Suburban Water Systems
A SouthWest Water Company

2020
URBAN WATER MANAGEMENT PLAN
SUBURBAN WATER SYSTEMS

JUNE 2021
FINAL

2020

URBAN WATER MANAGEMENT PLAN

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A SouthWest Water Company

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JUNE 2021 FINAL

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TABLE OF CONTENTS

Executive Summary & Lay Description

Section 1: Introduction

Section 2: Water Demand

Section 3: Water Sources & Supply Reliability

Section 4: Conservation Measures

Section 5: Water Shortage Contingency Plan

Section 6: Recycled Water

Section 7: Future Water Supply Projects & Programs

Section 8: Plan Adoption Process

Appendices

Appendix	Description
Appendix A	UWMP Checklist
Appendix B	DWR Submittal Tables
Appendix C	60-Day Notification of Public Hearing
Appendix D	Two-Week & One-Week Notification of Public Hearing
Appendix E	Board Resolutions Adopting 2020 UWMP & WSCP
Appendix F	Long Beach Judgment
Appendix G	Main Basin Judgment
Appendix H	Main Basin Rules and Regulations
Appendix I	Central Basin Judgment
Appendix J	Suburban's Tariff Rule & Schedule No. 14.1
Appendix K	2019 Los Angeles County All-Hazards Mitigation Plan

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ACRONYMS

Act	Urban Water Management Planning Act
AF	acre-feet
AFY	acre-feet per year
BDCP	Bay Delta Conservation Plan
BMP	Best Management Practice
Cal Domestic	California Domestic Water Company
CBMWD	Central Basin Municipal Water District
cfs	cubic feet per second
CII	Commercial/Industrial/Institutional
CIMIS	California Irrigation Management Information System
CPUC	California Public Utilities Commission
CRA	Colorado River Aqueduct
CUWCC	California Urban Water Conservation Council
CVP	Central Valley Project
CWC	California Water Code
DBPs	Disinfection Byproducts
DDW	State Water Resources Control Board Division of Drinking Water
DMM	Demand Management Measure
DWR	Department of Water Resources
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
ETo	Evapotranspiration
GPCD	gallons per capita per day
gpf	gallons per flush
GW	Groundwater
HECW	High Efficiency Clothes Washer
HET	High Efficiency Toilet
HR	Hydrologic Region
IRP	Integrated Resource Plan
IWA	International Water Association
JPL	Jet Propulsion Laboratory
JWPCP	Joint Water Pollution Control Plant
LACSD	Sanitation Districts of Los Angeles County
LADWP	Los Angeles Department of Water and Power

LRWSP	Local, Reliable Water Supply Program
MAF	million acre-feet
Main Basin	Main San Gabriel Basin
MCL	Maximum Contaminant Level
MG	Million gallons
MGD	million gallons per day
mg/L	milligrams per liter
MOU	Memorandum of Understanding
MTBE	Methyl tertiary butyl ether
MWD	Metropolitan Water District of Southern California
MWELO	Model Water Efficient Landscape Ordinance
NDMA	N-nitrosodimethylamine
ng/L	nanograms per liter
PCE	Tetrachloroethylene
PPCPs	Pharmaceuticals and Personal Care Products
PHETs	Premium HETs
QSA	Quantification Settlement Agreement
RHNA	Regional Housing Needs Assessment
SBx7-7	Senate Bill x7-7
SCAB	South Coast Air Basin
SCADA	Supervisory Control and Data Acquisition
SCAG	Southern California Association of Governments
SMSS	Soil Moisture Sensor System
SWP	State Water Project
SWRCB	State Water Resources Control Board
TDS	Total Dissolved Solid
TOC	Total Organic Carbon
TVMWD	Three Valleys Municipal Water District
Upper District	Upper San Gabriel Valley Municipal Water District
USGVMWD	Upper San Gabriel Valley Municipal Water District
UWMP	Urban Water Management Plan
VOC	Volatile Organic Compound
WARN	Water Agency Response Network
WBIC	Weather-Base Irrigation Controller
WRP	Water Reclamation Plant
WSAP	Water Supply Allocation Plan
WSCP	Water Shortage Contingency Plan

WSDM	Water Surplus and Drought Management Plan

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EXECUTIVE SUMMARY & LAY DESCRIPTION

INTRODUCTION

This report serves as the 2020 update of the Suburban Water System's (Suburban) Urban Water Management Plan (UWMP). This UWMP has been prepared consistent with the requirements under Water Code Sections 10610 through 10656 of the Urban Water Management Planning Act (Act) and its amendments. The Act requires that "every urban water supplier providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually, to prepare and adopt, in accordance with prescribed requirements, an urban water management plan." These plans must be filed with the California Department of Water Resources (DWR) every five years describing and evaluating reasonable and practical efficient water uses, reclamation, and conservation activities. 2020 UWMP updates are to be adopted by July 1, 2021.

