class, and the parties are directed to consummate the Settlement in accordance with its terms. A true and correct copy of the Stipulation of Settlement is attached as Exhibit 2.

15. The Complaint in the Willis Action shall be deemed dismissed with prejudice as

soon as the Final Judgment becomes effective under the terms of the Settlement Stipulation.

16. For purposes of this Final Judgment, "Released Parties" means Plaintiff Rebecca Lee Willis and the Willis Class, as well as Defendants Los Angeles County Waterworks District No. 40; The City of Palmdale; Palmdale Water District; Littlerock Creek Irrigation District; Palm Ranch Irrigation District; Quartz Hill Water District; California Water Service Company; Rosamond Community Service District; Phelan Pinon Hills Community Services District; Desert Lake Community Services District; and North Edwards Water District.

17. The Court hereby orders that the Released Parties are released and forever discharged from the Released Claims as more specifically provided in the Stipulation of Settlement.

18. The Class members and their heirs, executors, administrators, successors, and assigns are hereby permanently barred and enjoined from instituting, commencing, prosecuting, or continuing to prosecute, either directly or indirectly, any Released Claim against any of the Released Parties in any form, other than claims to enforce the terms of the Settlement. Each Class member may hereafter discover facts other than or different from those which he or she knows or believes to be true with respect to the Released Claims. Nevertheless, each member of the Class (except those who timely opted out) waive and fully, finally and forever settle and release, upon the Settlement Agreement becoming final, any known or unknown, suspected or unsuspected, contingent or noncontingent Released Claim, whether or not concealed or hidden, without regard to the subsequent discovery or existence of such different or additional facts.

19. The Settling Defendants and their heirs, executors, administrators, successors, and assigns are hereby permanently barred and enjoined from instituting, commencing, prosecuting, or continuing to prosecute, either directly or indirectly, any Released Claim against any of the Class Members in any forum, other than claims to enforce the terms of the Settlement. Each Settling Defendant may hereafter discover facts other than or different from those which he or she knows or believes to be true with respect to the Released Claims. Nevertheless, each Settling Defendant waives and fully, finally and forever settles and releases, upon the Settlement

Agreement becoming final, any known or unknown, suspected or unsuspected, contingent or noncontingent Released Claim, whether or not concealed or hidden, without regard to the subsequent discovery or existence of such different or additional facts.

20. Without affecting the finality of this Judgment, the Court hereby reserves and retains jurisdiction over this Settlement, including the administration and consummation of the Settlement, as well as any action or proceeding brought to enforce the Settlement. In addition, without affecting the finality of this Judgment, the Court retains jurisdiction over the Parties for purposes of incorporating and merging this Judgment into a physical solution or other Judgment that may ultimately be entered in the Consolidated Actions. The Settling Parties are hereby deemed to have submitted irrevocably to the exclusive jurisdiction of this Court for any suit, action, proceeding or dispute arising out of or relating to this Judgment or the Settlement.

21. The Court after considering the pleadings on file herein, and the arguments of counsel, awards the Willis Class attorneys fees in the amount of $1,839,494, an incentive award for Ms. Rebecca Willis in the amount of $10,000, costs in the amount of $65,057.68, and supplemental attorneys fees in the amount of $160,622.50. Judgment in the amount of $2,075,174.18 is hereby entered for the Willis Class against Los Angeles County Waterworks District No. 40, City of Palmdale, Palmdale Water District, Littlerock Creek Irrigation District, Palm Ranch Irrigation District, Quartz Hill Water District, California Water Service Company, Rosamond Community Service District, Phelan Pinon Hills Community Services District, Desert Lake Community Services District, and North Edwards Water District.

Date: 9-29-2015

Judge of the Superior Court
Honorable Jack Komar

Ralph B. Kalfayan (SBN 133464)
Lynne M. Brennan (SBN 149131)
KRAUSE KALFAYAN BENINK & SLAVENS, LLP
550 West C Street, Suite 530
San Diego, CA 92101
Tel: (619) 232-0331
Fax: (619) 232-4019

Class Counsel for the Willis Class

SUPERIOR COURT OF THE STATE OF CALIFORNIA

FOR THE COUNTY OF LOS ANGELES

ANTELOPE VALLEY GROUNDWATER CASES

This Pleading Relates to Included Action: REBECCA LEE WILLIS and DAVID ESTRADA, on behalf of themselves and all others similarly situated,

Plaintiffs,

v.

LOS ANGELES COUNTY WATERWORKS DISTRICT NO. 40; CITY OF LANCASTER; CITY OF PALMDALE; PALMDALE WATER DISTRICT; LITTLEROCK CREEK IRRIGATION DISTRICT; PALM RANCH IRRIGATION DISTRICT; QUARTZ HILL WATER DISTRICT; ANTELOPE VALLEY WATER CO.; ROSAMOND COMMUNITY SERVICE DISTRICT; PHELAN PINON HILL COMMUNITY SERVICE DISTRICT; and DOES 1 through 1,000;

Defendants.

RELATED CASE TO JUDICIAL COUNCIL COORDINATION PROCEEDING NO. 4408

PROOF OF SERVICE

I, Cindy Barba, declare:

I am a citizen of the United States and employed in San Diego County, California. I am over the age of eighteen years and not a party to the within-entitled action. My business address is Krause Kalfayan Benink & Slavens, LLP 550 West C Street, Suite 530, San Diego, California, 92101. On November 20, 2015, I caused the following document(s): to be served on the parties in this action, as follows:

SECOND AMENDED FINAL JUDGMENT APPROVING WILLIS CLASS ACTION SETTLEMENT

(X) (BY ELECTRONIC SERVICE) by posting the document(s) listed above to the Santa Clara County Superior Court website: www.scefiling.org regarding the Antelope Valley Groundwater matter.

( ) (BY U.S. Mail) I am readily familiar with the firm's practice of collection and processing of documents for mailing. Under that practice, the above-referenced documents(s) were placed in sealed envelope(s) addressed to the parties as noted above, with postage thereon fully prepaid and deposited such envelope(s) with the United States Postal Service on the same date at San Diego, California, addressed to:

( ) (BY FEDERAL EXPRESS) I served a true and correct copy by Federal Express or other overnight delivery service, for the delivery on the next business day. Each copy was enclosed in an envelope or package designed by the express service carrier; deposited in a facility regularly maintained by the express service carrier or delivered to a courier or driver authorized to receive documents on its behalf; with delivery fees paid or provided for; addressed as shown on the accompanying service list.

( ) (BY FACSIMILE TRANSMISSION) I am readily familiar with the firm's practice of facsimile transmission of documents. It is transmitted to the recipient on the same day in the ordinary course of business.

(X) (STATE) I declare under penalty of perjury under the laws of the State of California that the above is true and correct.

( ) (FEDERAL) I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct.

Cindy Barba

Exhibit 1

	LAST	FIRST	MIDDLE
1	190TH AVENUE WEST LLC		
2	1ST AND 41ST WEST LLC		
3	20TH STREET PROPERTIES		
4	300 A 40 H LLC		
5	3M PROPERTY INVESTMENT CO		
6	88 317 4 PARTNERSHIP		
7	A V FOOTHILLS LLC		
8	ABC DIAMONDS INC		
9	ABOLMOLUKI	MEHRAN	D
10	ACEH CAPITAL		
11	ACEH CAPITAL GROUP LLC		
12	ACEH CAPITAL LLC		
13	ACEH CAPITAL LLC 401K AND PROFIT		
14	ACOSTA	ANTONIO	T
15	ADAMS	MIRIAM	
16	ADICOFF	ARNOLD	
17	AGALSOFF	JAMES	N
18	AGRICULTURAL AND ANIMAL WASTE		
19	AGUILAR	CARLITO	R
20	AGUILAR	CARMEN	C
21	AGUILAR	VALENTIN	
22	AGUILAR	YOLANDA	
23	AKIN	MARTHA	
24	ALARCON	CYNTHIA	E
25	ALARCON	JOHN	
26	ALBRIGHT	JACK	R
27	ALESSO	CASEY	H
28	ALESSO	JOHN	S
29	ALESSO	LAWRENCE	V
30	ALESSO	LAWRENCE	V
31	ALEXANDER	DONALD	R
32	ALLEN	BETTY	A
33	ALLEN	BRUCE	
34	ALLEN	BRUNETTE	H
35	ALLEN	GEORGE	F
36	ALLEN	GUADALUPE	
37	ALLEN	RONALD	
38	ALLISON	PAUL	R
39	ALLISON	YVONNE	D
40	ALLUIS	DEBORAH	J
41	ALLUIS	JACK	C
42	ALMAREZ	MARY	B
43	ALND	FARHAD	
44	ALND	HERSELL	
45	ALONSO	JORGE	D
46	ALONSO	LAURA	B
47	ALP EQUIPMENT SALES INC		
48	ALVAREZ	FELIPE	
49	ALVIDREZ	MARY	M
50	ALVIDREZ	RICHARD	
51	AMENTO	CHARLES	A

52	AMENTO	SHEILA	D
53	AMERI	HAMID	
54	AMERICAN LANDMARK GROUP LLC		
55	AN VAN PHAN TR		
56	ANAVERDE LLC		
57	ANDERSON	BEATRICE	K
58	ANDERSON	DONNA	
59	ANDERSON	KEITH	
60	ANDERSON	RENEE	S
61	ANDREWS	FRANKLIN	D R
62	ANDREWS	TREBA	
63	ANIEVAS	ARMANDO	
64	ANNIS	SHARON	A
65	ANTELOPE VALLEY ALLIED ARTS ASSN		
66	ANTELOPE VALLEY EAST KERN WATER		
67	ANTELOPE VALLEY EAST KERN WATER AGENCY		
68	ANTELOPE VALLEY FLORIST INC		
69	ANTELOPE VALLEY JOINT UNION HIGH		
70	ANTELOPE VALLEY WATER STORAGE LLC		
71	AOKI	KEIKO	
72	APOSTOL	JOVENCIO	A
73	APPLEBY	FRANCES	R
74	APPLEBY	THOMAS	N
75	AREVALO	BENEDICTO	L
76	AREVALO	NORA	M
77	ARKLIN	PHILIP	H
78	ARKLIN	PHILIP	H
79	ARKLIN BROTHERS ENTERPRISES		
80	ARNOLD	FLORENCE	B
81	ARQUILETA	LUCITA	G
82	ARQUILETA	RUFINO	O
83	ARROYO FAMILY TRUST		
84	ASATO	NOBORU	
85	ASCENCIO	JESUS	
86	ASHER	ALIZA	
87	ASHER	SHAUL	
88	AUYONG	GERARD	H W
89	AV FOOTHILLS LLC		
90	AVENI	JANE	C
91	AVERY	LLOYD	F
92	AVRICK	ALAN	M
93	BAERLEIN	JACK	
94	BAHLMAN	GENE	T
95	BAKER	EDNA	L
96	BALICE	MARIA	M
97	BALICE	NORMAN	E
98	BALLESTEROS	EMILIANO	Q
99	BANALES	RAFAEL	
100	BANDUCCI ENTERPRISES		
101	BANDUCCI LAND LLC		
102	BANGLOY	JUANITA	S
103	BANGLOY	LUANITA	S

104	BANUELOS	BERNARDO	
105	BANUELOS	ROSARIO	
106	BANUK	PATRICIA	A
107	BANUK	RON	
108	BAR	OR	CARMIT
109	BARBEAU	IRENE	
110	BARNES	ANN	
111	BARNES	WAYNE	L
112	BARON	TERRI	J
113	BARTFAY	JOSEPH	V
114	BARTFAY	SELMA	
115	BATINO	FRANCISCO	B
116	BAUER	NANCY	L
117	BEASLEY	A	L
118	BECARRA	TERESA	
119	BECK	WILLIAM	A
120	BECKER	IKUKO	
121	BEDERIO	BETTY	J
122	BELISARIO	BEATRIZ	S
123	BELISARIO	LUIS	B
124	BELL TR		
125	BELLANCA	BEVERLY	J
126	BELTRAN	CECILIA	J
127	BENNER	VICTORIA	A
128	BENSKY LIVING TRUST		
129	BENZ	MARK	W
130	BENZ	NANCY	
131	BERGLUND	GAYLYN	
132	BERGLUND	KENNETH	G
133	BERGLUND	KENNETH	
134	BERKEY	JANET	STARR
135	BERMUNDO	AMANTE	B
136	BIERS	ARY	E
137	BIERS	ROBERT	G
138	BIK	KUEN	
139	BIMBIRIS	ALFONS	
140	BIMBIRIS	VERA	
141	BITTNER	MELVIN	S
142	BLACK	CATHERINE	LUELLA
143	BLANCHARD	ANITA	MAY
144	BLILEY	BETTY	J
145	BLILEY	EUGENE	E
146	BLOCK	EUGENE	S
147	BOCANEGRA	JOSE	A
148	BODKIN	JAMES	R
149	BODOLAI	FRANK	
150	BODOLAI	MAGDALENA	
151	BORON COMMUNITY SERVICE DIST		
152	BORUCHIN	DORA	
153	BORUCHIN	JOHN	
154	BOSQUE	MINH	M
155	BOVEE	GAYLE	

156	BOVEE	VICKI	
157	BOYLE	FLOYD	F
158	BOYLE	MARIA	C
159	BPP VALLEY CENTRAL		
160	BRADLEY	KATHLENE	K
161	BRADLEY	MONROE	
162	BRADLEY FAMILY TR		
163	BRALY	DENNIS	L
164	BRAMLETT	MARK	F
165	BRAMLETT	MARK	F
166	BRASEL FAMILY TR		
167	BRAUN	FLORA	
168	BREWER	JOE	
169	BREWER	SHARON	E
170	BREWER	STEVEN	T
171	BROOKS	PATRICIA	D
172	BROSKY	MARY	H
173	BROWN	VERA	
174	BRUNO	EVELYN	T
175	BRYK	THOMAS	M
176	BUCKLEY	EUGENE	C
177	BUCKLEY	JEANNE	M
178	BUHRMANN	DONALD	C
179	BUHRMANN	JUNE	
180	BUJULIAN BROTHERS INC		
181	BUMANGLAG	WASHINGTON	M
182	BUNCH	WALTER	
183	BURDICK	DONALD	O
184	BURGESS	KAREN	
185	BURGESS	RANDY	
186	BURNS	RAYMOND	J
187	BURRELL	DORETHA	
188	BURTON	ALICE	
189	BUYTKUS FAMILY TRUST		
190	BYRNE	DANIEL	R
191	BYRNE	DAVID	E
192	BYRNE	LEONA	
193	CABAHUG	ARLENE	A
194	CABAHUG	JAIME	M
195	CAL GOLF INC		
196	CALANDRI SON RISE FARMS L P		
197	CALDWELL	BELVA	A
198	CALIFORNIA WATER SERVICE CO		
199	CALKINS	CHRISTINA	J
200	CALKINS	JAMES	F
201	CALMAT LAND CO		
202	CALMESON	MARVIN	
203	CAMACHO	HERMINIA	T
204	CAMACHO	JULIAN	G
205	CAMARENA	RICARDO	C
206	CAMERON	BONNIE	M
207	CAMERON	JAMES	A

208	CAMERON	WILLIAM	H
209	CAMPBELL	ERIKA	
210	CANTE	RAFAEL	
211	CAPEL	LYNDA	B
212	CAREY	BARBARA	J
213	CAREY	DONALD	W
214	CARINGI	ERNEST	J
215	CARLISLE	VIOLET	E
216	CARNEY	TIMOTHY	G
217	CARRANZA	ROSENDO	
218	CARRASCO	TORIBIO	G
219	CARRLE	META	
220	CARROLL	IRENE	F
221	CARROLL	JAMES	K
222	CARRUTHERS	BERA	E
223	CARTER	AUDREY	M
224	CARTER	EUGENIA	
225	CARTER	LESLIE	A
226	CARTER	RONALD	H
227	CARTER	TERRY	
228	CASTELAN	GARY	E
229	CASTELAN	SHARON	L
230	CASTELLANOS	CANDACE	M
231	CASTELLANOS	EDDY	M
232	CASTILLO	JOSE	A
233	CASTILLO	REMEDIOS	C
234	CATANESE	ANA	
235	CATANESE	CHARLES	A
236	CAYETANO	AURELIA	
237	CAYETANO	EDGARDO	
238	CECIL	JULIA	I
239	CECIL	KEN	O
240	CENICEROS	GILBERT	B
241	CERNICKY	EDWARD	
242	CERNICKY	FLORENCE	
243	CHACHUAT	MARC	
244	CHAHAL	SUKHDEV	S
245	CHAN	BEE	HONG
246	CHAN	HAWK	NIN
247	CHAN	MON	KYI
248	CHAN	SIU	HANG
249	CHANDLER	BEVERLY	
250	CHANDLER	BURTON	
251	CHANEY	BONITA	
252	CHANEY	ROBERT	G
253	CHANG	JENSEN	J S
254	CHAO	PY	
255	CHARLES TAPIA FAMILY TRUST		
256	CHATTERTON	SALLIE	LYNNE
257	CHEIKY	CHARITY	S
258	CHEIKY	MICHAEL	C
259	CHEUNG	CHRISTOPHER	B

260	CHI YU	HU	
261	CHIANG	CHOU	
262	CHITIEA	ANDREW	J
263	CHITIEA	JOAN	K
264	CHITIEA	JOEL	
265	CHITIEA	VIVIAN	A
266	CHITIEA	VIVIAN	
267	CHIU	TIM	TUNG
268	CHLAVIN	MYRON	
269	CHLAVIN	MYRON	B
270	CHLAVIN	MYRON	Z
271	CHOE	MI	RAN
272	CHOE	PYONG	S
273	CHOI	KENNETH	Y
274	CHONG	EDWIN	Y
275	CHOSTNER	LOUIS	E
276	CHOY	BONIFACE	T
277	CHRISTIANSEN	CHARLES	W
278	CHRISTIANSEN	MAXINE	J
279	CHRISTIE	JOHN	S
280	CHRISTOPHER	ARDATHE	E
281	CHU	DAPHNE	M
282	CHUNG	FRED	H
283	CHUNG	GABRIELLE	F
284	CINFIO	JOHN	
285	CIPOLLONE	JAMES	
286	CLARK	ELAINE	M
287	CLARK	RICHARD	L
288	CLARK	RICHARD	B
289	CLAWSON	RUSSELL	M
290	CLUTTER	GAIL	M
291	CLUTTER	RALPH	W
292	CO	LAP	DU
293	COGER	GEORGE	F
294	COLBATH	EDWARD	H
295	COLE	MARC	L
296	COLEMAN	DONALD	W
297	COLLICUTT	WILLIAM	F
298	COLLINS	BEATRICE	
299	COLOMBO	CHRISTINA	
300	COLTON	CHARLES	
301	CONNELLY	LARRY	J
302	CONNELLY	LEO	P
303	CONTE	SIRPUHE	
304	CONTRERAS	MARTIN	
305	COOK	ALAN	
306	COOLEY	REGINA	FRANCOISE
307	COPE	DENISE	M
308	COPE	THOMAS	J
309	CORDER	RUBY	J
310	CORDOVA	VIRGINIA	C
311	CORDOVA	WILLIAM	