The Act has been amended on several occasions since its initial passage in 1983. New requirements of the Act due to SBx7-7 state that per capita water use within an urban water supplier's service area must decrease by 20 percent by the year 2020 in order to receive grants or loans administered by DWR or other state agencies. The legislation sets an overall goal of reducing per capita urban water use by 20 percent by December 31, 2020. Each urban retail water supplier developed water use targets by July 1, 2016. Effective 2021, urban retail water suppliers who do not meet the 2020 water conservation requirements established by this bill are not eligible for state water grants or loans.

Section 1.4.3 offers a summary of each section of this 2020 UWMP.

SERVICE AREA AND FACILITIES

Suburban serves the cities of Glendora, Covina, West Covina, La Puente, Walnut, Whittier, La Mirada, La Habra, and Buena Park as well as sections of unincorporated Los Angeles County and Orange County. Suburban's service area is currently divided into two main service areas: the San Jose Hills Service Area, and the Whittier/La Mirada Service Area. Altogether, Suburban serves a population of 298,367 (175,529 and 122,838 people for San Jose Hills and Whittier/La Mirada service area, respectively). Suburban is regulated by the California Public Utilities Commission (CPUC).

Groundwater comes from Suburban-owned wells in the Main San Gabriel Basin and Central Basin. The well water is disinfected and treated prior to entering the distribution system. Water supply is

supplemented with water purchased mainly from member agencies of the Metropolitan Water District of Southern California (MWD), Covina Irrigating Company, and California Domestic Water Company (Cal Domestic).

WATER DEMAND

The total water demand for the nearly 300,000 people served by Suburban is over 45,300 acre-feet of potable water for the 2020 calendar year. San Jose Hills and Whittier/La Mirada service area services 24,939 AF and 20,451 AF, respectively.

Suburban has selected three separate compliance target options for the various service areas:

- The **San Jose Hills service area** selected to comply with **Method 3**, 95 percent of the State Hydrologic Region Target, of the SBx7-7 compliance options; however, the minimum required target applies and the 2015 interim water use target was 155 GPCD, and the 2020 final water use target is **142 GPCD**.
- The **Whittier/La Mirada service area** selected to comply with **Method 1**, 20 percent reduction from the baseline of 189 GPCD. Its 2015 interim water use target was 170 GPCD, and the 2020 final water use target is **151 GPCD.**
- The **Combined Suburban service area** selected to comply with **Method 3**, 95 percent of the State Hydrologic Region Target, of the SBx7-7 compliance options; however, the minimum required target applies and the 2015 interim water use target was 159 GPCD, and the 2020 final water use target is **142 GPCD**.

A description of the compliance options is discussed in **Section 2.4**.

In 2020, the San Jose Hills, Whittier/La Mirada, and Combined Suburban service area has a per capita water use of **127**, **149**, and **136 GPCD**, respectively. Despite the COVID-19 pandemic requiring majority of individuals to work from home, Suburban was able to achieve their 2020 Target Goals.

WATER SOURCES AND SUPPLIES

Suburban has the legal right to pump groundwater from both the Main Basin and Central Basin and can purchase treated surface and groundwater from Covina Irrigation Company, treated groundwater from Cal Domestic. Furthermore, Suburban purchases water imported by MWD through its MWD member agencies: CBMWD, USGVMWD, and TVMWD. Furthermore, Suburban utilizes recycled water purchased from USGVMWD for landscape irrigation.

FUTURE WATER SUPPLY PROJECTS

Suburban supports various major supply initiatives in the Main Basin that have helped to increase the amount of cyclic groundwater storage. This, in turn, translates to more water in the basin for pumping and higher groundwater levels for pumpers. Furthermore, Suburban continues to implement plans to increase their utilization on recycled water. Currently, Suburban obtains recycled water from USGVMWD for the San Jose Hills Service Area. Suburban plans to push efforts for recycled water in the Whittier/La Mirada service area from supplies from CBMWD. Suburban and CBMWD have developed a plan to serve the City of La Mirada 900 AF of recycled water.

In 2016, CBMWD continued its planning to expand its recycled water system. CBMWD identified Suburban as the next phase of its expansion plan. Several large irrigation customers within Suburban's service are in the City of la Mirada, including the City of La Mirada Golf Course, La Mirada Park, and Behringer Park. CBMWD worked with Suburban to obtain consumption information to develop a plan to serve a total on 41 sites. The plan demonstrated that the City of La Mirada Expansion Project was prudent and would offset potable water supply and replace it with a more resilient water source.

WATER SERVICE RELIABILITY

It is required that every urban water supplier assess the reliability to provide water service to its customers under normal, dry, and multiple dry water years.

Groundwater supplies within the Main Basin and Central Basin are dependent on climatological conditions. During the recent droughts of 2012 – 2016, levels in the Main Basin dropped below average levels. As a result, the Main Basin Watermaster underwent significant reductions in the Operating Safe Yields for the Main Basin to ensure longevity of the basin's supplies. To this date, the Main Basin is seeing improvements in groundwater levels but continues to maintain a low Operating Safe Yield to ensure long lasting and reliable supply. The Central Basin, Suburban's other groundwater supply, remained stable and pumping rights maintained the same throughout the recent drought. Therefore, groundwater supplies in both basins continues to be a reliable source into the future.