312	CORRALES	ALFREDO	
313	COUNTY COUNTY SANITATION NO 14		
314	COUNTY SANITATION DISTRICT NO 20		
315	COX	CALVIN	J
316	COYLE	ERIC	M
317	CPH ROSAMOND LP		
318	CRAIN	ELLIE	
319	CRAIN	JERRY	
320	CROCKETT	SUSAN	ELISE SIMC
321	CRONK	RONALD	E
322	CROSBY	ALICE	B
323	CRUZ	CORA	D
324	CRUZ	FELINA	E
325	CRUZ	NICASIO	
326	CRUZ	ROGER	L
327	CRYSTAL ORGANIC FARMS LLC		
328	CUA	KRISTEEN	
329	CULHA	MIKE	M
330	CULLEN	PETER	
331	CURRY	DANNY	G
332	D C FAMILY TRUST		
333	D R HORTON LOS ANGELES HOLDING		
334	D SOUZA	FLORIN	
335	DACLES	ANITA	S
336	DACLES	SIMPLICIO	M
337	DALLEY	HELGA	I
338	DALLEY	MANFRED	H
339	DAMAN	LEONA	L
340	DAMRON	AMY	
341	DAMRON	JEANETTE	L
342	DANG	TAN	JAMES
343	DAOOD	MOHAMMAD	
344	DAOOD	SALEEM	A
345	DAOUD	ADIB	G
346	DAUGHERTY	DONNA	L
347	DAVALOS	ANITA	L
348	DAVALOS	DOMINADOR	M
349	DAVID	ALFRED	L
350	DAVIES	LITA	
351	DAVIS	DOUGLAS	G
352	DAVIS	JAMES	
353	DAVIS SIBS INC		
354	DE LANO	ELIZABETH	
355	DE PIETRO LIMITED		
356	DEAN REV LIV TR		
357	DEBOTOUN	SEFEY	
358	DEDIOS	ANGELITO	G
359	DEL SUR RANCH LLC		
360	DELUCA	BRUNO	M
361	DENG	LONG	
362	DENGER	SYBIL	M
363	DERRICK	OLIN	

364	DESCHENE	DENEEN	M
365	DESERT LAKE L P		
366	DIAZ	JUAN	A
367	DICKS	GARY	L
368	DIGIULIO	NICK	
369	DIOLI	RICHARD	A
370	DISCOUNTLAND INC		
371	DIXON	LONZO	W
372	DIXON	MAE	L
373	DIZON	ADELAIDA	R
374	DIZON	HONORATO	C
375	DONIS	ESTEBAN	C
376	DONIS	MAURO	
377	DONIS	ROSALINA	G
378	DONIS	VIRGINIA	
379	DORA	LAND	
380	DORA LAND		
381	DOUGHERTY	TERESA	
382	DOUGLAS	MICHAEL	R
383	DOUGLASS	KATHERINE	G
384	DOUK	BOROM	
385	DOUK	S&B	
386	DOUK	SOKHOM	
387	DOWNING	JAMES	W
388	DOWNING	JAMES	W
389	DOWNS	GARY	W
390	DREVER	ROMNIA	H
391	DRUMMOND	JOHN	T
392	DRUMMOND	MARILYN	M
393	DUMBRIQUE	ELISEO	C
394	DUNLOP	CYNTHIA	R
395	DUNN	JAMES	D
396	DUNNING	RAYMOND	E
397	DUONG	LOC	T
398	DURST	CAROL	A
399	DYKSTRA	HAROLD	
400	DYKSTRA	TERESA	
401	DYKSTRA	WILBUR	
402	DYKSTRA FAMILY TRUST		
403	E C WHEELER LLC		
404	E I C GROUP ET AL		
405	EARL	DOROTHY	A
406	EARL	JACK	B
407	EARWOOD	DAVID	BRIAN
408	EAST KERN PROP LLC		
409	EAST WEST LAND INVS INC		
410	EASTER	BENJAMIN	
411	EASTLEY	GEORGE	M
412	EASTLEY	PHILIP	G
413	EBERT	JOANNE	F
414	ECKBERG	DAVID	L
415	ECKBERG	PAULA	K

416	ECKLES	DALE	H
417	ECONOMOU	JEAN	F
418	EDMONDS	JOHN	H
419	EDWARDS	AVIS	M
420	EDWARDS	LINDA	
421	EDWARDS	SAMMY	L
422	EKSTROM	MARY	E
423	ELNESS	THEODORE	O
424	ELUMBA	ROSA	V
425	EMMS	ZENAIDA	C
426	EMPERT	ROSARIO	O
427	ENSMINGER	LORIN	
428	ENXCO DEV		
429	ENXCO DEV CORP		
430	ENXCO DEVELOPMENT CORPORATION		
431	ERAZIM	CATHERINE	A
432	ESCOBAR	JOHN	M
433	ESPARZA	ROBERTO	C
434	ESPARZA	ROSE	
435	ESPIRITU	WILLIAM	I
436	ESQUIVEL	BASILIO	
437	EST OF ZELDA C SCHLISKE DECD		
438	ESTRADA	EDELMIRA	
439	ESTRADA	HERVI	
440	EVANS	NANCY	H
441	EYHERABIDE	JUANITA	
442	EYHERABIDE	RAYMOND	
443	EYHERABIDE SHEEP CO		
444	FABER	GEORGINA	LISA
445	FABRIZIO	CARL	
446	FAIRVIEW DEVELOPMENT LLC		
447	FALK	DALE	
448	FANKHAUSER	ERNEST	
449	FANKHAUSER	HERTA	
450	FARIA	RICHARD	M
451	FARM ESTATES OF THE WORLD		
452	FELTS	DENESE	L
453	FELTS	DOUGLAS	D
454	FENNELL	OTILIA	E
455	FIKE	RUTH	E
456	FINKEL	CLAUDIA	
457	FINKEL	GARY	
458	FIORITO	MARY	
459	FISCHER GRANDCHILDRENS TRUST		
460	FLORES	GAYLE	
461	FLORES	MARIA	
462	FLOYD	HERBERT	F
463	FOGLEMAN	LARRY	
464	FOGLER	IRENE	P
465	FOGLER	RONALD	D
466	FONTILLAS	ALEJANDRO	
467	FORD	JOHN	R

468	FOWLER	ANTONIA	B
469	FRANE	KEVIN	J
470	FRANE	LAUREL	A
471	FREDRICK	STEPHENIE	J
472	FREEMAN	JEFF	
473	FRIEDMAN	ESTHER	E
474	FRIEDRICHSEN	LEWIS	
475	FU	JOANNE	Y
476	FUJISAWA	YOSHI	
477	FUKUMOTO	MICHI	
478	FULLER	RUSSELL	E
479	GABUYA	AURORA	P
480	GABUYA	RODRIGO	L
481	GALIETI	JEFF	A
482	GALVEZ	JOSE	L
483	GAMBONE	BETTY	L
484	GARCIA	MARTHA	I
485	GARCIA	RODOLFO	
486	GARDE	EDUARDO	
487	GARDE	RUSSELLEND	
488	GARDE FMLY REV TR		
489	GARY J RAFFERTY TRUST		
490	GATEWAY TRIANGLE DEVELOPMENT II		
491	GATEWAY TRIANGLE PROPERTIES		
492	GEE	HUNG	GIT
493	GENZ DEV INC		
494	GENZ DEVELOPMENT INC		
495	GHIKA BUDESTI	STEFAN	
496	GIANG	PAUL	
497	GILBRALTAR HOMES LLC		
498	GILL FAMILY TRUST 1999		
499	GILLINGHAM	GEORGE	H
500	GISELE SCHROEDER LIV TR		
501	GLAUSER	DRENA	M
502	GLENN	GARY	A
503	GLESSNER	PAUL	T
504	GODSHALL	HARRY	C
505	GOLD SKY PROPERTY LLC		
506	GOLDEN SANDS TRAILER PARK		
507	GONZALES	BENITO	S
508	GONZALES	ERMINIO	
509	GONZALES	QUACH	E
510	GONZALEZ	ARMANDO	C
511	GONZALEZ	ARMANDO	L
512	GONZALEZ	CARLOS	J
513	GONZALEZ	FRANCES	R
514	GONZALEZ	GLORIA	
515	GONZALEZ	RAMON	
516	GONZALEZ	ROQUE	
517	GONZALEZ	TINA	J
518	GORRINDO	ROBERT	
519	GOSE	VICENTE	

520	GOYA	CHRISTINA	A
521	GRAHAM	JOHN	C
522	GRANT	WILLIAM	M
523	GRAY	WESLEY	H
524	GREEN	BARBARA	MARIE
525	GREEN	HILDA	
526	GREENMAN	DONNA	J
527	GREMBER	PIERRE	
528	GRIFFIN	JOHN	R
529	GRIFFIN	LAURA	
530	GRIFFIN	LAURA	
531	GRIFFIN	LEONARD	W
532	GROFF	GERALD	L
533	GROFF	MARIAN	J
534	GROOM	LILLIAN	C
535	GROVEN	DENNIS	
536	GROVEN	MARGE	
537	GUERRANT FMLY TR		
538	GUIANG	LUCENA	F
539	GUILLEN	CRISTOVAL	
540	GUINTO	CLARITA	
541	GUTIERREZ	ALVARO	
542	GUTIERREZ	SANTOS	A
543	GUZMAN	JOSE	
544	GUZMAN	JOSE	
545	GUZMAN	NORMA	
546	GUZMAN	OVIDIO	
547	H & N DEVELOPMENT CO INC		
548	HA	JIN	S
549	HA	YOUNG	K
550	HADDOX	WILLIS	
551	HAHN	SUSAN	J
552	HAMIDI	HOMA	
553	HAMSON	CARRIE	M
554	HAMSON	DAVID	E
555	HANANO	DEAN	K
556	HANLON	JAMES	W F
557	HANLON	JAMES	F
558	HANSEN	HARALD	
559	HANSON	CHRISTINE	
560	HANTMAN	JOSEPH	
561	HANTMAN	JOYCE	
562	HARD	WILLIS	H
563	HARNIK	JOSEPH	H
564	HARPER	DAVID	C
565	HARRELL	MARY LOU	BYERLY
566	HARRIS	DIANE	M
567	HARRIS	JAMES	P
568	HARRIS	KAREN	JANE
569	HARRIS	STEVEN	
570	HART	KAREN	S
571	HARTER	KAY	B

572	HARTER	KAY	
573	HARTER	SCOTT	
574	HARTER	SCOTT	S
575	HARVELL FAMILY TR		
576	HASKINS	SAM	
577	HASSID	YAEL	
578	HASSID	YORAM	
579	HATHAWAY	GARY	
580	HATHAWAY	PATRICIA	
581	HAYDON	DONALD	C
582	HAZAMA	FUSAKO	
583	HAZAMA	HIDEO	
584	HEGGEN	ALICE	L
585	HELTON	BOB	D
586	HEMMING	JAMES	
587	HENNINGER	CORINE	L
588	HERNANDEZ	ANTONIO	
589	HERR	CAROL	E
590	HESS	CHRISTIAN	
591	HETZNER	RONALD	
592	HEYNEN	GERALDINE	A
593	HGJ LLC		
594	HIGH DESERT INVESTMENTS LLC		
595	HILL	JACK	M
596	HILL	MICHELE	
597	HILLERMAN	ERIC	V
598	HINCK	MARILYN	E
599	HINES	NORMAN	M
600	HINES	RICKI	
601	HO	GIANG	
602	HO	THONG	H
603	HOA	NGAN	
604	HOBAYAN	ALBERT	H
605	HOBAYAN	VIOLETA	P
606	HODGES	PAUL	
607	HODSDON	DEBRA	J
608	HODSDON	STEVE	W
609	HOEHN	ELISABETH	
610	HOEHN	MICHAEL	
611	HOFFMAN	WILBERT E DECD EST OF	&
612	HOGAN	KIM	M
613	HOGAN	PATRICK	J
614	HOLGUIN	SOLEDAD	
615	HOLLAND	CLARISSIA	E
616	HOMAN	LINDA	
617	HOMAN	MATHEW	L
618	HONG	CHE	C
619	HONG	KHAI	
620	HONG	TONY	
621	HOOPER	MARTHA	W
622	HOOVER	GARY	
623	HOOVER	MARILYN	L

624	HOPPER	J	A
625	HOSKINS	WILLIAM	L
626	HOST	CHERYL	A
627	HOST	THOMAS	A
628	HOURANI	JANETTE	
629	HOWE	LESLIE	B
630	HSI	SUMEI	P
631	HSIAONI CHANG		
632	HSU	JA	BIN
633	HSU	JAMES	T
634	HUANG	CHI	S
635	HUANG	CHI	SHIOU
636	HUANG	KANGLE	
637	HUANG	SUCHU	T
638	HUBBARD	MARIE	E
639	HUERTA	CRESENCIO	
640	HUGHES	ROMEO	
641	HUI SUK KIM TR		
642	HUNT	ROBERT	W.
643	HUNTER	JAMES	A
644	HUTH	CLINTON	C
645	HUTH-TANNER	S	
646	HUTSON	HARLEY	M
647	HWANG	AMY	C
648	HYATT	CLARENCE	L
649	HYPERICUM INTEREST LLC		
650	HYPERICUM INTERESTS LLC		
651	HYUN CHUL LEE		
652	IGE	KIYOSHI	
653	IGLESIA DE DIOS PENTECOSTAL MI		
654	IGNACIO	ISIDRO	
655	ILES	ELLEN	M
656	INGERSOLL	VERONICA	
657	INGRAM	MARTIN	
658	INVESTCO AV8 LLC		
659	IOELE	PASQUALE	S
660	IRISH	JOY	C
661	IRISH	ROBERT	L
662	ISSAKHANIA	J	
663	ISSAKHANIAN	MARTIN	
664	IWAMOTO	FUKUYO	
665	J P ELIOPULOS ENTERPRISES INC		
666	JABLONSKI	HELENA	
667	JACKS	ALFRED	H
668	JACKSON	DIETRA	F
669	JACOBSEN	ARNOLD	
670	JAGATRI L AND XANTHA DHAWAN		
671	JAMES	RICHARD	D
672	JAUREGUI	DAVID	
673	JAUREGUI	ISAURA	
674	JAVID INVESTMENTS LLC		
675	JEFFREY	ENID	C

676	JENG	CHERNPORN	
677	JENG	THIENCHAI	
678	JENNINGS	BOBBY	G
679	JENNINGS	PATRICIA	L
680	JENSEN FAMILY TR		
681	JEONG	WALLACE	D
682	JIBILIAN	ARMEN	
683	JIMENEZ	ENRIQUE	U
684	JOHNSON	HENRY	
685	JOHNSON	MARGARET	C
686	JONES	BETTY	J
687	JONES	CHRISTINE	D
688	JONES	DAVID	L
689	JONES	ESTHER	D
690	JONES	HAROLD	C
691	JONES	ROBERT	A
692	JORDAN	MARGLEEN	J
693	JOSHUA RANCH DEVELOPMENT INC		
694	JUHL	MORTON	S
695	K A INVESTMENT CO L L C		
696	KAGEHIRO	ISAKO	
697	KAGEHIRO	KENICHI	
698	KAM	ANNETTE	F
699	KAM	ANNETTE	FUNG HAU
700	KANAMORI	MITSUE	
701	KANEASTER	CHARLOTTE	M
702	KANG	YUN	H
703	KARIYA	KATSUKO	
704	KARIYA	KATSUMI	
705	KARLAKIS	THEODORE	
706	KARTHAS	NICHOLAS	
707	KASPER	COLLEEN	A
708	KATSION	GORDON	D
709	KAUFLER TRUST		
710	KAWAMOTO	WAYNE	T
711	KAWAMURA	YASUKO	IRA
712	KEAST FMLY TR		
713	KEKLIKIAN	ARPINEH	
714	KEKLIKIAN	MISSAK	
715	KENDRICK	MARIE	C
716	KERNROSS ESTATES		
717	KETTENRING	JOEL	S
718	KETTENRING	PAULINE	J
719	KETTLES	HARRIET	
720	KEY	SANDRA	
721	KHATER	FADI	N
722	KILA	LORNA	M
723	KIM	MI	JUNG
724	KIM	SOO	H
725	KINAT	CAROL	A
726	KING	CHUN	
727	KING	CHUN	C

728	KING	WILLIAM	
729	KING	WILLIAM	C
730	KIRKLAND	FREDA	D
731	KLECHEFSKI	C	DIANE
732	KLECHEFSKI	GEORGE	E
733	KLEKAR	HOWARD	R
734	KLODJA	FRANK	
735	KLUMP	HAROLD	P
736	KNAPP	IRENE	KENT
737	KOBAYASHI FAMILY TRUST		
738	KOLLAR	JOSEPHINE	P
739	KOLSTAD	ROSE	M
740	KOO	ERLINDA	L
741	KOOKEN	WILLIAM	R
742	KOOTENAI PROPERTIES INC		
743	KORDA	SARAH	
744	KOSTSZEWA	JOHN	L
745	KOSTSZEWA	MARLENE	
746	KOUSEN	KAREL	
747	KOUSEN	PAMELA	
748	KRAMER	ALICE	C
749	KRAMER	ROBERT	S
750	KU	DAVID	H
751	KU	SOU	CHIN
752	KUBIAK	MICHAEL	J
753	KUCHTA	TERRY	W
754	KUMAGAI	SEISHI	
755	KUNG	WEI	I
756	KYLE	GAILEN	
757	KYLE	GAILEN	W
758	KYLE	JAMES	W
759	KYLE	JULIA	
760	KYLE	WANDA	E
761	L A CO SANITATION DIST NO 14		
762	L A CO SANITATION DIST NO 20		
763	LA PORTE	JEAN	D
764	LAGUERTA	LILIA	R
765	LAI	TSUI	W
766	LAMBERT	DELORIS	G
767	LAMBERT	NANCY	L
768	LANCASTER AND 120 111 LLC		
769	LANCASTER BLVD		
770	LANCASTER BLVD AND 42ND ST WEST		
771	LANCASTER NEW HORIZONS		
772	LAND BUSINESS CORP		
773	LANDALE MUTUAL WATER CO		
774	LANDAU	PEARL	
775	LANDAU	WILLIAM	
776	LANDAVERDE	JESUS	
777	LANDAVERDE	NANCY	
778	LANDEROS	ROBERTO	
779	LANE	FRANK	A

780	LANG	PAULETTE	M
781	LANIER	WILLIAM	B
782	LANKTREE	ANN	R
783	LARGE	BONNIE	P
784	LARGE	ROBERT	W
785	LARRANAGA	SAMSON	
786	LAW	ALTON	B
787	LAWRENCE	MICHAEL	F
788	LAYMANCE	LOUIE	A
789	LAZO	CONRADO	V
790	LAZO	ELIZABETH	N
791	LE	DUONG	T
792	LE	LOI	
793	LE	SUONG	N
794	LE	YEN	S
795	LEARY	CORNELIUS	W
796	LEBRECHT	MARGARET	M
797	LEE	CHI	HSIUNG
798	LEE	DELANO	
799	LEE	JIM	
800	LEE	MAI	
801	LEE	TING	PIE
802	LEGASPI	AURELIA	V
803	LEGASPI	FELIMON	E
804	LEISTNER	LEO	
805	LENO	LEIGHTON	E
806	LENO	NANCY	A
807	LEONA VALLEY HUNTING CLUB		
808	LESIAK	MARIANE	
809	LESIAK	MAX	M
810	LEUNG	RAMIE	
811	LEWIS	PHILLIP	W
812	LIBED	RUDOLFO	P
813	LIEN FAMILY SURVIVORS TRUST		
814	LIGGETT	MICHAEL	
815	LIM	CAMILA	L
816	LIM	SENG	MOV
817	LIMOS	LEONORE	C
818	LIN	MICHAEL	
819	LIN	TACHUNG	
820	LINDE	DONALD	L
821	LING	KWONG	S
822	LING LING FANG		
823	LIONG	LILLA	
824	LITTLE ROCK SAND AND GRAVEL INC		
825	LITTLEROCK CREEK IRRIGATION DIST		
826	LITTLEROCK SAND AND GRAVEL INC		
827	LIU	CHIH	CHUNG
828	LIU	SUH	JEN
829	LIZOTTE	SHIRLEY	
830	LLANDA	EDITH	A
831	LLOYD F AVERY TR		

832	LO	MAN	C
833	LO	SHIUNG	RU
834	LOCSIN	CARMELITA	N
835	LOCSIN	HILARIO	S
836	LOGUE	MARY	R
837	LOI	THANH	LE
838	LOLA R JOHNSON TRUST		
839	LOMBARDO FMLY REV LIV TR		
840	LONG DENG		
841	LOOKBAUGH	STEPHEN	C
842	LOPAC	THOMAS	A
843	LOPEZ	MARK	L
844	LOPEZ	OLIVIA	E
845	LOPEZ	VICTOR	M
846	LOS ANGELES COUNTY SANITATION		
847	LOS BANOS	BERNARD	
848	LOVEN	ROBERTA	
849	LOVING	ROBERT	A
850	LOWERY	CHARLES	W
851	LOWERY	NINA	M
852	LOYOLA MARYMOUNT UNIVERSITY		
853	LOZANO	JOSE	G
854	LOZANO	MARIA	T
855	LU	CLARK	DANNY C
856	LU	CLARK	C
857	LUBBERS	EVA	F
858	LUCERO	ROBERT	
859	LUCKY 360 INVESTMENTS LLC		
860	LUDOVICO	MARIA	C
861	LY	MIKE	
862	LYMAN	JANET	L
863	LYMAN	JANET	L
864	LYNCH	PATRICIA	L
865	LYON	ALICE	J
866	LYONS	CHRISTI	L
867	LYONS	JOHN	D
868	M14 DEVELOPMENT LLC		
869	MACADAEG	BERNADETTE	
870	MACE	JEANENNE	K
871	MACE	MARK	E
872	MACIAS	ANTONIO	
873	MACIAS	BENJAMIN	
874	MACIAS	MARTINA	
875	MADAN	S	K
876	MADAN	SHOBHANA	
877	MADRIGAL	ANTONIO	
878	MAGALONA	CECILIA	M
879	MAGEO	PALE	I
880	MAGLAYA	PATROCINIO	M
881	MAGLIANO	ROBERT	
882	MAGLIANO	ROSALIN	
883	MAGTAAS	ROLADO	G

884	MAK	VANNA	
885	MALAY	ANGELA	L
886	MALIT	NARCISO	G
887	MANAY	LORIE	
888	MANDAC	LUZVIMINDA	B
889	MANERY	DAVID	
890	MANNINO	CAROL	A
891	MANUEL	CHARITO	M
892	MANUEL	EUFEMIA	
893	MANUEL	RICHMOND	B
894	MANUEL	RICHMOND	
895	MANZO	CHARLES	J
896	MARAVICH	RUDOLPH	
897	MARCELO	MENANDRO	
898	MARCELO	OFELIA	
899	MAREE J DE LANO TR		
900	MARITORENA	JOSE	
901	MARITORENA LIVING TRUST		
902	MAROTTA	HELEN	P
903	MARQUEZ	ALFREDO	
904	MARQUEZ	MANUELA	
905	MARQUEZ	MARIA	
906	MARQUEZ	MARTIN	
907	MARSH	MARY	L
908	MARSH	RACHEL	E
909	MARSHALL	BYRN	HOWARD
910	MARTIN	ALMA	
911	MARTIN	ARTHUR	C
912	MARTIN	BARBARA	D
913	MARTIN	THOMAS	
914	MARTINEZ	FRANCISCO	J
915	MARTINEZ	JESUS	A
916	MARTINEZ	MARIA	D
917	MARTINEZ	ROBERT	L
918	MARTINS	ELSIE	
919	MARTINS	LAWRENCE	
920	MARTINS	LAWRENCE	
921	MASON	DAVID	S
922	MASON	DAVID	
923	MASON	FRANCES	H
924	MASON	KERRI	
925	MASON	MILDRED	
926	MASTERS	DONALD	L
927	MATA	ROSARIO	G
928	MATE	TERESITA AND	
929	MATSUI	JEANNE	
930	MATSUSHIMA	SUMIKO	
931	MATTHEWS	FULTON	L
932	MAURICE	MATTHEW	
933	MAXILOM	SHIRLEY	A
934	MAXWELL	CATHERINE	
935	MAZARIEGOS	GUSTAUO	

936	MAZARIEGOS	LINDA	
937	MC AVOY	AMY	M
938	MC AVOY	DOUGLAS	R
939	MC INTYRE	THOMAS	R
940	MC KAY	RAYMOND	E
941	MC LAREN	B	A
942	MC LAUGHLIN	BRIAN	M
943	MCALLISTER	RAE	K
944	MCANDREW	LORRAINE	R
945	MCCALMAN	JULIENNE	
946	MCCALMAN	WALTER	
947	MCCLAIN	LORETA	Y
948	MCCLINE	SUSAN	R
949	MCCOOL	FREDERICK	W
950	MCCOOL	RITA	
951	MCDOWELL	JERRIE	E
952	MCGAHAN	PATTY	J
953	MCNINCH	EDWIN	
954	MCNINCH	MARGARET	
955	MEDINA	JULIAN	
956	MEJIA	JUANA	L
957	MELLOW	LEONARD	
958	MENDOZA	ALFREDO	B
959	MENDOZA	CUAUHTEMOC	
960	MERRY	ROBERTA	
961	MESSIER	HERMINIA	
962	MESSIER	LEONARD	
963	METTLER VALLEY MUTUAL WATER CO		
964	MEYER	DAVID	B
965	MEYER	HANS	PETER
966	MEYER	IPBI	K
967	MEYER	IPBI	KIM
968	MEYER	LISA	
969	MEYER CREST LTD		
970	MEYER CREST LTR		
971	MIHARA	HISAO	
972	MIKEL	MOLLY	
973	MIKEL	SAM	
974	MILLER	JAMIE	
975	MILLER	LINDA	M
976	MILLER	NANCY	
977	MILLER	NANCY	
978	MILLER	RAYMOND	C
979	MILLER	RICHARD	D
980	MILLER	STEVEN	S
981	MINA	MARIA	D
982	MINA	ROLDAN	C
983	MINER	RICHARD	H
984	MINH	LIEU	NGOC VO
985	MINH	VAN	DINH
986	MIRANDA	SALVADOR	
987	MIRKAZEMI	MORTEZA	S

988	MIRKAZEMI	SUSAN	G
989	MISSION BELL RANCH DEVELOPMENT		
990	MITSUSHIMA	JANICE	C
991	MO	CHIUNG	H
992	MOENE	BJORN	
993	MOJAVE & TROPICO LLC		
994	MOLINA	CELINA	
995	MONARREZ	CANDICE	J
996	MONASEBIAN	FARSHAD	S
997	MONEDA	PATRICIO	A
998	MONFARED	SAEED	F
999	MONTEMAYOR	EUSEBIO	R
1000	MONTES	MARIA	I
1001	MOORE	JUDITH	ANNE
1002	MOORE	ROBERT	A
1003	MOORE	SHIRLEY	M
1004	MOORE	THOMAS	A
1005	MORALES	ELAINE	L
1006	MORENO	MICHAEL	P
1007	MORI	RITSUKO	
1008	MORRIS	JOHN	
1009	MOSES	MARY	L
1010	MOTAVVEF	FIROUZEH	B
1011	MOTAVVEF	MANSOOR	
1012	MOUGHALIAN	GIRARD	
1013	MOUGHALIAN	RENATE	
1014	MOWER	MARY	B
1015	MUDGETT	MARILYN	
1016	MULLINS	BRANDON	
1017	MULVENA	MAIA	L
1018	MUMFORD	DON	HAZEN
1019	MUNGIA	EMMA	G
1020	MUNGIA	EMMA	G
1021	MUNZ	BARRY	S
1022	MUNZ	DAN	W
1023	MUNZ	KATHLEEN	M
1024	MUNZ	REVA	R
1025	MURDOCK	BRONWYN	
1026	MURO	ESTELA	
1027	MURPHY	PATTY	A
1028	MURTAUGH SURVIVORS TRUST		
1029	MYERS FAMILY TRUST ET AL		
1030	MYUNG	DUK	Y
1031	MYUNG	HYUN	S
1032	NADWODNY	MARY	L
1033	NAIDITCH	GAY	E
1034	NAKAMICHI	SATOYE	
1035	NAKASHIMA	YOSHITO	
1036	NAKAWATASE	SHIZUKO	
1037	NAKAWATASE	YOSHITAKA	
1038	NANAMKIN	JIM	L
1039	NAPUTI	DAVID	A

1040	NATIONAL CEMENT CO OF CALIF		
1041	NATIONWIDE ASSET MANAGEMENT LP		
1042	NAVAL	CHARYL	Y
1043	NAVARRO	ALEJANDRA	
1044	NAVARRO	ANDREA	
1045	NAVARRO	FRANCISCO	B
1046	NAVARRO	JOSE	
1047	NAVARRO	MARTA	
1048	NEBEKER	EUGENE	B
1049	NELLIE TAPIA FAMILY TRUST		
1050	NELLIE TAPIA FMLY TR		
1051	NEMAN	SIMIN	
1052	NEWMAN	DORWIN	
1053	NEWMAN	SHIRLEY	
1054	NEWSOM FAMILY TRUST		
1055	NGO	BINH	
1056	NGUYEN	ANTHONY	L
1057	NGUYEN	DANNY	T
1058	NGUYEN	NGOC	A
1059	NGUYEN	NGUYET	M
1060	NGUYEN	SONNIE	H
1061	NGUYEN	THANH	M
1062	NIBBELINK FAMILY TR		
1063	NICHOLS	JUANITA	R
1064	NICHOLSON	GERARD	H
1065	NICHOLSON	MARIE	A
1066	NISHIDA	ERIC	M
1067	NISHIDA	ERIC	M
1068	NISSING	NEIL	
1069	NIXON	LYDIA	A
1070	NOEL	DIXIE	LEE
1071	NONA M RAFFERTY TRUST		
1072	NORTHROP GRUMMAN CORP		
1073	NORTHROP GRUMMAN SYSTEMS CORP		
1074	NOTERMAN	MARK	A
1075	NOTERMAN	YVETTE	M
1076	NOU	NANCY	M
1077	NOVELOSO	CIPRIANO	
1078	NOVELOSO	DOLORES	
1079	NOZAKI	HENRY	A
1080	NOZAKI	NAOMI	F
1081	NUSS	STEVEN	B
1082	NUTTER	MARY	A
1083	OBERG	MERLE	L
1084	OCONNOR	TIMOTHY	J
1085	OHTA	JESSIE	T
1086	OKAMOTO	KEIKO	
1087	OKAMOTO	MASAAKI	
1088	OKIHARA	HARUTO	
1089	OLIVAS	RICK	D
1090	OLSON FAMILY TR		
1091	OLSSON	BETTY	A

1092	OLSSON	JOHN	B
1093	ORARA	ADORACION	M
1094	ORARA	FRANCISCO	
1095	ORTEGA	PEDRO	O
1096	OSHIRO	DORIS	Y
1097	OSKOOI	FIROOZ	R
1098	OSSA	GUNTRAM	R
1099	OSSA	LIANE	D
1100	OWL PROPERTIES INC		
1101	PADDEN	BRETT	R
1102	PADGETT	CHARLENE	E
1103	PADGETT	ROY	B
1104	PADILLA	MARTA	
1105	PADILLA	PAZ	R
1106	PADUA	CLAIRE	M
1107	PAGDILAO	LEONIDA	P
1108	PALACIO	JULIO	
1109	PALACIO	LUZ	
1110	PALMDALE 1000 ASSOCIATES LLC		
1111	PALMDALE 5TH STREET WEST LLC		
1112	PALMDALE FAMILY HOUSING		
1113	PALMDALE HILLS PROPERTY		
1114	PALMDALE HILLS PROPERTY LLC		
1115	PALMDALE LODGING ASSOCIATES LLC		
1116	PALMDALE MOBILE FRANK LLC		
1117	PAQUIN	JOSEPH	R
1118	PAREDES	EUGENIO	
1119	PARK	CHOON	S
1120	PARK	INYOUNG	
1121	PARK	JEAN	C
1122	PARKER	HAROLD	B
1123	PARKER	JUEL	A
1124	PASTRANO	JOSE	D
1125	PATINO	SALLY	
1126	PAULING	ADRIAN	LEE
1127	PAYNE	CHARLES	A
1128	PAYNE	IMA	J
1129	PEARSON	DIANA	J
1130	PEARSON	DIANA	JO
1131	PEDENKO	LEO	
1132	PENA	VICENTA	A
1133	PEREIRA	MICHAEL	P
1134	PEREZ	ROSA	I
1135	PERRISEAU	KAREN	
1136	PERRISEAU	KAREN	L
1137	PERRISEAU	MARVIN	R
1138	PETERSEN PROPERTIES		
1139	PH ROSAMOND LLC		
1140	PHAM	THANG	DUC
1141	PHAN	MYLINH	
1142	PHILLIPS	ORRIN	
1143	PIANE	TOM	

1144	PIERATT	PAUL	M
1145	PIKE	ROBERT	
1146	PIWENITZKY	FRED	W
1147	PIWENITZKY	SACHIKO	
1148	PIZANO	ARTHUR	
1149	PIZANO	HERLINDA	
1150	PLEDGE INVESTMENT LLC		
1151	PLOYNGAM	TAVIL	
1152	POLLARD	PERLA	C
1153	POLLARD	ROBERT	A
1154	POMEROY	KIMBERLEY	
1155	POMEROY	KIMBERLY	A
1156	POMEROY	VANCE	
1157	POMEROY	VANCE	D
1158	POOLE FAMILY TR		
1159	PORCARI	DORA	A
1160	POULSEN	NORMAN	L
1161	POWELL	CHARLES	P
1162	PRATANTHIP	WARAYA	
1163	PROCIDA	ROMANO	
1164	PRODAN	BRUNO	
1165	PRODAN	ROSA	
1166	PVK FAMILY LIMITED PTN		
1167	QARMOUT	ELIAS	
1168	QUADIR	ABU	
1169	QUAN QUOC PHAM		
1170	QUANTUMCUE INC		
1171	QUESTIN	BELLA	S
1172	QUIGLEY		
1173	QUIGLEY	RACHEL	
1174	QUINLAN	MARY	R
1175	QWEST ENGINEERING INC		
1176	R AND M RANCH		
1177	RABENA	THEODORE	R
1178	RAGUINE	ARMANDO	M
1179	RAHGAN REAL ESTATE DEV CO		
1180	RALPHS	GAY	A
1181	RALPHS	RONALD	A
1182	RAMOS FAMILY TRUST		
1183	RAMPE	FRED	
1184	RANADA	FELICITAS	T
1185	RAWJEE	MAHMUD	
1186	RAZAVI	FEREIDOUN	
1187	RAZER	CLARENCE	L
1188	RAZER	JEAN	L
1189	REACH	JOAN	E
1190	RECA	JOHN	B
1191	REED	ROBERT	L
1192	REFF	BARBARA	
1193	REFF	HERBERT	
1194	REGALADO	RAY	Y
1195	REICH	FRED	

1196	REID	MARY	L
1197	REINOSO	EDGAR	
1198	RETZ	MAYME	E
1199	REYES	CONCEPCION	
1200	REYES	EFREN	
1201	REYES	ELIZABETH	
1202	REYES	ERNESTO	S
1203	REYES	VICENTE	
1204	REYNOLDS	CARLETON	
1205	REYNOLDS	OLIVIA	
1206	RHEE	SEI	C
1207	RHODA	SUSAN	M
1208	RHODEN	MICHELE	
1209	RICHARD A WHITE TRUST		
1210	RICHARD M LANG FAMILY TRUST		
1211	RICHARDS	MORRIS	D
1212	RICKETTS	RONALD	M
1213	RIDDLE	NANCY	J
1214	RIDER	ANITA	E
1215	RIGGINS	PATRICIA	J
1216	RIMANDO	FLORENCE	L
1217	RIMANDO	RUBEN	B
1218	RINALDI	MICHAEL	J
1219	RIOS	MARIA	T
1220	RIOS	NICOLAS	
1221	RIPPERDA	JOYCE	
1222	RIPPON	JAMES	
1223	RITTER	EDGAR	C
1224	RITTER	PAULA	E
1225	RIVERA	GEORGE	R
1226	RMG PROPERTY HOLDING FOUR LLC		
1227	RMG PROPERTY HOLDING TWO LLC		
1228	ROBBIE	DAVID	L
1229	ROBBIE	KINUE	REV
1230	ROBERSON	TRACY	A
1231	ROBERTSON	CHARLES	T
1232	RODARTE	ALBERT	
1233	RODRIGUEZ	CONCEPCION	
1234	RODRIGUEZ	GUADALUPE	
1235	RODRIGUEZ	IGNACIO	
1236	RODRIGUEZ	JOHN	M
1237	ROQUEMORE TR		
1238	ROSAMOND LAND TRUST		
1239	ROSEMOUNT EQUITIES LLC		
1240	ROSENBERRY	RUSSELL	F
1241	ROSENDALE	CRYSTAL	L
1242	ROSENDALE	STEPHEN	
1243	ROSENTHAL	ROBERT	
1244	ROSS REBAR CO INC		
1245	ROTTGERING	RICHARD	W
1246	ROWE	TRISHA	A
1247	ROWEN	MARSHALL	

1248	ROWLAND	MYRA	
1249	ROYAL INVESTORS GROUP		
1250	ROYAL INVESTORS GROUP LLC		
1251	ROYAL WESTERN PROPERTIES		
1252	ROYAL WESTERN PROPERTIES LLC		
1253	RUBENSTEIN	JAMES	
1254	RUFF	DORIS	E
1255	RUFF	EDWARD	L
1256	RUNDT	EDNA	V
1257	RUNKLE	DEWEY	R
1258	RUONA	LYNN	M
1259	RUOPP	FREDERICK	J
1260	RUSSELL	BERNA	
1261	RUSSELL	HELEN	B
1262	RUSTON	PATRICIA	
1263	RUSTON	TOM	F
1264	SACMAN	HERMOGENES	V
1265	SAITO	KATSUJI	
1266	SALAZAR	GABRIEL	
1267	SALEH	HOGER	R
1268	SALLEN	BETTY	
1269	SALLEN	JOSEPH	
1270	SALOMON	FRANKIE	H
1271	SAN DIEGO FRENCH AMERICAN		
1272	SANCHEZ	FRANCISCO	
1273	SANCHEZ	MARIA	F
1274	SANTANA	DIGNA	S
1275	SANTANA	PEDRO	
1276	SANTOS	GREGORIO	R
1277	SAPARZADEH	DANIEL	
1278	SAROMINES	JOSE	A
1279	SARRIS	GUSTAVE	
1280	SASAKI FAMILY TRUST 1995		
1281	SAUER	KAREN	
1282	SAY	AMY	Y
1283	SCATTAGLIA	FRANCES	
1284	SCATTAGLIA	FRANCES	M
1285	SCHAD	WILLIAM	O
1286	SCHAEFFER	ALICE	M
1287	SCHAEFFER	BUD	S
1288	SCHEMENAUER	STACY	J
1289	SCHILLING	LAWRENCE	
1290	SCHILLING	MARY	
1291	SCHIPPER	SYLVIA	J
1292	SCHLEGEL	JUDITH	A
1293	SCHLEGEL	STEPHEN	J
1294	SCHMIDT	HERMAN	A
1295	SCHOEPFLIN	HAZEL	E
1296	SCHOEPFLIN	NIEL	
1297	SCHULTE	JOHN	L
1298	SCHULTZ	PHILIP	
1299	SCIDMORE	BETTY	