As mentioned, Suburban receives imported water from MWD through their member agencies. The completion of MWD's 2020 Integrated Water Resources Plan will be after the submission of Suburban's 2020 UWMP. Information on MWD's 2015 Integrated Water Resources Plan is still relevant to this day. The plan describes the core water resource strategy, which will be used to meet full-service demands at the retail level under all foreseeable hydrologic conditions from 2025

through 2045. Furthermore, MWD's 2020 UWMP finds that MWD is able to meet full service demands of its member agencies with existing supplies from 2025 through 2045 during normal years, single dry year, and multiple dry years.

Suburban is therefore capable of meeting the water demands of its customers in normal, single dry, and multiple dry years between 2025 and 2045, as shown in **Section 3.10.4**. Suburban has also conducted a Drought Risk Assessment as part of a new requirement for the 2020 UWMP which mandates water purveyors to assess their water demand and supplies within the next five years under drought situations. Based on the assessment, Suburban is able to meet their demands under drought situations from 2021 – 2025 without the need of the Water Shortage Contingency Plan's water supply augmentation or demand reductions as shown in **Section 5**; however, Suburban continues to promote water saving measures to its consumers to ensure reliability of its supplies.

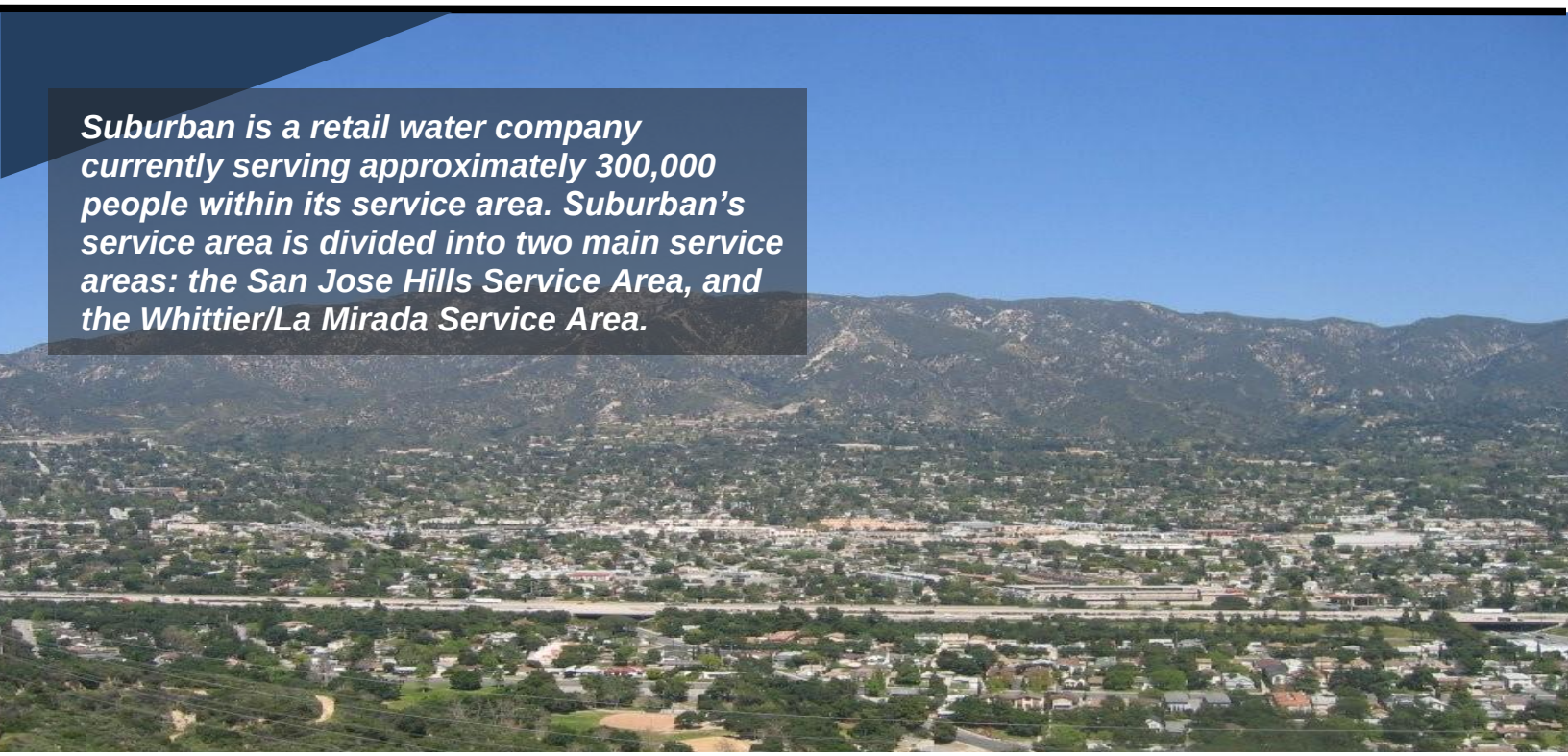
CHALLENGES AHEAD & STRATEGIES FOR MANAGING RELIABILITY RISKS

Suburban faces challenges in the near future regarding water supply including:

- Over the last decade, drastic changes in annual hydrologic conditions statewide have negatively affected water supplies available from the State Water Project (SWP) and the Colorado River Aqueduct (CRA).
- The declining ecosystem of the Bay-Delta has resulted in a reduction in water supply deliveries to State Water Contractors, including MWD.