1300	SCOTT	ROBERT	D
1301	SCRUGGS	PATRICIA	L
1302	SCS FAMILY LIMITED PARTNERSHIP		
1303	SEGROVE	HENRY	H
1304	SEIBERT	FLORENCE	G
1305	SELLSITE & UNITED LLC		
1306	SELNICK	ALVIN	A
1307	SEMERAU	DEWILLO	F
1308	SEMOTAN	CARL	W
1309	SERVICE ROCK PRODUCTS CORP		
1310	SEVEN STAR UNITED LLC		
1311	SEXTON	RALPH	F
1312	SF PACIFIC PROPERTIES INC		
1313	SHADD	EUGENIA	
1314	SHAKIB	KAMRAM	S
1315	SHANNON	WILLIAM	J
1316	SHEARER	CATHERINE	L
1317	SHEARER MARITAL TRUST		
1318	SHELTON	EDWARD	W
1319	SHERMAN	EARNEST	G
1320	SHIBUYA	HAJIME	
1321	SHIBUYA	KYOKO	
1322	SHIMABUKURO	LUPE	
1323	SHIMABUKURO	RODNEY	
1324	SHIMIZU	YOSHIAKI	
1325	SHIMOMURA	SHOGO	
1326	SHIU	ALVES	
1327	SHLOMI	BENJAMIN	
1328	SHOKRI	BEHROUZ	
1329	SHOKRI	FARIBA	
1330	SHOKRIAN	ELLIAS	
1331	SHOKRIAN	SHIRLEY	
1332	SIAM INV CORP		
1333	SIAM INVESTMENT CORP		
1334	SICAT	LOLITA	D
1335	SICCAMA	JAKOB	K
1336	SIEBERT	JEFFREY	L
1337	SIEBERT	NANCEE	J
1338	SIERRA GATEWAY RESOLUTION LLC		
1339	SIMON	EDWARD	B
1340	SIMPSON	DONNA	L
1341	SIMPSON	GARETH	L
1342	SIMS	TAFFIE	J
1343	SIMS	THEODORE	H
1344	SINGH	GORA	
1345	SINGH	TINA	C
1346	SIREX	LESLIE	A
1347	SIVILLE	ESTHER	M
1348	SIVILLE FAMILY TRUST		
1349	SKAGGS	CHARLES	R
1350	SKAGGS	REBECCA	S
1351	SKIADAS	GEORGETTE	

1352	SKINNER	CHARLES	
1353	SKINNER	SHARREN	
1354	SMALL	FRANK	A
1355	SMEJKAL	EUGENE	F
1356	SMITH	CHONG	H
1357	SMITH	JAMES	C
1358	SMITH	LARRY	A
1359	SMITH	PATRICIA	A
1360	SMITH	ROBERT	WAYNE
1361	SMUTZ	GLEN	R
1362	SNEED	ODIS	
1363	SOARING VISTA PROPERTIES INC		
1364	SONG	MI	R
1365	SORRENTO WEST PROPERTIES INC		
1366	SOTEROPOULOS	KONSTANTINOS	
1367	SOTO	JUAN	M
1368	SOUTH	JAMES	T
1369	SOUTHCOTT	BERNEICE	B
1370	SOUTHERN CA EDISON CO		
1371	SOUTHERN CALIFORNIA EDISON		
1372	SOVICH	EDWARD	S
1373	SOWERSBY	KIM	
1374	SPERLING	FRANCIS	F
1375	SSERUNKUMA	DAVID	
1376	ST JUDES RANCH FOR CHILDREN INC		
1377	STADLER	VIRGINIA	
1378	STAMBACK	LINDA	
1379	STATHATOS	HELEN	
1380	STATHATOS	SAVAS	
1381	STENBERG	COLUMBIA	M
1382	STENERSON	ALAN	G
1383	STEPHENSON	DEBORAH	
1384	STERKEL	TERESITA	C
1385	STERN	ELEANOR	
1386	STERN	JOHN	
1387	STERNBERG	RICHARD	R
1388	STIPANCIC TR		
1389	STONE	BRIAN	P
1390	STOVER	LOIS	A
1391	STRAWMYER	CLEO	P
1392	STREMEL	WILMA	M
1393	STUBNER	STEVE	J
1394	STURM	GUZEL	
1395	SU	JOHN	
1396	SUGARMAN	JORDAN	M
1397	SUGARMAN	RUTH	G
1398	SULPACIO	CARMELITA	C
1399	SULPACIO	ROMEO	R
1400	SUMMERS	EUGENE	W
1401	SUMMERS	JUANITA	B
1402	SUMMERS	QUEENIE	
1403	SUN	CHRISTOPHER	S

1404	SUN	JOHN	S
1405	SUNJKA	FRANA	
1406	SUNJKA	JOSEPH	
1407	SUNLIGHT TOWNHOME LLC		
1408	SUPA	LENNY	C
1409	SUPERMED HEALTH INC		
1410	SWEIS	FADIA	M
1411	SWEIS	SAMIR	S
1412	SZETO	ETHEL	
1413	T L SQUARED LLC		
1414	TAFT	ALAN	R
1415	TAFT	TERIANNE	N
1416	TAKAGI	TAKASHI	
1417	TAKASHITA	REIKO	
1418	TALLEY	GROVER	L
1419	TAM	HERBERT	H
1420	TAMAYO	CRES	S
1421	TAMAYO	MACARIO	S
1422	TAN	CORAZON	D
1423	TAN	FIDELINO	M
1424	TANAKA	ALICE	T
1425	TANAKA	ROY	T
1426	TANIGUCHI	JOHN	M
1427	TANIGUCHI	ROBIN	LEE
1428	TAO	CHI-KWANG	
1429	TAO	TING-NING	
1430	TAPIA	GEORGE	
1431	TAYLOR	F	CATHERINE
1432	TAZMAN		
1433	TEJON RANCH CO		
1434	TEJON RANCHCORP		
1435	TEJON RANCHERO LAND CO LLC		
1436	TEJON RANCHO CO		
1437	TERAYAMA	SADAKO	M
1438	TERUYA	FUMIO	
1439	TERUYA	HISAKO	
1440	TESTA	NICHOLAS	J
1441	THOMPSON	LARRY	L
1442	THOMPSON	LARRY	L
1443	THOMPSON	MARY	A
1444	THOMPSON	WILLIAM	A
1445	THORNTON	LYDIA	N
1446	THORNTON	LYDIA	
1447	THORNTON	ROBERT	S
1448	THORNTON	ROBERT	
1449	THREE ARKLIN LLC		
1450	THROAT APPLES INC PROFIT SHARING		
1451	THYRA RETZKE FAMILY TRUST		
1452	TICHAUER	RONALD	
1453	TIENDAS	LOUISE	
1454	TIENDAS	TERTIUS	A
1455	TIERRA BONITA RANCH COMPANY		

1456	TING	CHIANG	CHANG
1457	TITLE	INSURANCE	
1458	TITLE INS AND TR CO		
1459	TIVENS	LYNN	B
1460	TKATCH	IVAN	O
1461	TOBIAS	BEVERLY	J
1462	TOBIN	ARTHUR	
1463	TOBIN	HILDA	B
1464	TODAY INVESTMENT GROUP LLC		
1465	TOMEI	ALICE	A
1466	TOMEI	RALPH	Y
1467	TOMKIEWICZ	GLEN	R
1468	TOMKIEWICZ	JILL	C
1469	TOMLINSON	BENNY	N
1470	TORRES	DALISAY	S
1471	TORRES	EDILBERTO	C
1472	TORRES	NERIO	
1473	TORRES	SHIRLEY	D
1474	TORRES	VICTOR	J
1475	TORREZ	DONATO	
1476	TOVAR	FELIPE	P
1477	TRAN	HUYNH	V
1478	TRAN	JEANNIE	N
1479	TREACY	PATRICK	J
1480	TREMBLAY	SHARON	
1481	TROCHIM	EMMA	
1482	TROCHIM	WALDEMAR	
1483	TRUONG	JENNY	P
1484	TSEN	LIU FANG	
1485	TSUHAKO	GAIL	S
1486	TSUHAKO	JOHN	I
1487	ULAT	ARTHUR	T
1488	ULAT	ELDENA	R
1489	UNFRIED	RICHARD	H
1490	UNISON INVESTMENT COMPANY LLC		
1491	UONG	HOA	
1492	UPDEGRAFT	JERRY	P
1493	URBAN	LESLIE	
1494	USA GOLDEN LAND INVESTMENT LLC		
1495	USHIGOME	CIV	K
1496	UYEHARA	AMELIA	T
1497	UYEHARA	EDDIE	K
1498	VAHAN	ELLEN	T
1499	VALDEZ	ELPIDIO	O
1500	VALENTINE	ROLAND	M
1501	VAN DAM	CRAIG	
1502	VAN DAM	CRAIG	A
1503	VAN DAM	DELMAR	
1504	VAN DAM	DELMAR	D
1505	VAN DAM	GARY	L
1506	VAN DAM	GARY	
1507	VAN DAM	GERTRUDE	

1508	VANCE	EVANGELINE	S
1509	VANDERGROEN	DONNA	L
1510	VANDERGROEN	RONALD	E
1511	VARELA	VICTOR	
1512	VAUGHN	DANNY	M
1513	VELCHEZ	GIL	V
1514	VELCHEZ	LOLITA	A
1515	VELUR PROPERTIES LLC		
1516	VICARI	CRISPINO	
1517	VICENS	ISAIAS	V
1518	VILLAGOMEZ	BERTHA	
1519	VILLARENTE	NORMA	G
1520	VILLARUEL	PERFECTO	M
1521	VILLEGAS	DORIS	
1522	VILLEGAS	GREGARIO	
1523	VILORIA	MARGARITA	G
1524	VILT	EDWARD	E
1525	VIRTUE	RODGER	
1526	VISITACION	DANNY	
1527	VISITACION	SALLY	J
1528	VONBORCKE	RICHARD	
1529	VONDRA	ELISA	K
1530	VONDRA	JAMES	L
1531	VULCAN LANDS INC		
1532	WADE	ROBERT	L
1533	WAGAS LAND COMPANY		
1534	WAKEHAM	BARBARA	P
1535	WALDEN	DANIEL	C
1536	WALKER	CECIL	
1537	WALKER	GRACE	
1538	WALLACE	PATRICIA	
1539	WALLACE	WILLIAM	
1540	WANG	JOSEPHINE	
1541	WANG	LUCY	B
1542	WANG	WONG	YUH-HUA
1543	WARM SPRINGS INVESTMENTS LTD		
1544	WARMINGTON	WILLIAM	
1545	WARNACK	A	C
1546	WARNACK	A	C
1547	WARNER	JAMES	L
1548	WARNER	LEIGH	J
1549	WATSON	AMY	S
1550	WEAVER	ELIZABETH	C
1551	WEBB	GEORGE	O
1552	WEBB TRUST		
1553	WEBB TRUST		
1554	WEI	CECILIA	
1555	WEI	CHUNG	H
1556	WEI	SUHMEI	L
1557	WEST	IVAL	V
1558	WHEATON	RICHARD	
1559	WHICHER	LAURIE	S

1560	WHICHER	LAURIE	S
1561	WHITE	BETTY	J
1562	WHITE	EDWARD	A
1563	WHITE	JAMES	E
1564	WHITE	LORETTA	M
1565	WHITE	RICHARD	A
1566	WHITE	VIVIAN	L
1567	WHITE	WALT	
1568	WHITTAKER	JOSEPH	L
1569	WILCOX	GARY	J
1570	WILLIAMS	CYNTHIA	JEAN
1571	WILLIAMS	RONLLD	
1572	WILLIAMS FMLY TR		
1573	WILSON	DONALD	D
1574	WILSON	HARRY	Z
1575	WILSON	MARIE	J
1576	WILSON FAMILY TR		
1577	WINDHAM	WALTER	
1578	WINKLER	DONALD	D
1579	WINKLER	SUSAN	H
1580	WINTERS	THERESA	
1581	WKR360-6 LLC		
1582	WLOCZYK	HEATWIG	B
1583	WOLFE	MARGARET	J
1584	WOLFE	OTIS	V
1585	WONG	GARY	ALAN
1586	WONG	JOHNNY	
1587	WONG	MAI	T
1588	WONNELL	KAREN	E
1589	WOOD FAMILY TR		
1590	WOODALL	ROBERT	M
1591	WOODWARD	RUSSELL	G
1592	WRAY	MARY	
1593	WRIGHT	EMIKO	T
1594	WRIGHT	ROBERT	R
1595	WU	MIKE	M
1596	YAGO	ANTONIO	
1597	YAMADA	GRACE	
1598	YANEZ	MARIA	F
1599	YANG	WENDY	
1600	YANKOVICH	JOSEPH	E
1601	YEH	VIVIAN	HWA
1602	YEOMANS	MONICA	A
1603	YIN	TAMMY	P
1604	YOSHINO	BARNEY	
1605	YOUNG	CARLOS	A
1606	YOUNG	JULIE	Y
1607	YOUNG	KIM	J
1608	YU	BOB	H
1609	YU	KYU	S
1610	YU	ROGER	
1611	YUNG	BRIAN	

1612	YUNG	LINCOLN	CHU KUEN
1613	ZEDICHER	CORAL	K
1614	ZEDICHER	DONALD	L
1615	ZHAN	HAO	
1616	ZIMMERMAN	STANLEY	M
1617	ZUCKER	MILTON	O
1618	ZUCKER	NATALIE	V
1619	ZUMEL	ELENA	
1620	ZUMEL	RICHARD	
1621	ZWINGER	CHARLOTTE	

Exhibit 2

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(ADDITIONAL COUNSEL ARE LISTED ON SIGNATURE PAGES)

Superior Court of the State of California

County of Los Angeles

ANTELOPE VALLEY GROUNDWATER CASES

This Pleading Relates to Included Action:
REBECCA LEE WILLIS, on behalf of herself and all others similarly situated,

Plaintiff,

v.

LOS ANGELES COUNTY WATERWORKS DISTRICT NO. 40; CITY OF LANCASTER; CITY OF LOS ANGELES; CITY OF PALMDALE; PALMDALE WATER DISTRICT; LITTLEROCK CREEK IRRIGATION DISTRICT; PALM RANCH IRRIGATION DISTRICT; PALM RANCH IRRIGATION DISTRICT; QUARTZ HILL WATER DISTRICT; ANTELOPE VALLEY WATER CO.; ROSAMOND COMMUNITY SERVICES DISTRICT; and DOES 1 through 1,000;

Defendants.

JUDICIAL COUNCIL COORDINATION PROCEEDING NO. 4408

Case No. BC 364553

WILLIS CLASS STIPULATION OF SETTLEMENT

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This Stipulation of Settlement (the "Stipulation" or "Agreement") is entered into this 13th day of July 2010 by and between California Water Service Company, City of Palmdale, Littlerock Creek Irrigation District, Los Angeles Waterworks District No. 40 ("District 40"), Palmdale Water District, Palm Ranch Irrigation District, Phelan Pinon Hills Community Services District, Quartz Hill Water District, and Rosamond Community Services District, Desert Lake Community Services District and North Edwards Water District (collectively, "Settling Defendants"), on the one hand, and Rebecca Lee Willis and the Willis Class (as more fully defined below), which consists of certain persons who own property(ies) that overly the Antelope Valley Groundwater Basin (the "Basin") on which they do not and have not pumped groundwater, on the other hand. Settling Defendants, Rebecca Lee Willis, and the Willis Class are collectively referred to as the "Settling Parties," or individually a "Settling Party." This Stipulation and the Exhibits hereto set forth the terms of a settlement (the "Settlement") between and among the Settling Parties compromising and dismissing the claims and defenses they have asserted in the above-captioned action. The Settlement is subject to approval by the Superior Court of California for Los Angeles County; in the event such approval is denied, cannot be obtained, or is reversed on appeal, this Stipulation shall have no further force or effect, and the Settling Parties shall be returned to their respective positions in the litigation prior to execution of this Stipulation.

I. THE SETTLING PARTIES

A. The Settling Plaintiffs are Rebecca Lee Willis and the members of the Willis Class, as defined in paragraph II, D below.

B. The Settling Defendants are as follows:

1. California Water Service Company is a California corporation which extracts groundwater from the Basin to serve customers within the Basin.

2. The City of Palmdale is a municipal corporation in the County of Los Angeles which receives water from the Basin.

3. Littlerock Creek Irrigation District is a public agency which produces groundwater from the Basin to serve customers within the Basin.

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4. Los Angeles County Waterworks District No. 40 ("District 40") is a public agency governed by the Los Angeles County Board of Supervisors. District 40 has been lawfully organized to perform various functions, including producing water from the Basin, which it provides to more than 65,000 residential and commercial customers in the Basin.

5. Palmdale Water District is an irrigation district organized and operating under Division 11 of the California Water Code, which produces groundwater from the Basin to serve customers within the Basin.

6. Palm Ranch Irrigation District is a public agency which produces groundwater from the Basin to serve customers within the Basin.

7. Rosamond Community Services District is a public agency which produces water from the Basin which it provides to customers within the Basin.

8. Quartz Hill Water District is a county water district organized and operating under Division 12 of the California Water Code. It produces water from the Basin.

9. Phelan Pinon Hills Community Services District is a public water supplier which produces water from the Basin.

10. Desert Lake Community Services District is a public agency which produces groundwater from the Basin.

11. North Edwards Water district is a public agency which produces groundwater from the Basin.

II. RECITALS

A. On or about November 29, 2004, District 40 commenced a civil action against Overlying Owners (more specifically defined in III. M) in the Basin, which is now pending in the Superior Court for Los Angeles County, seeking, inter alia, an adjudication of their respective rights to produce groundwater from the Basin. On or about July 11, 2005, that case was coordinated with several quiet title actions that had been brought by Basin landowners, which also sought a declaration of the parties' rights to produce and use the Basin's groundwater. Antelope Valley Groundwater Cases, No. 1-05-CV049053 (JCCP 4408) (hereinafter the "Coordinated Actions"). The Coordinated Actions are pending before the Honorable Jack Komar.

B. On or about October 10, 2006, the Court held an initial phase of trial with respect to the boundaries of the Basin. The Court issued an Order on November 3, 2006, defining the Basin for purposes of this litigation.

C. On or about January 11, 2007 Plaintiff, Rebecca Lee Willis ("Willis"), filed a class action complaint in the Superior Court of the State of California for Los Angeles County (No. BC 364553) (the "Willis Action") in which she alleged that certain Public Water Suppliers had wrongfully claimed prescriptive rights to the Basin's groundwater. Willis sought, inter alia, a declaration that the Settling Defendants had not obtained prescriptive rights as to her or Willis Class Members (more specifically defined in III.X). On or about April 10, 2007, the Willis Action was coordinated as part of the Coordinated Actions.

D. By Order dated September 11, 2007 (as amended by Orders dated May 22, 2008 and September 2, 2008), the Court certified Willis as the representative of a Class of certain Overlying Owners (more specifically defined in if III.M. below) pursuant to Section 382 of the California Code of Civil Procedure and Division 7, Chapter 6 of the Rules of Court.

E. In early January 2009, Notice of the Pendency of the Willis Action was sent by first class mail to all Willis Class Members (more specifically defined in III.X below) who could be identified with reasonable effort and a summary notice was published. The deadline for putative Willis Class Members to exclude themselves (as extended) expired on August 30, 2009. The Court has made various orders allowing certain parties to rejoin the Willis Class.

F. The Settling Parties have actively discussed potential settlement for much of this year. On or about September 2, 2009, the Settling Parties engaged in mediation before the Honorable Ronald Robie during the course of which counsel for most of the parties reached an agreement in principle to settle the Willis Action, subject to the negotiation of a final settlement agreement, client approvals, and approval by the Court.

G. On or about February 19, 2010, the Court entered an Order Transferring and Consolidating Actions for All Purposes (hereinafter the "Consolidated Actions").

H. Over the course of the last three years, the Settling Plaintiffs' counsel have conducted a thorough investigation of the facts and law relating to the matters at issue in the

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Consolidated Actions and have evaluated the merits of all Settling Parties' contentions and the impact this Settlement will have on the Willis Class Members. After evaluating the foregoing, the Settling Plaintiffs and counsel are satisfied that the terms and conditions of this Stipulation are fair, reasonable, and adequate, and that the Settlement is in the best interest of the Willis Class Members.

I. The Settling Defendants contend that they have prescriptive rights to substantially more than 15% of the Basin's Native Safe Yield. The Settling Plaintiffs contend that the Settling Defendants have no such prescriptive rights as to them. This Settlement reflects a compromise between the Settling Parties and shall not (1) be construed as an admission or concession by any Settling Party of the truth of any allegation or the validity of any claim or defense asserted in any of the pleadings, (2) be construed to prejudice the rights, claims, or defenses of any persons who are not Settling Parties, or (3) be construed to prejudice the rights, claims, or defenses (whether asserted or potential) of any Settling Party vis-à-vis any non-settling party.

J. The United States owns property within the Basin as to which it claims a Federal Reserved Right to produce groundwater.

III. DEFINITIONS

The following terms used in this Stipulation shall have the meanings set forth below:

A. "Assessments" means any monetary or other levy or charge imposed as part of a Physical Solution.

B. "Basin" means the Antelope Valley Groundwater Basin as defined in the Court's Order of November 3, 2006.

C. "Consolidated Actions" means all actions that have been or subsequently were coordinated as part of Judicial Council Coordination Proceeding No. 4408 and all actions that have been or subsequently were consolidated pursuant to the Court's Order from February 19, 2010.

D. "Correlative Rights" means the principle of California law, articulated in Katz v. Walkinshaw (1903) 141 Cal. 116 and subsequent cases, that Overlying Owners may make reasonable and beneficial use of the water in a Basin and that, if the supply of water is insufficient

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for all reasonable and beneficial needs, each Overlying Owner is entitled to a fair and just proportion of the water available to the Overlying Owners.

E. "Court" means the Honorable Jack Komar, sitting by designation as a Judge of the Superior Court of Los Angeles County or such other Judge as may be designated by the Judicial Conference to hear JCCP No. 4408.

F. "Effective Date" means the date on which the Court's Judgment granting final approval to the Settlement becomes final and not subject to further appeal.

G. "Federal Reserved Right" is the principle originally articulated in Winters v. United States (1908) 207 U.S. 564 and more recently in *Cappaert v. United States* (1976) 426 U.S. 128, which holds that when the Federal Government reserves land from the public domain, it impliedly reserves sufficient water to serve the purposes for which the lands were reserved, and the quantity of reserved water is limited to the amount necessary to fulfill the purposes of the reserved land. The United States contends that the Federal Reserved Right entitles the United States to a prior and paramount right to a portion of the Native Safe Yield.

H. "Federally Adjusted Native Safe Yield" for any given year means the Basin's Native Safe Yield less the actual annual production of the United States' during the prior year pursuant to its Federal Reserved Right.

I. "Final Judgment" means a final judgment to be entered by the Court in the above matter, which approves the terms and provisions of this Stipulation, and is substantially in the form attached hereto as Exhibit A.

J. "Imported Water" means water that enters the Basin and that originates outside the Basin that is not part of the Basin's Native Safe Yield, and that, absent human intervention, would not recharge or be used in the Basin. Imported Water does not include water purchased by the Watermaster with Replacement Assessments or bottled water.

K. "Native Safe Yield" means the amount of pumping, which under a given set of land use and other prevailing cultural conditions, generates Return Flows that, when combined with naturally occurring groundwater recharge to the Basin, results in no long-term depletion of

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Basin groundwater storage. Pumping of the Settling Parties' share of Native Safe Yield is not subject to any Replacement Assessment.

L. "Overlying Right" means the appurtenant right of an Overlying Owner to use groundwater from the Native Safe Yield for overlying reasonable and beneficial use.

M. "Overlying Owners" means owners of land overlying the Basin who hold an Overlying Right.

N. "Physical Solution" means a mechanism that comprehensively resolves the competing claims to the Basin's water and provides for the management of the Basin. The Settling Parties anticipate that this Settlement will later be incorporated into a Physical Solution.

O. "Preliminary Approval Order" means the Court's Order granting preliminary approval to the Settlement set forth herein, directing the manner in which notice of the Settlement shall be provided to the Willis Class, and scheduling a final Hearing for the Court to consider whether to approve the Settlement. The Settling Parties will submit a proposed Preliminary Approval Order in the form appended as Exhibit B hereto.

P. "Recycled Water" means 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 and is therefore considered a valuable resource..

Q. "Replacement Assessment" means the charge imposed on any Settling Party by the Watermaster for producing more water than it is entitled to produce from the Basin under the terms of this Settlement or pursuant to such further orders as the Court may enter in the Coordinated Actions.

R. "Replacement Water" means water purchased by the Watermaster to offset production in excess of a Settling Party's share of Total Safe Yield.

S. "Return Flows" means the amount of water that is put to reasonable and beneficial agricultural, municipal or other use and thereafter returns to the Basin and is part of the Basin's Total Safe Yield.

T. "Settlement" means this Stipulation, including the Exhibits appended hereto.

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U. "Total Safe Yield" means the amount of pumping, which under a given set of land use and other prevailing cultural conditions generates Return Flows that, when combined with naturally occurring groundwater recharge to the Basin and Return Flows derived from Imported Water, results in no long-term depletion of Basin groundwater storage.

V. "Transition Period" means the period of time provided for in the Physical Solution during which the parties' right to produce water from the Native Safe Yield free from Replacement Assessment will decrease to amounts that total no more than that party's share of Native Safe Yield.

W. "Watermaster" means the person or entity appointed by the Court to monitor and manage the Basin's groundwater, subject to oversight by the Court.

X. "Willis Class" or "Willis Class Members" means the Willis Class as defined in the Court's Order of September 11, 2007, as amended by the Court's Orders of May 22, 2008, and September 2, 2008, but shall exclude all persons who timely excluded themselves from the Willis Class and have not rejoined the Willis Class. The Willis Class consists of the following:

> "All private (i.e., non-governmental) persons and entities that own real property within the Basin, as adjudicated, that are not presently pumping water on their property and have not done so at any prior time ("the Class"). The Class includes the successors-in-interest by way of purchase, gift, inheritance, or otherwise of such landowners.
>
> The Class excludes the defendants herein, any person, firm, trust, corporation, or other entity in which any defendant has a controlling interest or which is related to or affiliated with any of the defendants, and the representatives, heirs, affiliates, successors-in-interest or assigns of any such excluded party. The Class also excludes all persons to the extent their properties are connected and receive service from a municipal water system, public utility, or mutual water company. The Class shall [further] exclude all property(ies) that are listed as `improved' by the Los Angeles County or Kern County Assesor's' office, unless the owners of such properties declare under penalty of perjury that they do not pump and have never pumped water on those properties."

IV. SETTLEMENT TERMS

In consideration of the covenants and agreements set forth herein, and of the releases and dismissals described below, the Settling Parties agree to settle and compromise the claims that have been asserted or that could have been asserted between and among the Willis Class and the

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Settling Defendants, subject to Court approval, on the following terms and conditions:

A. Native Safe Yield.

Settling Defendants and the United States contend that the best estimate of the Basin's Native Safe Yield is 82,300 acre-feet per year. The Willis Class agrees not to challenge or otherwise contest the Native Safe Yield proposed by the Settling Defendants as long as it is at least 82,300 acre-feet per year. The Settling Parties understand and agree that, in the absence of stipulation by all parties in the Coordinated Actions, the Court will decide the Basin's Native Safe Yield following trial, and the Settling Parties agree to be bound by the Court's determination in that regard even if some or all of them do not participate in such a trial.

B. Total Safe Yield.

The Settling Defendants contend that the best estimate of the Basin's Total Safe Yield is 110,500 acre-feet per year. The Willis Class agrees not to challenge or otherwise contest that estimate. The Settling Parties understand and agree that, in the absence of stipulation by all parties in the Coordinated Actions, the Court will decide the Basin's Total Safe Yield following trial, and the Settling Parties agree to be bound by the Court's determination in that regard even if some or all of them do not participate in such a trial.

C. Federal Reserved Right.

The United States contends that it is entitled to a Federal Reserved Right. The Settling Parties agree that the Federal Government has a Federal Reserved Right to use a portion of the Native Safe Yield. The Settling Parties agree that the Court will decide the amount of the Federal Reserved Right and they agree to be bound by the Court's determination.

D. Allocation Of Federally Adjusted Native Safe Yield.

The Settling Parties agree to be bound by the Court's determination of the amounts of the Basin's Native Safe Yield and the United States' Federal Reserved Right. The Basin's Federally Adjusted Native Safe Yield shall be the Basin's Native Safe Yield less the prior year's production of water by the United States (not to exceed the Federal Reserved Right). The Settling Parties agree that the Settling Defendants and the Willis Class Members each have rights to produce groundwater from the Basin's Federally Adjusted Native Safe Yield.

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1. Settling Defendants' Water Rights

Settling Defendants have asserted in the Coordinated Actions that they have obtained prescriptive rights to the Basin's Native Safe Yield. This Stipulation shall neither be construed to recognize prescriptive rights nor to limit the Settling Defendants' prescriptive claims vis-a-vis the Basin or any non-settling parties, but rather as an agreement to fairly allocate the Settling Parties' respective rights to use the Basin's water. The Settling Parties agree that the Settling Defendants collectively have the right to produce up to 15% of the Basin's Federally Adjusted Native Safe Yield free of any Replacement Assessment. The Willis Class will not take any positions or enter into any agreements that are inconsistent with the exercise of the Settling Defendants' rights.

2. Willis Class Members' Pumping Rights

The Settling Parties agree that the Willis Class Members have an Overlying Right to a correlative share of 85% of the Federally Adjusted Native Safe Yield for reasonable and beneficial uses on their overlying land free of any Replacement Assessment. The Settling Defendants will not take any positions or enter into any agreements that are inconsistent with the exercise of the Willis Class Members' Overlying Right to produce and use their correlative share of 85% of the Basin's Federally Adjusted Native Safe Yield.

a. Safe Harbor.

The Willis Class Members acknowledge that the Settling Defendants may at trial prove prescriptive rights against all groundwater pumping in the Basin during a prior prescriptive period. If the Settling Defendants do prove prescriptive rights, Settling Defendants shall not exercise their prescriptive rights to diminish the Willis Class Members' Overlying Right below a correlative share of 85% of the Basin's Federally Adjusted Native Safe Yield. If the Settling Defendants fail to prove any prescriptive rights, this Agreement shall not diminish at all the rights of Willis Class Members to make reasonable and beneficial use of a correlative share of the Basin's Federally Adjusted Native Safe Yield. In no event shall this Agreement require the Willis Class Members to give to the Settling Defendants more than 15% of any rights to use the Basin's groundwater that they may obtain by way of settlement or judgment. If there is a subsequent Court decision whereby the Court determines that the Willis Class Members do not

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have Overlying Rights, this Agreement shall not require Settling Defendants to give the Willis Class Members any right to pump from the Native Safe Yield.

3. Correlative Rights Of Overlying Landowners

The Willis Class Members recognize that other Overlying Owners may have the right to pump correlatively with them 85% of the Federally Adjusted Native Safe Yield of the Basin for reasonable and beneficial uses on their overlying land.

4. Return Flows From Imported Water

a. The Settling Parties acknowledge and agree that they all have the right to recapture Return Flows from Imported Water that they put to reasonable and beneficial use in the Basin, consistent with California law. The Settling Parties will not be subject to any Replacement Assessment for their production of an amount equal to the Return Flows from Imported Water that they put to reasonable and beneficial use in the Basin.

b. Settling Defendants believe that the best estimates of Return Flows from Imported Water are (a) 25% of the water used for agricultural purposes and (b) 28% of the water used for municipal and industrial purposes. Settling Defendants further believe that the best estimate of total annual Return Flows from Imported Water is 28,200 acre-feet of which 25,100 acre-feet is from municipal and industrial use and 3,100 acre-feet is from agricultural use. The Willis Class agrees not to contest those estimates, and all Settling Parties agree to be bound by any findings that may later be made by the Court with respect thereto.

V. MANAGEMENT OF THE BASIN

A. General

The Settling Parties agree that the Basin has limited water resources and that they should use their best efforts to conserve and maximize reasonable and beneficial use. The Settling Parties further agree that there is a need to create a groundwater management plan to ensure that pumping from the Basin does not exceed the Basin's Total Safe Yield and that the Court should appoint a Watermaster to oversee the management of the Basin's water resources.

B. Physical Solution

The Settling Parties expect and intend that this Stipulation will become part of a Physical

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Solution entered by the Court to manage the Basin and that the Court will retain jurisdiction in the Coordinated Actions. The Settling Parties agree to be part of such a Physical Solution to the extent it is consistent with the terms of this Stipulation and to be subject to Court-administered rules and regulations consistent with California and Federal law and the terms of this Stipulation. The Settling Parties agree that the Physical Solution may require installation of a meter on any groundwater pump by a Willis Class Member before a Willis Class Member may produce groundwater. The responsibility for the cost of such meters will be determined by the Court.

C. Transition Period.

The Settling Parties agree that net groundwater production from the Basin needs to be reduced over a period of time from current levels to no more than the Basin's Total Safe Yield. This can be accomplished by reducing pumping and/or purchasing Replacement Water. The Settling Parties agree that the Transition Period should begin at the date of entry of Final Judgment in the Coordinated Actions and should last seven years. During the first two years of the Transition Period no effort will be made to curtail groundwater pumping and no Replacement Assessments will be made. By the end of the seventh year of the Transition Period, groundwater pumping from the Basin without Replacement Assessment for Replacement Water will not exceed the Native Safe Yield.

D. Replacement Water.

The Settling Parties recognize the right of any Settling Party to produce groundwater from the Basin above their share of the Native Safe Yield, subject to the Physical Solution and to any Replacement Assessment. The Settling Parties agree to provide or purchase Imported Water for all groundwater pumping that exceeds a Settling Party's share of the Federally Adjusted Native Safe Yield. The Settling Parties agree that any Settling Party who produces more than its annual share of the Federally Adjusted Native Safe Yield in any year will be responsible to provide Replacement Water or pay a Replacement Assessment to the Watermaster so that the Watermaster can purchase Imported Water to recharge the Basin.

E. Water Storage

The Settling Parties agree that water storage in the Basin offers significant benefits and

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should be encouraged. The Settling Parties further recognize that there is a limit on the Basin's available storage space and that the storage of water for uses within the Basin should have priority over storage for use outside the Basin. Subject to those general principles, the Settling Parties agree that water storage should be permitted and encouraged and agree to support appropriate provisions in the Physical Solution.

F. Recycled Water

The Settling Parties agree that it is important to encourage the treatment and use of Recycled Water. The Willis Class agrees not to challenge or otherwise contest Settling Defendants' claims to Return Flows from Recycled Water that was reclaimed by the Sanitation Districts of Los Angeles County.

VI. PROCEDURES FOR CLASS NOTICE AND HEARING ON MOTIONS FOR PRELIMINARY AND FINAL APPROVAL OF STIPULATION

A. Preliminary Approval Motion and Settlement Notice.

Settling Plaintiffs shall file a motion for preliminary approval ("Preliminary Approval Motion") of the terms of the Settlement as soon as practicable following execution of this Stipulation by all Settling Parties. The Preliminary Approval Motion will seek entry of an Order Preliminarily Approving Class Action Settlement. The Preliminary Approval Motion shall include a proposed form of notice describing this Stipulation (the "Settlement Notice") to be disseminated to the Willis Class as well as a description of the procedures to be used in disseminating the Settlement Notice. The Settlement Notice shall be disseminated to all Willis Class Members by or under the supervision of counsel for District 40, with the expenses to be borne by District 40. The Settling Parties will attempt to agree upon the language for the Settlement Notice, but agree to be bound by the Court's determination in the event they have any disputes or disagreements in that regard. The Settling Parties agree to use their best efforts to have the Preliminary Approval Motion heard as promptly as is practical.

B. Final Approval Hearing.

The Settlement Notice will advise Willis Class Members of the date and time set for a Hearing on the Settling Plaintiffs' Motion for Final Approval of the Stipulation, including

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RIVERSIDE, CA 92502

advising them of their rights to submit statements in support of or opposition to the Stipulation. The Final Approval Motion shall request that this Court find that the Stipulation and Proposed Final Judgment are fair, reasonable, and adequate to the Willis Class and shall seek entry of a Final Judgment substantially in the form attached hereto as Exhibit A.

VII. RELEASES AND DISMISSALS

A. Release By Settling Plaintiffs

1. In addition to the effect of any Final Judgment entered in accordance with this Stipulation, upon this Stipulation becoming final as set out in Section VIII, Paragraph G of this Stipulation, and in consideration for the settlement consideration set forth above, and for other valuable consideration, the Settling Plaintiffs shall completely release, acquit and forever discharge the Settling Defendants from any and all claims, demands, actions, suits, causes of action, whether class, individual, or otherwise in nature that Settling Plaintiffs, or each of them, ever had, now has, or hereafter can, shall, or may have on account of or in any way arising out of, any and all known or unknown, foreseen or unforeseen, suspected or unsuspected injuries, damages, and the consequences thereof in any way arising out of or relating in any way to the matters at issue in the Willis Action ("Released Claims"). Each Settling Plaintiff may hereafter discover facts other than or different from those which he, she, or it knows or believes to be true with respect to the claims which are the subject matter of this Stipulation, but each Settling Plaintiff hereby expressly waives and fully, finally, and forever, settles and releases, upon this Stipulation becoming final, any known or unknown, suspected or unsuspected, contingent or non-contingent claim with respect to the subject matter of the Stipulation, whether or not concealed or hidden, without regard to the subsequent discovery or existence of such different or additional facts. As provided in the Release set forth above, the Settling Plaintiffs, including any of Settling Plaintiffs' representatives, successors, agents, affiliates, employees, supervisors, officers, directors, or shareholders, agree to waive and release all rights and benefits which they might otherwise have pursuant to Section 1542 of the California Civil Code with regard to the release of such unknown, unanticipated or misunderstood claims, causes of action, liabilities, indebtedness and obligations.