Suburban's strategies for managing these reliability risks include:

- Continuing a progressive and effective water conservation program.
- Utilizing supplemental water through transfers and exchanges.
- Replacing deteriorating water infrastructure through a proactive capital improvement program, which will reduce water main leaks and conserve water.
- Implementing shortage response actions, as needed, under the Water Shortage Contingency Plan.
- Reactivating ground water wells impacted by water quality contaminants with the addition of treatment systems.



Suburban is a retail water company currently serving approximately 300,000 people within its service area. Suburban's service area is divided into two main service areas: the San Jose Hills Service Area, and the Whittier/La Mirada Service Area.

SECTION 1: INTRODUCTION

2020 URBAN WATER MANAGEMENT PLAN

SECTION 1 INTRODUCTION

1.1 UWMP PURPOSE & SUMMARY

This is the 2020 Urban Water Management Plan (UWMP) for Suburban Water Systems (Suburban). This plan has been prepared in compliance with the Urban Water Management Planning Act (Act), which has been codified as California Water Code (CWC) sections 10610 through 10657.

As part of the Act, the legislature declared that waters of the state are a limited and renewable resource subject to ever increasing demands; that the conservation and efficient use of urban water supplies are of statewide concern; that successful implementation of plans is best accomplished at the local level; that conservation and efficient use of water shall be actively pursued to protect both the people of the state and their water resources; that conservation and efficient use of urban water supplies shall be a guiding criterion in public decisions; and that urban water suppliers shall be required to develop water management plans to achieve conservation and efficient use.

Figure 1.1:UWMPs Comply with State Water Code

The UWMP Act requires "every urban water supplier providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre-feet (AF) of water annually, to prepare and adopt, in accordance with prescribed requirements, an urban water management plan." These plans must be filed with the California Department of Water Resources (DWR) every five years and evaluate reasonable and practical efficient water uses, reclamation, and conservation activities (see generally Water Code § 10631).

1.2 PAST UPDATES TO THE UWMP ACT

The Act has been amended on several occasions since its initial passage in 1983. Of all the amendments, the most significant came in 2009 as a result of the requirements of Senate Bill 7 / Seventh Extraordinary Session. This is better known as the Water Conservation Act of 2009 (SBx7-7). The requirements of this bill state that per capita water use within an urban water supplier's service area must decrease by 20 percent by the year 2020 (20x2020) in order to receive grants or loans administered by DWR or other state agencies. The legislation sets an overall goal of reducing per capita urban water use by 20 percent by December 31, 2020. The state was required to make incremental progress towards this goal by reducing per capita water use by at least 10 percent by December 31, 2015. In addition, each urban retail water supplier was required to develop water use targets by July 1, 2016. Effective 2021, urban retail water suppliers who do not meet the 2020 water conservation requirements established by this bill are not eligible for state water grants or loans. SBx7-7 substantially expanded the role of the UWMPs by requiring all urban retail water suppliers to develop baseline daily per capita water use data, urban water use targets, and other technical information, and to report all of the information in their 2010 UWMPs.

1.3 UPDATES TO THE UWMP ACT FOR 2020 UWMPS

There have not been any significant changes affecting the 2020 UWMPs on the level of SBx7-7; however, there are numerous minor to major updates to the UWMP Act affecting the 2020 UWMPs as follows:

- **Water Loss:** Quantify distribution system water loss for each of the five years preceding the plan update (CWC § 10631 (d) (3) (A), SB 1414, 2019)
- **Drought Risk Assessment:** Assess water supply reliability over a 5-year period examining water supplies, water uses, and the reasonable predicted water supply reliability for five consecutive dry years (CWC § 10635 (b), SB 606, 2018)
- **Reporting of Energy Intensity:** Provide information that the water supplier can readily obtain on the energy used to process water (CWC § 10631.2 (a), SB 606, 2018)
- **Lay Description:** Include a lay description of the fundamental determinations of the UWMP, especially regarding water service reliability, challenges ahead, and strategies for managing reliability risks (CWC § 10630.5, SB 606, 2018)
- **Climate Change Impacts and Considerations:** Provide details on the impacts of climate change and consider them into projections (CWC § 10630, SB 606, 2018)

- **Water Shortage Contingency Plan (WSCP):** The water shortage contingency analysis required in previous UWMPs by former law has been replaced by a WSCP mandate with new elements, which include new six standard water shortage levels (CWC § 10632, SB 606, 2018, AB 1414, 2019)
- **Seismic Risk Assessment and Mitigation Plan:** As part of the WSCP, water suppliers are required to assess seismic risks to their water system facilities and measures to mitigate those risks (CWC § 10632.5, SB 664, 2015)

Of the above, the inclusion of the WSCP (including the seismic risk assessment and mitigation plan as part of the WSCP) as a separate document with revised elements is the most significant update affecting the 2020 UWMPs. AB 1414, SB 606, and SB 664, which amended the WSCP, mark a continued focus on water shortage preparedness and pre-planned strategies for mitigating catastrophic service disruptions.