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2. The Release set forth in Paragraph VII.A, above, does not include claims by any of the Settling Plaintiffs other than the claims set forth therein. In particular, the Settling Parties recognize that many persons own more than one parcel of land within the Basin. The foregoing Release only binds Willis Class Members and only with respect to those properties within the Basin on which they have not pumped water.

B. Release By Settling Defendants

In addition to the effect of any Final Judgment entered in accordance with this Stipulation, upon this Stipulation becoming final as set out in Paragraph VIII.G of this Stipulation, and in consideration of the settlement consideration set forth above, and for other valuable consideration, the Settling Defendants completely release, acquit and forever discharge Settling Plaintiffs and the Willis Class Members from any and all claims, demands, actions, suits, causes of action, whether class, individual, or otherwise in nature that Settling Defendants, or any of them, ever had, now has, or hereafter can, shall, or may have arising from or relating in any way to the matters at issue in the Willis Action ("Released Claims"). Each Settling Defendant may hereafter discover facts other than or different from those which he, she, or it knows or believes to be true with respect to the claims which are the subject matter of this Stipulation, but each Settling Defendant hereby waives any right to relief from the provisions of this Stipulation in such event, and fully, finally, and forever, settles and releases, upon this Stipulation becoming final, any known or unknown, suspected or unsuspected, contingent or non-contingent claim with respect to the subject matter of the Stipulation, whether or not concealed or hidden, and without regard to the subsequent discovery or existence of such different or additional facts.

1. As provided in the Release set forth in Paragraph VII.B, above, the Settling Defendants, including any of Settling Defendants' representatives, successors, agents, affiliates, employees, supervisors, officers, directors, or shareholders, agree to waive and release all rights and benefits which they might otherwise have pursuant to Section 1542 of the California Civil Code with regard to the release of such unknown, unanticipated or misunderstood claims, causes of action, liabilities, indebtedness and obligations.

VIII. MISCELLANEOUS PROVISIONS

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A. No Concession By Any Settling Party

It is understood and agreed that this Stipulation represents the compromise of disputed positions with respect to the relevant facts and law. This Stipulation shall not be deemed a concession by any Settling Party as to any fact or the validity or invalidity of any claim or defense.

B. Best Efforts and Mutual Cooperation.

Settling Plaintiffs and Settling Defendants shall use their best efforts to effectuate this Stipulation and its purpose, and secure the prompt, complete, and final dismissal with prejudice of the Willis Action. The Settling Parties agree to take any and all reasonable steps that may be necessary in that regard, as long as those steps do not require any material deviations from the terms of this Stipulation or impose material new obligations beyond those contemplated by this Stipulation.

The Settling Parties recognize that not all parties to the Coordinated Actions have entered into this Stipulation and that a trial may be necessary as against non-settling parties. The Settling Parties agree to cooperate and coordinate their efforts in any such trial or hearing so as to obtain entry of judgment consistent with the terms of this Stipulation; this provision, however, will not require Willis Class counsel to participate in any such trial or render any efforts absent written agreement of Settling Defendants to compensate them for such efforts. Nor shall this Stipulation preclude Settling Plaintiffs from participating in any further proceedings that may affect their rights.

C. Adjustments Of Settling Parties' Estimates

In the event that the Court enters findings of fact that vary from the estimated amounts that the Settling Parties have agreed to for purposes of this Stipulation (including the length of the Transition Period described in Paragraph V.C.), the Court's findings will be determinative and will supplant the amounts set forth in this Stipulation. For example, if the Court should determine following trial that the Basin's Total Safe Yield is, in fact, 120,000 acre-feet per year (or some other amount), the Court's findings will control.

D. Fees And Costs Of Settling Plaintiff's Counsel

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The Settling Parties understand that Willis Class counsel intend to seek an award of their fees and costs from the Court. Any such awards will be determined by the Court unless agreed to by the Settling Parties. Settling Defendants will likely oppose the motion for fees and costs. If Willis Class Counsel obtain an award of fees, Settling Defendants agree to exercise their best efforts to pay any fee award within a reasonable period of time or as required pursuant to Court order. Willis Class Counsel agree that they will not seek any attorneys' fees and/or costs from Settling Defendants for any efforts Willis Class Counsel undertake after the Court's entry of Final Judgment approving the Settlement, except with respect to the following: (a) any reasonable and appropriate efforts by Willis Class Counsel to enforce the terms of this Stipulation against Settling Defendants in the event Settling Defendants fail to comply with a provision of this Stipulation; (b) any reasonable and appropriate efforts by Willis Class Counsel to defend against any new or additional claims or causes of action asserted by Settling Defendants against the Willis Class in pleadings or motions filed in the Consolidated Actions; (c) any reasonable and appropriate efforts by Willis Class Counsel that are undertaken in response to a written Court order stating that, pursuant to this provision, Class counsel may seek additional fees for specified efforts from Settling Defendants pursuant to Code of Civil Procedure section 1021.5; (d) any reasonable and appropriate efforts by Willis Class Counsel that are undertaken in response to a written request by Settling Defendants executed by counsel for all Settling Defendants that Class Counsel participate in future aspects of the Consolidated Actions (e.g., the negotiation of a Physical Solution); or (e) any reasonable and appropriate efforts that Willis Class Counsel render to defend a fee award in their favor in the event the Settling Defendants appeal such a fee award and the Court of Appeal affirms the fee award in the amount of 75 percent or more of the fees awarded by the Superior Court. Willis Class Counsel remain free to seek an award of fees from other parties to the litigation.

E. Retention Of Jurisdiction

The Superior Court of the State of California for Los Angeles County shall retain jurisdiction over the implementation, enforcement, and performance of this Stipulation, and shall have exclusive jurisdiction over any suit, action, proceeding, or dispute arising out of or relating

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to this Stipulation or the applicability of this Stipulation.

F. Choice Of Law

This Stipulation shall be governed and construed by the substantive laws of the State of California.

G. Finality

a. This Stipulation shall be effective on the Effective Date, which shall occur when the Court has entered a Final Judgment approving this Stipulation and one of the following events occurs; (i) if an appeal is taken, the date of final affirmance of the Final Judgment, or if petition for review is granted by California Supreme Court or writ of certiorari is granted by United States Supreme Court, the date of final affirmance of the Final Judgment following review pursuant to such grant; or (ii) the date of final dismissal of any appeal from Final Judgment or the final dismissal of any proceedings on petition to review the Final Judgment; or (iii) if no appeal is filed, the expiration date of the time for filing or noticing of any appeal from the Final Judgment, i.e., sixty (60) days after notice of entry of the Final Judgment.

b. In the event that the Court refuses to approve this Stipulation, or any material part hereof, or if such approval is materially modified or set aside on appeal, or if the Final Judgment is not entered in accordance with this Stipulation, appellate review is sought, and on such review, such Final Judgment is not affirmed as to all material parts, then any of the Settling Parties to the Stipulation have the option to rescind this Stipulation in its entirety. Written notice of the exercise of any such right to rescind shall be made according to the terms of this Paragraph VIII.L below within thirty (30) days of the triggering event.

H. Integrated Agreement

This Stipulation constitutes the entire, complete and integrated agreement among the Settling Parties, and supersedes all prior or contemporaneous undertakings of the Settling Parties in connection herewith. This Stipulation may not be modified or amended except in writing executed by the Settling Parties and approved by the Court. It shall be construed and interpreted to effectuate the intent of the Settling Parties which is to provide, through this Stipulation, for a complete resolution of the relevant claims between the Settling Parties on the terms provided in

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this Stipulation. Notwithstanding the foregoing, the Settling Parties intend and agree that this Stipulation will later be incorporated into a Physical Solution, as defined above, which is consistent with the terms of this Stipulation.

I. Waiver

The waiver by any Settling Party of its rights under any provision of this Stipulation or of any breach of this Stipulation shall not be deemed a waiver of any other provision or subsequent breach of this Stipulation.

J. Intended Beneficiaries

This Stipulation shall be binding upon, and inure to the benefit of, the heirs, successors and assigns of the Settling Plaintiffs and Settling Defendants. Without limiting the generality of the foregoing, this Stipulation shall bind each and every subsequent property owner who acquires property in the Basin from a Willis Class Member as well as persons who subsequently acquire such properties.

K. Interpretation and Construction

The terms of this Stipulation have been arrived at by negotiation and mutual agreement, with consideration of and participation by all Settling Parties and with the advice of counsel. Neither Settling Plaintiffs nor Settling Defendants shall be considered to be the drafter of this Stipulation or any of its provisions for the purpose of any statute, case law, or rule of interpretation or construction that would or might cause any provision to be construed against the drafter of this Stipulation (including but not limited to Civil Code Section 1654). The descriptive headings of any paragraphs or sections of this Stipulation are inserted for convenience only and do not constitute a part of this Stipulation.

L. Notices

Where this Stipulation requires either party to provide notice or any other communication or document to the other, such notice shall be in writing, and such notice, communication, or document shall be provided by personal delivery, facsimile transmission, overnight delivery, or letter sent by United States mail with delivery confirmation. Notice may be provided to the Settling Parties through their counsel of record at the following addresses:

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P.O. BOX 1028
RIVERSIDE, CA 92502

California Water Service Company:	Attn: President California Water Service Company 1720 North First Street San Jose, California 95112
with a copy to:	John Tootle California Water Service Company 2632 West 237th Street Torrance, California 90505
City of Palmdale:	Attn: City Manager 38300 Sierra Highway Palmdale, California 93550
with a copy to:	James Markman Richards, Watson & Gerson 355 South Grand Avenue, 40th Floor Los Angeles, California 90071
Littlerock Creek Irrigation District:	Attn: General Manager 35141 87th Street East Littlerock, California 93543
with a copy to:	Wayne Lemieux Lemieux & O'Neill 2393 Townsgate Rd., Suite 201 Westlake Village, California 91361
Los Angeles County Waterworks District No. 40:	Attn: Director 260 East Avenue K-8 Lancaster, California 93535
with a copy to:	Michael Moore Los Angeles county Counsel Office 648 Kenneth Hahn Hall of Administration 500 West Temple Street Los Angeles, California 90012
with a copy to:	Eric L. Garner

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RIVERSIDE, CA 92502

	Best Best & Krieger LLP 3750 University Avenue P.O.B 1028 Riverside, California 92502
Palmdale Water District:	Attn: General Manager 2029 E. Avenue Q Palmdale, California 93550
with a copy to:	Thomas Bunn III Lagerlof, Senecal, Gosney & Kruse, LLP 301 North Lake Avenue, 10th floor Pasadena, California 91101-4108
Palm Ranch Irrigation District:	Attn: General Manger 4871 West Avenue M. (Colombia Way) Quartz Hill, California 93536
with copy to:	Wayne Lemieux Lemieux & O'Neill 2393 Townsgate Rd., Suite 201 Westlake Village, California 91361
Quartz Hill Water District:	Attn: General Manager 42141 N. 50th Street West Quartz Hill, California 93536
with copy to:	Bradley Weeks Charlton Weeks LLP 107 West Avenue M-14, Suite A Palmdale, California 93551
Phelan Pinon Hills Community Services District:	Attn: General Manager 4037 Phelan Road, Suite C-1 Phelan, California 92371
with copy to:	Francis Logan Law Office of Susan Trager 19712 MacArthur Blvd. #120 Irvine, California 92612
Rosamond Community Services District:	Attn: General Manager

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P.O. BOX 1028
RIVERSIDE, CA 92502

	3179 35th Street W Rosamond California 93560
with a copy to:	Eric L. Garner Best Best & Krieger LLP 3750 University Avenue P.O.Box 1028 Riverside, California 92502
Willis Class:	Rebecca Lee Willis
With a copy to:	Ralph Kalfayan Krause Kalfayan Benink & Slavens LLP 625 Broadway, Ste. 635 San Diego, CA 92101

or to such other address as any Settling Party shall, from time to time, specify in the manner provided herein.

M. No Admissions

Neither this Stipulation, nor any act performed or document executed pursuant to or in furtherance of this Stipulation is or may be deemed to be or may be used as an admission of, or evidence of, (i) the validity of any claim or defense; or (ii) the appropriateness or inappropriateness of any Willis Class Member or other representational capacity, whether contemporaneously with this Stipulation or at any time in the future.

N. Execution

This Stipulation may be executed in counterparts by Settling Plaintiffs and Settling Defendants, and a facsimile signature shall be deemed an original signature for purposes of executing this Stipulation. Each of the undersigned persons represents that he or she is fully authorized to enter into the terms and conditions of and to execute this Stipulation by the party for which he or she has signed the Stipulation.

IN WITNESS HEREOF, the undersigned being duly authorized, have executed this Stipulation on the dates shown below.

Rebecca Lee Willis

Approved as to form by: Ralph Kalfayan

LAW OFFICES OF
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P.O. BOX 1028
RIVERSIDE, CA 92502

By: Rebecca Lee Willis

By: Keene Kaffaga

California Water Service

Approved as to form by: John Tootle

By: _____

By: _____

City of Palmdale

Approved as to form by: James Markman

By: _____

By: _____

Littlerock Creek Irrigation District

Approved as to form by: Wayne Lemieux

By: _____

By: _____

Los Angeles County Waterworks District No. 40

Approved as to form by:
Andrea Sheridan Ordin, County Counsel

By: _____
Chair, Board of Supervisors

By: _____
Warren R. Wellen, Principal Deputy County Counsel

Approved as to form by: Eric L. Garner

By: _____

Attest:
Sachi A. Hamai,
Executive Officer-Clerk Of the Board of Supervisors

By: LaChelle Smitherman
DEPUTY

Palmdale Water District

Approved as to form by: Tom Bunn

By: _____

By: _____

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P.O. BOX 1028
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By: _____

California Water Service

By: _____

City of Palmdale

By: James J. Markman

Littlerock Creek Irrigation District

By: _____

Los Angeles County Waterworks District No. 40

By: _____
Chair, Board of Supervisors

Attest:
Sachi A. Hamai,
Executive Officer-Clerk Of the Board of Supervisors

By: _____

Palmdale Water District

By: _____

By: _____

Approved as to form by: John Tootle

By: _____

Approved as to form by: James Markman

By: James D. Markman

Approved as to form by: Wayne Lemieux

By: _____

Approved as to form by:
Andrea Sheridan Ordin, County Counsel

By: _____
Warren R. Wellen, Principal Deputy County Counsel

Approved as to form by: Eric L. Garner

By: _____

Approved as to form by: Tom Bunn

By: _____

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By: _____

California Water Service

By: _____

City of Palmdale

By: _____

Littlerock Creek Irrigation District

By: BJ Bones

Los Angeles County Waterworks District No. 40

By: _____
Chair, Board of Supervisors

Attest:
Sachi A. Hamai,
Executive Officer-Clerk Of the Board of Supervisors

By: _____

Palmdale Water District

By: _____

By: _____

Approved as to form by: John Tootle

By: _____

Approved as to form by: James Markman

By: _____

Approved as to form by: Wayne Lemieux

By: _____

Approved as to form by:
Andrea Sheridan Ordin, County Counsel

By: _____
Warren R. Wellen, Principal Deputy
County Counsel

Approved as to form by: Eric L. Garner

By: _____

Approved as to form by: Tom Bunn

By: _____

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By: _____

California Water Service

By: _____

City of Palmdale

By: _____

Littlerock Creek Irrigation District

By: _____

Los Angeles County Waterworks District No. 40

By: _____
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Attest:
Sachi A. Hamai,
Executive Officer-Clerk Of the Board of Supervisors

By: LaChelle Smitherman
DEPUTY

Palmdale Water District

By: Dennis LaMoreaux

By: _____

Approved as to form by: John Tootle

By: _____

Approved as to form by: James Markman

By: _____

Approved as to form by: Wayne Lemieux

By: _____

Approved as to form by:
Andrea Sheridan Ordin, County Counsel

By: _____
Warren R. Wellen, Principal Deputy County Counsel

Approved as to form by: Eric L. Garner

By: _____

Approved as to form by: Tom Bunn

By: Thomas S. Bunn III

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Palm Ranch Irrigation District

By: _____

Approved as to form by: Wayne Lemieux

By: _____

Phelan Pinon Hills Community Services District

By: _____

Approved as to form by: Francis Logan

By: _____

Quartz Hill Water District

By: _____

Approved as to form by; Brad Weeks

By: _____

Rosamond Community Services Districts

By: _____

Approved as to form by: Eric L. Garner

By: _____

Desert Lake Community Services District

By: _____

Approved as to form by: Wayne Lemieux

By: _____

North Edwards Water District

By: _____

Approved as to form by: Wayne Lemieux

By: _____

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Rosamond Community Services Districts

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By: _____

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Rosamond Community Services Districts

By: _____

Approved as to form by: Eric L. Garner

By: _____

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By: _____

Quartz Hill Water District

By: _____

Approved as to form by: Brad Weeks

By: _____

Rosamond Community Services Districts

By: _____

Approved as to form by: Eric L. Garner

By: _____

Desert Lake Community Services District

By: Nelli A. Kostopoulos

Approved as to form by: Wayne Lemieux

By: Wayne Lemieux

North Edwards Water District

By: _____

Approved as to form by: Wayne Lemieux

By: Wayne Lemieux

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Palm Ranch Irrigation District

By: _____

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By: _____

Phelan Pinon Hills Community Services District

By: _____

Approved as to form by: Francis Logan

By: _____

Quartz Hill Water District

By: _____

Approved as to form by: Brad Weeks

By: _____

Rosamond Community Services Districts

By: _____

Approved as to form by: Eric L. Garner

By: _____

Desert Lake Community Services District

By: _____

Approved as to form by: Wayne Lemieux

By: _____

North Edwards Water District

By: Nellie D. Kostopoulos

Approved as to form by: Wayne Lemieux

By: Wayne Lemieux

RALPH B. KALFAYAN, Bar No. 133464
DAVID B. ZLOTNICK, Bar No. 195607
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Jeffrey.Dunn@bbklaw.com
BEST BEST & KRIEGER LLP
3750 University Avenue, Suite 400
P.O. Box 1028
Riverside, California 92502
Telephone: (951) 686-1450
Facsimile: (951) 686-3083
Attorneys for Defendant

(ADDITIONAL COUNSEL ARE LISTED ON SIGNATURE PAGES)

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RIVERSIDE, CA 92502

Superior Court of the State of California

County of Los Angeles

ANTELOPE VALLEY GROUNDWATER CASES This Pleading Relates to Included Action: REBECCA LEE WILLIS, on behalf of herself and all others similarly situated, Plaintiff, v. LOS ANGELES COUNTY WATERWORKS DISTRICT NO. 40; CITY OF LANCASTER; CITY OF LOS ANGELES; CITY OF PALMDALE; PALMDALE WATER DISTRICT; LITTLEROCK CREEK IRRIGATION DISTRICT; PALM RANCH IRRIGATION DISTRICT; PALM RANCH IRRIGATION DISTRICT; QUARTZ HILL WATER DISTRICT; ANTELOPE VALLEY WATER CO.; ROSAMOND COMMUNITY SERVICES DISTRICT; and DOES 1 through 1,000; Defendants.	JUDICIAL COUNCIL COORDINATION PROCEEDING NO. 4408 Case No. BC 364553 **WILLIS CLASS STIPULATION OF SETTLEMENT**

This Stipulation of Settlement (the "Stipulation" or "Agreement") is entered into this 13th day of July 2010 by and between California Water Service Company, City of Palmdale, Littlerock Creek Irrigation District, Los Angeles Waterworks District No. 40 ("District 40"), Palmdale Water District, Palm Ranch Irrigation District, Phelan Pinon Hills Community Services District, Quartz Hill Water District, and Rosamond Community Services District, Desert Lake Community Services District and North Edwards Water District (collectively, "Settling Defendants"), on the one hand, and Rebecca Lee Willis and the Willis Class (as more fully defined below), which consists of certain persons who own property(ies) that overly the Antelope Valley Groundwater Basin (the "Basin") on which they do not and have not pumped groundwater, on the other hand. Settling Defendants, Rebecca Lee Willis, and the Willis Class are collectively referred to as the "Settling Parties," or individually a "Settling Party." This Stipulation and the Exhibits hereto set forth the terms of a settlement (the "Settlement") between and among the Settling Parties compromising and dismissing the claims and defenses they have asserted in the above-captioned action. The Settlement is subject to approval by the Superior Court of California for Los Angeles County; in the event such approval is denied, cannot be obtained, or is reversed on appeal, this Stipulation shall have no further force or effect, and the Settling Parties shall be returned to their respective positions in the litigation prior to execution of this Stipulation.

I. THE SETTLING PARTIES

A. The Settling Plaintiffs are Rebecca Lee Willis and the members of the Willis Class, as defined in paragraph II, D below.

B. The Settling Defendants are as follows:

1. California Water Service Company is a California corporation which extracts groundwater from the Basin to serve customers within the Basin.

2. The City of Palmdale is a municipal corporation in the County of Los Angeles which receives water from the Basin.

3. Littlerock Creek Irrigation District is a public agency which produces groundwater from the Basin to serve customers within the Basin.

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4. Los Angeles County Waterworks District No. 40 ("District 40") is a public agency governed by the Los Angeles County Board of Supervisors. District 40 has been lawfully organized to perform various functions, including producing water from the Basin, which it provides to more than 65,000 residential and commercial customers in the Basin.

5. Palmdale Water District is an irrigation district organized and operating under Division 11 of the California Water Code, which produces groundwater from the Basin to serve customers within the Basin.

6. Palm Ranch Irrigation District is a public agency which produces groundwater from the Basin to serve customers within the Basin.

7. Rosamond Community Services District is a public agency which produces water from the Basin which it provides to customers within the Basin.

8. Quartz Hill Water District is a county water district organized and operating under Division 12 of the California Water Code. It produces water from the Basin.

9. Phelan Pinon Hills Community Services District is a public water supplier which produces water from the Basin.

10. Desert Lake Community Services District is a public agency which produces groundwater from the Basin.

11. North Edwards Water district is a public agency which produces groundwater from the Basin.

II. RECITALS

A. On or about November 29, 2004, District 40 commenced a civil action against Overlying Owners (more specifically defined in III. M) in the Basin, which is now pending in the Superior Court for Los Angeles County, seeking, inter alia, an adjudication of their respective rights to produce groundwater from the Basin. On or about July 11, 2005, that case was coordinated with several quiet title actions that had been brought by Basin landowners, which also sought a declaration of the parties' rights to produce and use the Basin's groundwater. Antelope Valley Groundwater Cases, No. 1-05-CV049053 (JCCP 4408) (hereinafter the "Coordinated Actions"). The Coordinated Actions are pending before the Honorable Jack Komar.

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B. On or about October 10, 2006, the Court held an initial phase of trial with respect to the boundaries of the Basin. The Court issued an Order on November 3, 2006, defining the Basin for purposes of this litigation.

C. On or about January 11, 2007 Plaintiff, Rebecca Lee Willis ("Willis"), filed a class action complaint in the Superior Court of the State of California for Los Angeles County (No. BC 364553) (the "Willis Action") in which she alleged that certain Public Water Suppliers had wrongfully claimed prescriptive rights to the Basin's groundwater. Willis sought, inter alia, a declaration that the Settling Defendants had not obtained prescriptive rights as to her or Willis Class Members (more specifically defined in III.X). On or about April 10, 2007, the Willis Action was coordinated as part of the Coordinated Actions.

D. By Order dated September 11, 2007 (as amended by Orders dated May 22, 2008 and September 2, 2008), the Court certified Willis as the representative of a Class of certain Overlying Owners (more specifically defined in if III.M. below) pursuant to Section 382 of the California Code of Civil Procedure and Division 7, Chapter 6 of the Rules of Court.

E. In early January 2009, Notice of the Pendency of the Willis Action was sent by first class mail to all Willis Class Members (more specifically defined in III.X below) who could be identified with reasonable effort and a summary notice was published. The deadline for putative Willis Class Members to exclude themselves (as extended) expired on August 30, 2009. The Court has made various orders allowing certain parties to rejoin the Willis Class.

F. The Settling Parties have actively discussed potential settlement for much of this year. On or about September 2, 2009, the Settling Parties engaged in mediation before the Honorable Ronald Robie during the course of which counsel for most of the parties reached an agreement in principle to settle the Willis Action, subject to the negotiation of a final settlement agreement, client approvals, and approval by the Court.

G. On or about February 19, 2010, the Court entered an Order Transferring and Consolidating Actions for All Purposes (hereinafter the "Consolidated Actions").

H. Over the course of the last three years, the Settling Plaintiffs' counsel have conducted a thorough investigation of the facts and law relating to the matters at issue in the

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Consolidated Actions and have evaluated the merits of all Settling Parties' contentions and the impact this Settlement will have on the Willis Class Members. After evaluating the foregoing, the Settling Plaintiffs and counsel are satisfied that the terms and conditions of this Stipulation are fair, reasonable, and adequate, and that the Settlement is in the best interest of the Willis Class Members.

I. The Settling Defendants contend that they have prescriptive rights to substantially more than 15% of the Basin's Native Safe Yield. The Settling Plaintiffs contend that the Settling Defendants have no such prescriptive rights as to them. This Settlement reflects a compromise between the Settling Parties and shall not (1) be construed as an admission or concession by any Settling Party of the truth of any allegation or the validity of any claim or defense asserted in any of the pleadings, (2) be construed to prejudice the rights, claims, or defenses of any persons who are not Settling Parties, or (3) be construed to prejudice the rights, claims, or defenses (whether asserted or potential) of any Settling Party vis-à-vis any non-settling party.

J. The United States owns property within the Basin as to which it claims a Federal Reserved Right to produce groundwater.

III. DEFINITIONS

The following terms used in this Stipulation shall have the meanings set forth below:

A. "Assessments" means any monetary or other levy or charge imposed as part of a Physical Solution.

B. "Basin" means the Antelope Valley Groundwater Basin as defined in the Court's Order of November 3, 2006.

C. "Consolidated Actions" means all actions that have been or subsequently were coordinated as part of Judicial Council Coordination Proceeding No. 4408 and all actions that have been or subsequently were consolidated pursuant to the Court's Order from February 19, 2010.

D. "Correlative Rights" means the principle of California law, articulated in Katz v. Walkinshaw (1903) 141 Cal. 116 and subsequent cases, that Overlying Owners may make reasonable and beneficial use of the water in a Basin and that, if the supply of water is insufficient

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for all reasonable and beneficial needs, each Overlying Owner is entitled to a fair and just proportion of the water available to the Overlying Owners.

E. "Court" means the Honorable Jack Komar, sitting by designation as a Judge of the Superior Court of Los Angeles County or such other Judge as may be designated by the Judicial Conference to hear JCCP No. 4408.

F. "Effective Date" means the date on which the Court's Judgment granting final approval to the Settlement becomes final and not subject to further appeal.

G. "Federal Reserved Right" is the principle originally articulated in Winters v. United States (1908) 207 U.S. 564 and more recently in *Cappaert v. United States* (1976) 426 U.S. 128, which holds that when the Federal Government reserves land from the public domain, it impliedly reserves sufficient water to serve the purposes for which the lands were reserved, and the quantity of reserved water is limited to the amount necessary to fulfill the purposes of the reserved land. The United States contends that the Federal Reserved Right entitles the United States to a prior and paramount right to a portion of the Native Safe Yield.

H. "Federally Adjusted Native Safe Yield" for any given year means the Basin's Native Safe Yield less the actual annual production of the United States' during the prior year pursuant to its Federal Reserved Right.

I. "Final Judgment" means a final judgment to be entered by the Court in the above matter, which approves the terms and provisions of this Stipulation, and is substantially in the form attached hereto as Exhibit A.

J. "Imported Water" means water that enters the Basin and that originates outside the Basin that is not part of the Basin's Native Safe Yield, and that, absent human intervention, would not recharge or be used in the Basin. Imported Water does not include water purchased by the Watermaster with Replacement Assessments or bottled water.

K. "Native Safe Yield" means the amount of pumping, which under a given set of land use and other prevailing cultural conditions, generates Return Flows that, when combined with naturally occurring groundwater recharge to the Basin, results in no long-term depletion of

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Basin groundwater storage. Pumping of the Settling Parties' share of Native Safe Yield is not subject to any Replacement Assessment.

L. "Overlying Right" means the appurtenant right of an Overlying Owner to use groundwater from the Native Safe Yield for overlying reasonable and beneficial use.

M. "Overlying Owners" means owners of land overlying the Basin who hold an Overlying Right.

N. "Physical Solution" means a mechanism that comprehensively resolves the competing claims to the Basin's water and provides for the management of the Basin. The Settling Parties anticipate that this Settlement will later be incorporated into a Physical Solution.

O. "Preliminary Approval Order" means the Court's Order granting preliminary approval to the Settlement set forth herein, directing the manner in which notice of the Settlement shall be provided to the Willis Class, and scheduling a final Hearing for the Court to consider whether to approve the Settlement. The Settling Parties will submit a proposed Preliminary Approval Order in the form appended as Exhibit B hereto.

P. "Recycled Water" means 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 and is therefore considered a valuable resource..

Q. "Replacement Assessment" means the charge imposed on any Settling Party by the Watermaster for producing more water than it is entitled to produce from the Basin under the terms of this Settlement or pursuant to such further orders as the Court may enter in the Coordinated Actions.

R. "Replacement Water" means water purchased by the Watermaster to offset production in excess of a Settling Party's share of Total Safe Yield.

S. "Return Flows" means the amount of water that is put to reasonable and beneficial agricultural, municipal or other use and thereafter returns to the Basin and is part of the Basin's Total Safe Yield.

T. "Settlement" means this Stipulation, including the Exhibits appended hereto.

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U. "Total Safe Yield" means the amount of pumping, which under a given set of land use and other prevailing cultural conditions generates Return Flows that, when combined with naturally occurring groundwater recharge to the Basin and Return Flows derived from Imported Water, results in no long-term depletion of Basin groundwater storage.

V. "Transition Period" means the period of time provided for in the Physical Solution during which the parties' right to produce water from the Native Safe Yield free from Replacement Assessment will decrease to amounts that total no more than that party's share of Native Safe Yield.

W. "Watermaster" means the person or entity appointed by the Court to monitor and manage the Basin's groundwater, subject to oversight by the Court.

X. "Willis Class" or "Willis Class Members" means the Willis Class as defined in the Court's Order of September 11, 2007, as amended by the Court's Orders of May 22, 2008, and September 2, 2008, but shall exclude all persons who timely excluded themselves from the Willis Class and have not rejoined the Willis Class. The Willis Class consists of the following:

> "All private (i.e., non-governmental) persons and entities that own real property within the Basin, as adjudicated, that are not presently pumping water on their property and have not done so at any prior time ("the Class"). The Class includes the successors-in-interest by way of purchase, gift, inheritance, or otherwise of such landowners.
>
> The Class excludes the defendants herein, any person, firm, trust, corporation, or other entity in which any defendant has a controlling interest or which is related to or affiliated with any of the defendants, and the representatives, heirs, affiliates, successors-in-interest or assigns of any such excluded party. The Class also excludes all persons to the extent their properties are connected and receive service from a municipal water system, public utility, or mutual water company. The Class shall [further] exclude all property(ies) that are listed as `improved' by the Los Angeles County or Kern County Assesor's' office, unless the owners of such properties declare under penalty of perjury that they do not pump and have never pumped water on those properties."

IV. SETTLEMENT TERMS

In consideration of the covenants and agreements set forth herein, and of the releases and dismissals described below, the Settling Parties agree to settle and compromise the claims that have been asserted or that could have been asserted between and among the Willis Class and the

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Settling Defendants, subject to Court approval, on the following terms and conditions:

A. Native Safe Yield.

Settling Defendants and the United States contend that the best estimate of the Basin's Native Safe Yield is 82,300 acre-feet per year. The Willis Class agrees not to challenge or otherwise contest the Native Safe Yield proposed by the Settling Defendants as long as it is at least 82,300 acre-feet per year. The Settling Parties understand and agree that, in the absence of stipulation by all parties in the Coordinated Actions, the Court will decide the Basin's Native Safe Yield following trial, and the Settling Parties agree to be bound by the Court's determination in that regard even if some or all of them do not participate in such a trial.

B. Total Safe Yield.

The Settling Defendants contend that the best estimate of the Basin's Total Safe Yield is 110,500 acre-feet per year. The Willis Class agrees not to challenge or otherwise contest that estimate. The Settling Parties understand and agree that, in the absence of stipulation by all parties in the Coordinated Actions, the Court will decide the Basin's Total Safe Yield following trial, and the Settling Parties agree to be bound by the Court's determination in that regard even if some or all of them do not participate in such a trial.

C. Federal Reserved Right.

The United States contends that it is entitled to a Federal Reserved Right. The Settling Parties agree that the Federal Government has a Federal Reserved Right to use a portion of the Native Safe Yield. The Settling Parties agree that the Court will decide the amount of the Federal Reserved Right and they agree to be bound by the Court's determination.

D. Allocation Of Federally Adjusted Native Safe Yield.

The Settling Parties agree to be bound by the Court's determination of the amounts of the Basin's Native Safe Yield and the United States' Federal Reserved Right. The Basin's Federally Adjusted Native Safe Yield shall be the Basin's Native Safe Yield less the prior year's production of water by the United States (not to exceed the Federal Reserved Right). The Settling Parties agree that the Settling Defendants and the Willis Class Members each have rights to produce groundwater from the Basin's Federally Adjusted Native Safe Yield.

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1. Settling Defendants' Water Rights

Settling Defendants have asserted in the Coordinated Actions that they have obtained prescriptive rights to the Basin's Native Safe Yield. This Stipulation shall neither be construed to recognize prescriptive rights nor to limit the Settling Defendants' prescriptive claims vis-a-vis the Basin or any non-settling parties, but rather as an agreement to fairly allocate the Settling Parties' respective rights to use the Basin's water. The Settling Parties agree that the Settling Defendants collectively have the right to produce up to 15% of the Basin's Federally Adjusted Native Safe Yield free of any Replacement Assessment. The Willis Class will not take any positions or enter into any agreements that are inconsistent with the exercise of the Settling Defendants' rights.

2. Willis Class Members' Pumping Rights

The Settling Parties agree that the Willis Class Members have an Overlying Right to a correlative share of 85% of the Federally Adjusted Native Safe Yield for reasonable and beneficial uses on their overlying land free of any Replacement Assessment. The Settling Defendants will not take any positions or enter into any agreements that are inconsistent with the exercise of the Willis Class Members' Overlying Right to produce and use their correlative share of 85% of the Basin's Federally Adjusted Native Safe Yield.

a. Safe Harbor.

The Willis Class Members acknowledge that the Settling Defendants may at trial prove prescriptive rights against all groundwater pumping in the Basin during a prior prescriptive period. If the Settling Defendants do prove prescriptive rights, Settling Defendants shall not exercise their prescriptive rights to diminish the Willis Class Members' Overlying Right below a correlative share of 85% of the Basin's Federally Adjusted Native Safe Yield. If the Settling Defendants fail to prove any prescriptive rights, this Agreement shall not diminish at all the rights of Willis Class Members to make reasonable and beneficial use of a correlative share of the Basin's Federally Adjusted Native Safe Yield. In no event shall this Agreement require the Willis Class Members to give to the Settling Defendants more than 15% of any rights to use the Basin's groundwater that they may obtain by way of settlement or judgment. If there is a subsequent Court decision whereby the Court determines that the Willis Class Members do not

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have Overlying Rights, this Agreement shall not require Settling Defendants to give the Willis Class Members any right to pump from the Native Safe Yield.

3. Correlative Rights Of Overlying Landowners

The Willis Class Members recognize that other Overlying Owners may have the right to pump correlatively with them 85% of the Federally Adjusted Native Safe Yield of the Basin for reasonable and beneficial uses on their overlying land.

4. Return Flows From Imported Water

a. The Settling Parties acknowledge and agree that they all have the right to recapture Return Flows from Imported Water that they put to reasonable and beneficial use in the Basin, consistent with California law. The Settling Parties will not be subject to any Replacement Assessment for their production of an amount equal to the Return Flows from Imported Water that they put to reasonable and beneficial use in the Basin.

b. Settling Defendants believe that the best estimates of Return Flows from Imported Water are (a) 25% of the water used for agricultural purposes and (b) 28% of the water used for municipal and industrial purposes. Settling Defendants further believe that the best estimate of total annual Return Flows from Imported Water is 28,200 acre-feet of which 25,100 acre-feet is from municipal and industrial use and 3,100 acre-feet is from agricultural use. The Willis Class agrees not to contest those estimates, and all Settling Parties agree to be bound by any findings that may later be made by the Court with respect thereto.

V. MANAGEMENT OF THE BASIN

A. General

The Settling Parties agree that the Basin has limited water resources and that they should use their best efforts to conserve and maximize reasonable and beneficial use. The Settling Parties further agree that there is a need to create a groundwater management plan to ensure that pumping from the Basin does not exceed the Basin's Total Safe Yield and that the Court should appoint a Watermaster to oversee the management of the Basin's water resources.

B. Physical Solution

The Settling Parties expect and intend that this Stipulation will become part of a Physical

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Solution entered by the Court to manage the Basin and that the Court will retain jurisdiction in the Coordinated Actions. The Settling Parties agree to be part of such a Physical Solution to the extent it is consistent with the terms of this Stipulation and to be subject to Court-administered rules and regulations consistent with California and Federal law and the terms of this Stipulation. The Settling Parties agree that the Physical Solution may require installation of a meter on any groundwater pump by a Willis Class Member before a Willis Class Member may produce groundwater. The responsibility for the cost of such meters will be determined by the Court.

C. Transition Period.

The Settling Parties agree that net groundwater production from the Basin needs to be reduced over a period of time from current levels to no more than the Basin's Total Safe Yield. This can be accomplished by reducing pumping and/or purchasing Replacement Water. The Settling Parties agree that the Transition Period should begin at the date of entry of Final Judgment in the Coordinated Actions and should last seven years. During the first two years of the Transition Period no effort will be made to curtail groundwater pumping and no Replacement Assessments will be made. By the end of the seventh year of the Transition Period, groundwater pumping from the Basin without Replacement Assessment for Replacement Water will not exceed the Native Safe Yield.