1.4 2020 UWMP SCOPE & FORMAT

1.4.1 SCOPE & TOPICS OF DISCUSSION

This UWMP provides DWR with information on the present and future water resources and demands and provides an assessment of the water resource needs of Suburban. Specifically, this document will provide water supply planning for a 25-year planning period in 5-year increments and effectively revises Suburban's 2015 UWMP. This plan will identify water supplies for existing and future demands, quantify water demands during normal year, single-dry year, and multiple-dry years, and identify supply reliability under the three hydrologic conditions. This document has been prepared in compliance with the requirements of the Act as amended in 2009, and includes the following topics:

- *Water Service Area and Facilities*
- *Water Sources and Supplies*
- *Water Use by Customer Type*
- *Energy Intensity*
- *Climate Change Impacts*
- *Demand Management Measures*
- *Water Supply Reliability*
- *Planned Water Supply Projects and Programs*
- *Water Shortage Contingency Plan*
- *Recycled Water*

With the passage of SBx7-7 in 2009, Demand Management Measures (DMMs) have become a critical component of an agency's UWMP.

The topics listed on the previous page are consistent with the 2015 UWMP with the additions of Climate Change Impacts and Energy Intensity. Furthermore, updates also include narratives related to the above topics reflecting current (2020) conditions. In addition, the incorporation of visual format changes, expansions of existing text, and addition of new sub-categories and/or new data enhance this 2020 UWMP and provide more benefit for Suburban.

1.4.2 SBX7-7 CONSERVATION UPDATES

As required in the 2015 UWMP, each urban retail water supplier must include in its 2020 UWMP the following information from its target-setting process:

- *Baseline daily per capita water use*
- *2020 Urban water use target*
- *2015 Interim water use target*
- *Compliance method being used along with calculation method and support data*
- *Updates on interim (2015) target*

Since the above information was already contained in the 2015 UWMP, an agency has the option of re-stating this information if it is the same from the 2015 UWMP or revising it if different from the 2020 UWMP.

Wholesale water suppliers, including Suburban's imported water suppliers, Central Basin Municipal Water District (CBMWD), Upper San Gabriel Valley Municipal Water District (USGVMWD), and Three Valleys Municipal Water District (TVMWD), are required to include an assessment of present and proposed future measures, programs, and policies that would help Suburban achieve the 20x2020 goal.

Figure 1.2: SBx7-7 Aims to Protect Water Sources

1.4.3 FORMAT OF THE REPORT

The sections in this Plan correspond to the UWMP Act (Article 2, Contents of Plans, Sections 10631, 10632, and 10633). The sequence used for the required information, however, differs slightly in order to present information in a manner reflecting the unique characteristics of Suburban's water utility. The sections are as follows:

Section 1 - Introduction	This section describes the UWMP Act, Suburban's planning and coordination process, the history of Suburban's water supply system, and a description of its service area.
Section 2 – Water Demands	This section describes past, current, and projected future water demands within Suburban's service area as well as factors that affect demand, including climate and population demographics. This chapter also discusses the requirements of the Water Conservation Act of 2009 (SBx7-7). This section also looks at climate change impacts to water demands and projections.
Section 3 – Water Sources & Supplies	This section describes Suburban's water supplies, including imported water from MWD, and how Suburban handles those supplies. This section also discusses the quality of Suburban's water sources, including a discussion on the treatment and testing of water.
Section 4 – Demand Management Measures	This section addresses Suburban's compliance with the current Best Management Practices (BMPs), otherwise known as Demand Management Measures (DMMs).
Section 5 – Water Shortage Contingency Plan	This section describes Suburban's contingency planning in the event of a water supply interruption, such as a drought or catastrophe. This section also discusses Suburban's Board adopted Conservation Plan (first adopted in 2009) and MWD's Water Surplus and Drought Management Plan (WSDM).
Section 6 – Recycled Water	This chapter describes past, current, and projected recycled water use, along with a description of wastewater collection and treatment facilities.
Section 7 – Future Water Supply Projects & Programs	This section discusses planned and potential future water supplies and programs, including new supply sources, transfers and exchanges, and the feasibility of such supplies and programs.
Section 8 – Plan Adoption Process	This Section describes Suburban's planning and coordination process for the 2020 UWMP, including public and outside agency participation, and Board adoption.
Appendices	The appendices contain references, supplemental information, and specific documents relating to Suburban, used to prepare this 2020 UWMP.

1.5 AGENCY OVERVIEW

Suburban Water Systems is a company under The SouthWest Water Company. The SouthWest Water Company owns and operates regulated water and wastewater systems in Alabama, California, Oregon, South Carolina, and Texas. The stated mission of the SouthWest Water Company is to provide safe and reliable water, wastewater services, and resource management for homes, businesses, and communities. The company was founded in 1946 in the San Gabriel Valley, California, as the San Jose Hills Water Company, which sold water to local farmers and ranchers. The company was consolidated in 1953 to form Suburban Water Systems. The company was then incorporated as SouthWest Water Company in 1954, with Suburban remaining one of its subsidiaries. SouthWest Water Company then expanded outside of California in 1969. SouthWest Water consolidated its many subsidiaries in 2007 under a single name, though its assets in the San Gabriel Valley are still referred to as Suburban Water Systems.

Suburban has an 8-member Board of Directors who participate in the management of Suburban. The current members of the Board of Directors are:

- **Karen J. Plessinger – Chairman, Board of Directors**
  Member of the University of Nebraska-Lincoln College of Business Finance Advisory Board
- **Rob MacLean – President and CEO of SouthWest Water**
  Member of the Executive Committee of the National Association of Water Companies
- **Art Beattie – Board Director**
  Former Executive Vice President and Chief Financial Officer at Southern Company
- **Sherina Maye Edwards – Board Director**
  Chief Executive Officer of INTREN
- **Peter Kind – Board Director**
  Founder of the advisory firm eiAdvocates LLC
- **Hai-Gi Li – Board Director**
  Managing Director and Investment Principal for the Infrastructure Investments Group at J.P.Morgan Asset Management – Global Real Assets
- **Hilda Pinnix-Ragland – Board Director**
  Former Vice President and Energy Consultant for Duke Energy
- **Michael Quinn – Board Director**
  Former President & CEO of SouthWest Water Company

Suburban takes pride in providing safe and reliable water, wastewater services and resource management for homes, businesses and communities nationwide.

1.6 SERVICE AREA AND FACILITIES

1.6.1 SERVICE AREA DESCRIPTION

Suburban is a retail water company (Investor-owned Utility) that currently serves approximately 300,000 people within its service area. Suburban is located in Southern California, approximately 20 miles east of the City of Los Angeles. Most of Suburban's service area is located within Los Angeles County, with the exception of small areas located in unincorporated portions of Orange County.

Suburban serves the cities of Glendora, Covina, West Covina, La Puente, Walnut, Whittier, La Mirada, La Habra, and Buena Park as well as sections of unincorporated Los Angeles County and Orange County. Suburban's service area is currently divided into two main service areas: the San Jose Hills Service Area, and the Whittier/La Mirada Service Area. Areas served by Suburban are primarily developed land, including residential, commercial and industrial customers. **Figure 1.3** on the next page shows Suburban's service area.

1.6.2 SUBURBAN'S WATER FACILITIES

Suburban serves a population of about 300,000 through a water distribution system that includes 18 wells, 35 reservoirs, and more than 800 miles of pipeline. Its network of facilities pumps and distributes approximately 43,000 acre-feet of water annually (an acre-foot of water is about 326,000 gallons, which meets the annual average indoor/outdoor water needs of 1-2 households).

Groundwater comes from Suburban-owned wells in the Main San Gabriel Basin and Central Basin. The well water is disinfected and treated prior to entering the distribution system. To date, Suburban has the following wells:

- ***San Jose Hills***, four active wells in the Main Basin, no wells in Central Basin
- ***Whittier/La Mirada***, four active wells in the Main Basin, two active wells in Central Basin

Water supply is supplemented with water purchased mainly from member agencies of the Metropolitan Water District of Southern California (MWD), Covina Irrigating Company, and California Domestic Water Company (Cal Domestic). Suburban Water is regulated by the California Public Utilities Commission (CPUC).