D. Replacement Water.

The Settling Parties recognize the right of any Settling Party to produce groundwater from the Basin above their share of the Native Safe Yield, subject to the Physical Solution and to any Replacement Assessment. The Settling Parties agree to provide or purchase Imported Water for all groundwater pumping that exceeds a Settling Party's share of the Federally Adjusted Native Safe Yield. The Settling Parties agree that any Settling Party who produces more than its annual share of the Federally Adjusted Native Safe Yield in any year will be responsible to provide Replacement Water or pay a Replacement Assessment to the Watermaster so that the Watermaster can purchase Imported Water to recharge the Basin.

E. Water Storage

The Settling Parties agree that water storage in the Basin offers significant benefits and

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should be encouraged. The Settling Parties further recognize that there is a limit on the Basin's available storage space and that the storage of water for uses within the Basin should have priority over storage for use outside the Basin. Subject to those general principles, the Settling Parties agree that water storage should be permitted and encouraged and agree to support appropriate provisions in the Physical Solution.

F. Recycled Water

The Settling Parties agree that it is important to encourage the treatment and use of Recycled Water. The Willis Class agrees not to challenge or otherwise contest Settling Defendants' claims to Return Flows from Recycled Water that was reclaimed by the Sanitation Districts of Los Angeles County.

VI. PROCEDURES FOR CLASS NOTICE AND HEARING ON MOTIONS FOR PRELIMINARY AND FINAL APPROVAL OF STIPULATION

A. Preliminary Approval Motion and Settlement Notice.

Settling Plaintiffs shall file a motion for preliminary approval ("Preliminary Approval Motion") of the terms of the Settlement as soon as practicable following execution of this Stipulation by all Settling Parties. The Preliminary Approval Motion will seek entry of an Order Preliminarily Approving Class Action Settlement. The Preliminary Approval Motion shall include a proposed form of notice describing this Stipulation (the "Settlement Notice") to be disseminated to the Willis Class as well as a description of the procedures to be used in disseminating the Settlement Notice. The Settlement Notice shall be disseminated to all Willis Class Members by or under the supervision of counsel for District 40, with the expenses to be borne by District 40. The Settling Parties will attempt to agree upon the language for the Settlement Notice, but agree to be bound by the Court's determination in the event they have any disputes or disagreements in that regard. The Settling Parties agree to use their best efforts to have the Preliminary Approval Motion heard as promptly as is practical.

B. Final Approval Hearing.

The Settlement Notice will advise Willis Class Members of the date and time set for a Hearing on the Settling Plaintiffs' Motion for Final Approval of the Stipulation, including

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advising them of their rights to submit statements in support of or opposition to the Stipulation. The Final Approval Motion shall request that this Court find that the Stipulation and Proposed Final Judgment are fair, reasonable, and adequate to the Willis Class and shall seek entry of a Final Judgment substantially in the form attached hereto as Exhibit A.

VII. RELEASES AND DISMISSALS

A. Release By Settling Plaintiffs

1. In addition to the effect of any Final Judgment entered in accordance with this Stipulation, upon this Stipulation becoming final as set out in Section VIII, Paragraph G of this Stipulation, and in consideration for the settlement consideration set forth above, and for other valuable consideration, the Settling Plaintiffs shall completely release, acquit and forever discharge the Settling Defendants from any and all claims, demands, actions, suits, causes of action, whether class, individual, or otherwise in nature that Settling Plaintiffs, or each of them, ever had, now has, or hereafter can, shall, or may have on account of or in any way arising out of, any and all known or unknown, foreseen or unforeseen, suspected or unsuspected injuries, damages, and the consequences thereof in any way arising out of or relating in any way to the matters at issue in the Willis Action ("Released Claims"). Each Settling Plaintiff may hereafter discover facts other than or different from those which he, she, or it knows or believes to be true with respect to the claims which are the subject matter of this Stipulation, but each Settling Plaintiff hereby expressly waives and fully, finally, and forever, settles and releases, upon this Stipulation becoming final, any known or unknown, suspected or unsuspected, contingent or non-contingent claim with respect to the subject matter of the Stipulation, whether or not concealed or hidden, without regard to the subsequent discovery or existence of such different or additional facts. As provided in the Release set forth above, the Settling Plaintiffs, including any of Settling Plaintiffs' representatives, successors, agents, affiliates, employees, supervisors, officers, directors, or shareholders, agree to waive and release all rights and benefits which they might otherwise have pursuant to Section 1542 of the California Civil Code with regard to the release of such unknown, unanticipated or misunderstood claims, causes of action, liabilities, indebtedness and obligations.

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2. The Release set forth in Paragraph VII.A, above, does not include claims by any of the Settling Plaintiffs other than the claims set forth therein. In particular, the Settling Parties recognize that many persons own more than one parcel of land within the Basin. The foregoing Release only binds Willis Class Members and only with respect to those properties within the Basin on which they have not pumped water.

B. Release By Settling Defendants

In addition to the effect of any Final Judgment entered in accordance with this Stipulation, upon this Stipulation becoming final as set out in Paragraph VIII.G of this Stipulation, and in consideration of the settlement consideration set forth above, and for other valuable consideration, the Settling Defendants completely release, acquit and forever discharge Settling Plaintiffs and the Willis Class Members from any and all claims, demands, actions, suits, causes of action, whether class, individual, or otherwise in nature that Settling Defendants, or any of them, ever had, now has, or hereafter can, shall, or may have arising from or relating in any way to the matters at issue in the Willis Action ("Released Claims"). Each Settling Defendant may hereafter discover facts other than or different from those which he, she, or it knows or believes to be true with respect to the claims which are the subject matter of this Stipulation, but each Settling Defendant hereby waives any right to relief from the provisions of this Stipulation in such event, and fully, finally, and forever, settles and releases, upon this Stipulation becoming final, any known or unknown, suspected or unsuspected, contingent or non-contingent claim with respect to the subject matter of the Stipulation, whether or not concealed or hidden, and without regard to the subsequent discovery or existence of such different or additional facts.

1. As provided in the Release set forth in Paragraph VII.B, above, the Settling Defendants, including any of Settling Defendants' representatives, successors, agents, affiliates, employees, supervisors, officers, directors, or shareholders, agree to waive and release all rights and benefits which they might otherwise have pursuant to Section 1542 of the California Civil Code with regard to the release of such unknown, unanticipated or misunderstood claims, causes of action, liabilities, indebtedness and obligations.

VIII. MISCELLANEOUS PROVISIONS

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A. No Concession By Any Settling Party

It is understood and agreed that this Stipulation represents the compromise of disputed positions with respect to the relevant facts and law. This Stipulation shall not be deemed a concession by any Settling Party as to any fact or the validity or invalidity of any claim or defense.

B. Best Efforts and Mutual Cooperation.

Settling Plaintiffs and Settling Defendants shall use their best efforts to effectuate this Stipulation and its purpose, and secure the prompt, complete, and final dismissal with prejudice of the Willis Action. The Settling Parties agree to take any and all reasonable steps that may be necessary in that regard, as long as those steps do not require any material deviations from the terms of this Stipulation or impose material new obligations beyond those contemplated by this Stipulation.

The Settling Parties recognize that not all parties to the Coordinated Actions have entered into this Stipulation and that a trial may be necessary as against non-settling parties. The Settling Parties agree to cooperate and coordinate their efforts in any such trial or hearing so as to obtain entry of judgment consistent with the terms of this Stipulation; this provision, however, will not require Willis Class counsel to participate in any such trial or render any efforts absent written agreement of Settling Defendants to compensate them for such efforts. Nor shall this Stipulation preclude Settling Plaintiffs from participating in any further proceedings that may affect their rights.

C. Adjustments Of Settling Parties' Estimates

In the event that the Court enters findings of fact that vary from the estimated amounts that the Settling Parties have agreed to for purposes of this Stipulation (including the length of the Transition Period described in Paragraph V.C.), the Court's findings will be determinative and will supplant the amounts set forth in this Stipulation. For example, if the Court should determine following trial that the Basin's Total Safe Yield is, in fact, 120,000 acre-feet per year (or some other amount), the Court's findings will control.

D. Fees And Costs Of Settling Plaintiff's Counsel

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The Settling Parties understand that Willis Class counsel intend to seek an award of their fees and costs from the Court. Any such awards will be determined by the Court unless agreed to by the Settling Parties. Settling Defendants will likely oppose the motion for fees and costs. If Willis Class Counsel obtain an award of fees, Settling Defendants agree to exercise their best efforts to pay any fee award within a reasonable period of time or as required pursuant to Court order. Willis Class Counsel agree that they will not seek any attorneys' fees and/or costs from Settling Defendants for any efforts Willis Class Counsel undertake after the Court's entry of Final Judgment approving the Settlement, except with respect to the following: (a) any reasonable and appropriate efforts by Willis Class Counsel to enforce the terms of this Stipulation against Settling Defendants in the event Settling Defendants fail to comply with a provision of this Stipulation; (b) any reasonable and appropriate efforts by Willis Class Counsel to defend against any new or additional claims or causes of action asserted by Settling Defendants against the Willis Class in pleadings or motions filed in the Consolidated Actions; (c) any reasonable and appropriate efforts by Willis Class Counsel that are undertaken in response to a written Court order stating that, pursuant to this provision, Class counsel may seek additional fees for specified efforts from Settling Defendants pursuant to Code of Civil Procedure section 1021.5; (d) any reasonable and appropriate efforts by Willis Class Counsel that are undertaken in response to a written request by Settling Defendants executed by counsel for all Settling Defendants that Class Counsel participate in future aspects of the Consolidated Actions (e.g., the negotiation of a Physical Solution); or (e) any reasonable and appropriate efforts that Willis Class Counsel render to defend a fee award in their favor in the event the Settling Defendants appeal such a fee award and the Court of Appeal affirms the fee award in the amount of 75 percent or more of the fees awarded by the Superior Court. Willis Class Counsel remain free to seek an award of fees from other parties to the litigation.

E. Retention Of Jurisdiction

The Superior Court of the State of California for Los Angeles County shall retain jurisdiction over the implementation, enforcement, and performance of this Stipulation, and shall have exclusive jurisdiction over any suit, action, proceeding, or dispute arising out of or relating

to this Stipulation or the applicability of this Stipulation.

F. Choice Of Law

This Stipulation shall be governed and construed by the substantive laws of the State of California.

G. Finality

a. This Stipulation shall be effective on the Effective Date, which shall occur when the Court has entered a Final Judgment approving this Stipulation and one of the following events occurs; (i) if an appeal is taken, the date of final affirmance of the Final Judgment, or if petition for review is granted by California Supreme Court or writ of certiorari is granted by United States Supreme Court, the date of final affirmance of the Final Judgment following review pursuant to such grant; or (ii) the date of final dismissal of any appeal from Final Judgment or the final dismissal of any proceedings on petition to review the Final Judgment; or (iii) if no appeal is filed, the expiration date of the time for filing or noticing of any appeal from the Final Judgment, i.e., sixty (60) days after notice of entry of the Final Judgment.

b. In the event that the Court refuses to approve this Stipulation, or any material part hereof, or if such approval is materially modified or set aside on appeal, or if the Final Judgment is not entered in accordance with this Stipulation, appellate review is sought, and on such review, such Final Judgment is not affirmed as to all material parts, then any of the Settling Parties to the Stipulation have the option to rescind this Stipulation in its entirety. Written notice of the exercise of any such right to rescind shall be made according to the terms of this Paragraph VIII.L below within thirty (30) days of the triggering event.

H. Integrated Agreement

This Stipulation constitutes the entire, complete and integrated agreement among the Settling Parties, and supersedes all prior or contemporaneous undertakings of the Settling Parties in connection herewith. This Stipulation may not be modified or amended except in writing executed by the Settling Parties and approved by the Court. It shall be construed and interpreted to effectuate the intent of the Settling Parties which is to provide, through this Stipulation, for a complete resolution of the relevant claims between the Settling Parties on the terms provided in

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this Stipulation. Notwithstanding the foregoing, the Settling Parties intend and agree that this Stipulation will later be incorporated into a Physical Solution, as defined above, which is consistent with the terms of this Stipulation.

I. Waiver

The waiver by any Settling Party of its rights under any provision of this Stipulation or of any breach of this Stipulation shall not be deemed a waiver of any other provision or subsequent breach of this Stipulation.

J. Intended Beneficiaries

This Stipulation shall be binding upon, and inure to the benefit of, the heirs, successors and assigns of the Settling Plaintiffs and Settling Defendants. Without limiting the generality of the foregoing, this Stipulation shall bind each and every subsequent property owner who acquires property in the Basin from a Willis Class Member as well as persons who subsequently acquire such properties.

K. Interpretation and Construction

The terms of this Stipulation have been arrived at by negotiation and mutual agreement, with consideration of and participation by all Settling Parties and with the advice of counsel. Neither Settling Plaintiffs nor Settling Defendants shall be considered to be the drafter of this Stipulation or any of its provisions for the purpose of any statute, case law, or rule of interpretation or construction that would or might cause any provision to be construed against the drafter of this Stipulation (including but not limited to Civil Code Section 1654). The descriptive headings of any paragraphs or sections of this Stipulation are inserted for convenience only and do not constitute a part of this Stipulation.

L. Notices

Where this Stipulation requires either party to provide notice or any other communication or document to the other, such notice shall be in writing, and such notice, communication, or document shall be provided by personal delivery, facsimile transmission, overnight delivery, or letter sent by United States mail with delivery confirmation. Notice may be provided to the Settling Parties through their counsel of record at the following addresses:

LAW OFFICES OF
BEST BEST & KRIEGER LLP
3750 UNIVERSITY AVENUE, SUITE 400
P.O. BOX 1028
RIVERSIDE, CA 92502

California Water Service Company:	Attn: President California Water Service Company 1720 North First Street San Jose, California 95112
with a copy to:	John Tootle California Water Service Company 2632 West 237th Street Torrance, California 90505
City of Palmdale:	Attn: City Manager 38300 Sierra Highway Palmdale, California 93550
with a copy to:	James Markman Richards, Watson & Gerson 355 South Grand Avenue, 40th Floor Los Angeles, California 90071
Littlerock Creek Irrigation District:	Attn: General Manager 35141 87th Street East Littlerock, California 93543
with a copy to:	Wayne Lemieux Lemieux & O'Neill 2393 Townsgate Rd., Suite 201 Westlake Village, California 91361
Los Angeles County Waterworks District No. 40:	Attn: Director 260 East Avenue K-8 Lancaster, California 93535
with a copy to:	Michael Moore Los Angeles county Counsel Office 648 Kenneth Hahn Hall of Administration 500 West Temple Street Los Angeles, California 90012
with a copy to:	Eric L. Garner

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BEST BEST & KRIEGER LLP
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P.O. BOX 1028
RIVERSIDE, CA 92502

	Best Best & Krieger LLP 3750 University Avenue P.O.B 1028 Riverside, California 92502
Palmdale Water District:	Attn: General Manager 2029 E. Avenue Q Palmdale, California 93550
with a copy to:	Thomas Bunn III Lagerlof, Senecal, Gosney & Kruse, LLP 301 North Lake Avenue, 10th floor Pasadena, California 91101-4108
Palm Ranch Irrigation District:	Attn: General Manger 4871 West Avenue M. (Colombia Way) Quartz Hill, California 93536
with copy to:	Wayne Lemieux Lemieux & O'Neill 2393 Townsgate Rd., Suite 201 Westlake Village, California 91361
Quartz Hill Water District:	Attn: General Manager 42141 N. 50th Street West Quartz Hill, California 93536
with copy to:	Bradley Weeks Charlton Weeks LLP 107 West Avenue M-14, Suite A Palmdale, California 93551
Phelan Pinon Hills Community Services District:	Attn: General Manager 4037 Phelan Road, Suite C-1 Phelan, California 92371
with copy to:	Francis Logan Law Office of Susan Trager 19712 MacArthur Blvd. #120 Irvine, California 92612
Rosamond Community Services District:	Attn: General Manager

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BEST BEST & KRIEGER LLP
3750 UNIVERSITY AVENUE, SUITE 400
P.O. BOX 1028
RIVERSIDE, CA 92502

	3179 35th Street W Rosamond California 93560
with a copy to:	Eric L. Garner Best Best & Krieger LLP 3750 University Avenue P.O.Box 1028 Riverside, California 92502
Willis Class:	Rebecca Lee Willis
With a copy to:	Ralph Kalfayan Krause Kalfayan Benink & Slavens LLP 625 Broadway, Ste. 635 San Diego, CA 92101

or to such other address as any Settling Party shall, from time to time, specify in the manner provided herein.

M. No Admissions

Neither this Stipulation, nor any act performed or document executed pursuant to or in furtherance of this Stipulation is or may be deemed to be or may be used as an admission of, or evidence of, (i) the validity of any claim or defense; or (ii) the appropriateness or inappropriateness of any Willis Class Member or other representational capacity, whether contemporaneously with this Stipulation or at any time in the future.

N. Execution

This Stipulation may be executed in counterparts by Settling Plaintiffs and Settling Defendants, and a facsimile signature shall be deemed an original signature for purposes of executing this Stipulation. Each of the undersigned persons represents that he or she is fully authorized to enter into the terms and conditions of and to execute this Stipulation by the party for which he or she has signed the Stipulation.

IN WITNESS HEREOF, the undersigned being duly authorized, have executed this Stipulation on the dates shown below.

Rebecca Lee Willis

Approved as to form by: Ralph Kalfayan

LAW OFFICES OF
BEST BEST & KRIEGER LLP
3750 UNIVERSITY AVENUE, SUITE 400
P.O. BOX 1028
RIVERSIDE, CA 92502

By: Rebecca Lee Willis

By: Rachel Kaffaga

California Water Service

Approved as to form by: John Tootle

By: _____

By: _____

City of Palmdale

Approved as to form by: James Markman

By: _____

By: _____

Littlerock Creek Irrigation District

Approved as to form by: Wayne Lemieux

By: _____

By: _____

Los Angeles County Waterworks District No. 40

Approved as to form by:
Andrea Sheridan Ordin, County Counsel

By: _____
Chair, Board of Supervisors

By: _____
Warren R. Wellen, Principal Deputy
County Counsel

Approved as to form by: Eric L. Garner

By: _____

Attest:
Sachi A. Hamai,
Executive Officer-Clerk Of the Board of Supervisors

By: LaChelle Smitherman
DEPUTY

Palmdale Water District

Approved as to form by: Tom Bunn

By: _____

By: _____

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By: BJ Bones

By: Wayne Lemieux

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Palm Ranch Irrigation District

By: _____

Approved as to form by: Wayne Lemieux

By: _____

Phelan Pinon Hills Community Services District

By: _____

Approved as to form by: Francis Logan

By: _____

Quartz Hill Water District

By: _____

Approved as to form by: Brad Weeks

By: _____

Rosamond Community Services Districts

By: _____

Approved as to form by: Eric L. Garner

By: _____

Desert Lake Community Services District

By: _____

Approved as to form by: Wayne Lemieux

By: _____

North Edwards Water District

By: _____

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By: _____

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Desert Lake Community Services District

By: Sallie A. Kyriakopoulos

Approved as to form by: Wayne Lemieux

By: Wayne Lemieux

North Edwards Water District

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By: _____

North Edwards Water District

By: Dallis D. Kostopoulos

Approved as to form by: Wayne Lemieux

By: _____

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