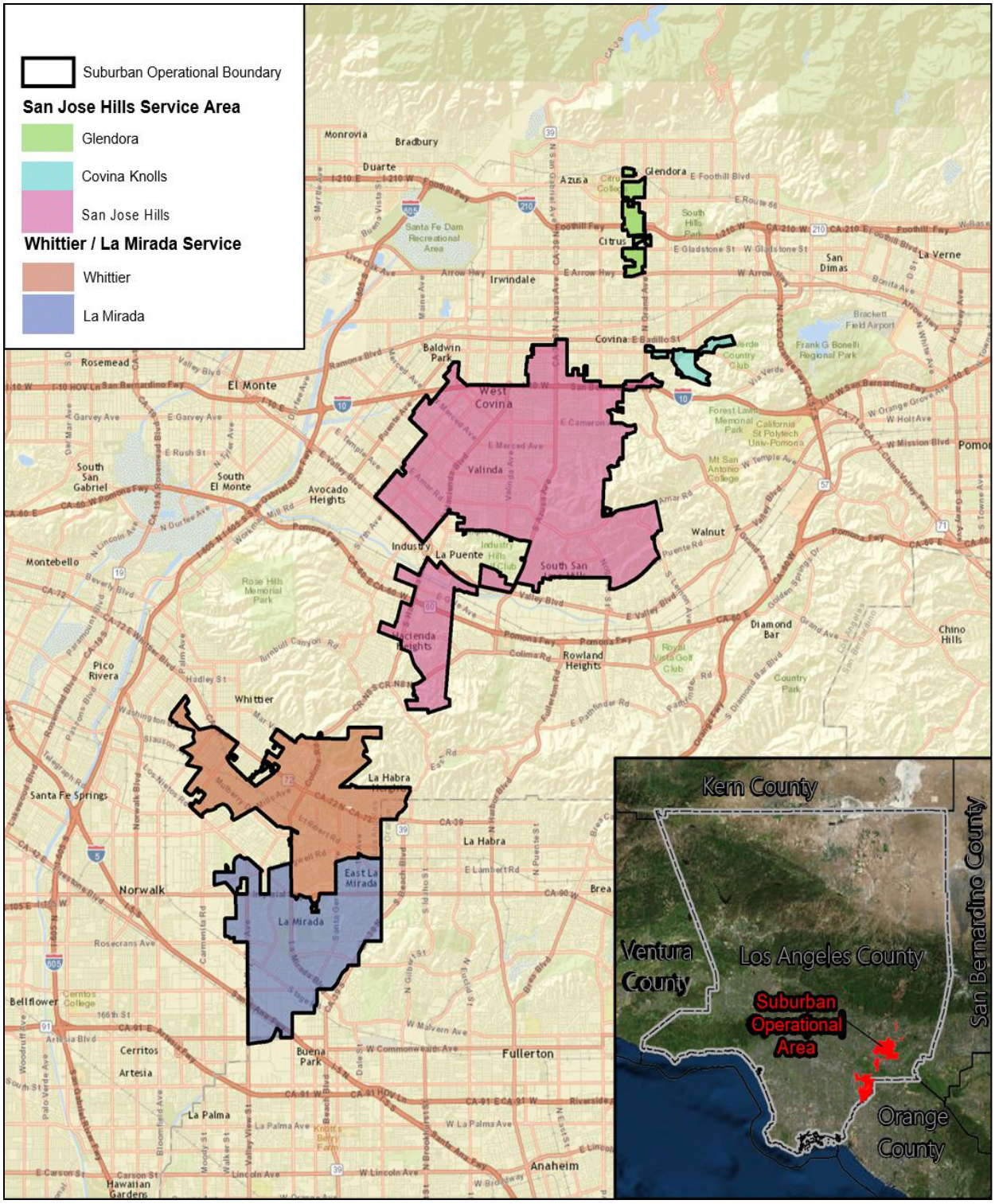
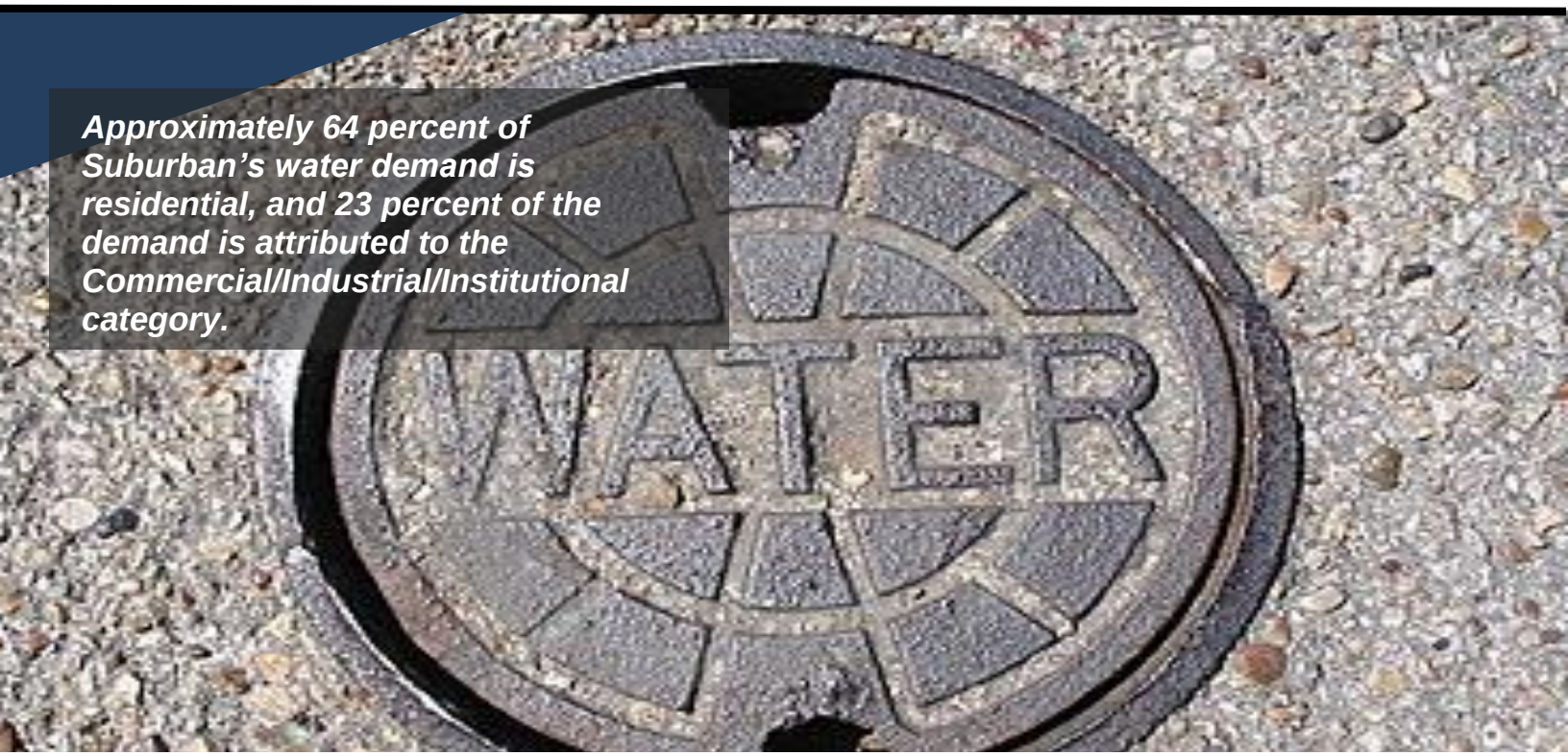


Figure 1.3: Suburban's Service Boundaries



Approximately 64 percent of Suburban's water demand is residential, and 23 percent of the demand is attributed to the Commercial/Industrial/Institutional category.

SECTION 2: WATER DEMAND

2020 URBAN WATER MANAGEMENT PLAN

SECTION 2 WATER DEMAND

2.1 OVERVIEW

Water use within Suburban's service area includes residential potable use, landscape irrigation use, commercial and institutional uses, and of course water losses. Water use is variable and depends on a number of factors which include seasonal climate changes, demographic shifts, changes in land use or redevelopment, and of course legislation. Since Suburban's service area is largely residential, changes in residential plumbing fixtures and customer usage habits can significantly affect water usage. Suburban is able to meet its demands with a blend of groundwater and imported water.

This section explores the water usage trends within Suburban's service area and quantifies total usage per customer class. In addition, the provisions of SBx7-7 are explored in detail.

2.2 FACTORS AFFECTING DEMAND

Water consumption is influenced by many factors including climate characteristics of the hydrologic region, demographics (including social and economic demographics), land use characteristics, and economics. The key factors affecting water demand in Suburban's service area are discussed in the following sub-sections.

2.2.1 CLIMATE

Suburban is located within the South Coast Air Basin (SCAB) that encompasses urban and unincorporated areas of Los Angeles County. The SCAB climate is characterized by a "Mediterranean" climate: a semi-arid environment with mild winters, warm summers and moderate rainfall. **Table 2.1** shows the historical average evapotranspiration (ETo), rainfall, and temperatures for the Suburban service area from 2001 to 2020.

Table 2.1: Monthly Average Climate Characteristics

Month	Standard Monthly Average ETo (Inches)	Average Total Rainfall (Inches)	Average Temperatures (°F)	
			Max.	Min.
January	1.92	1.48	69.09	41.89
February	2.31	2.31	67.29	43.13
March	3.65	1.21	69.14	46.89
April	4.53	0.62	71.30	49.69
May	4.99	0.32	72.42	54.46
June	4.90	0.01	74.88	58.84
July	5.70	0.09	80.42	62.36
August	5.53	0.02	82.53	61.99
September	4.50	0.14	83.64	59.71
October	3.29	0.39	78.97	54.18
November	2.10	0.74	73.68	46.89
December	1.65	2.10	67.92	41.73
Annual	**45.07**	**9.41**	**74.27**	**51.81**

The sources of Suburban's imported water supplies, the State Water Project (SWP) and Colorado River Aqueduct (CRA), are influenced by weather conditions in Northern California and along the Colorado River Basin region. Both regions have recently been suffering from multi-year drought conditions and record low rainfalls which directly impact demands and supplies to Suburban and Southern California. In addition, Suburban purchases water from local wholesalers, Cal Domestic, and Covina Irrigating Company, that are impacted by the drought.

Climate fluctuations not only can increase or decrease demand, but can also directly affect Suburban's ratio of groundwater to imported water, since reduced precipitation and snowfall means less groundwater replenishment. When groundwater supplies are reduced, Suburban purchases more imported water.

Figure 2.1: Snowfall on San Gabriel Mountains

CLIMATE CHANGE

The rise of anthropogenic activities producing carbon dioxide in the world has changed the earth's climate by emitting greenhouse gasses responsible for global warming. This has resulted in extreme weather events occurring more frequently. The severity and frequency

of climate change impacts on temperature and precipitation patterns can be difficult to forecast due to dramatic shifts in weather patterns as a result of increased concentrations of carbon dioxide in the atmosphere. While the precise timing, severity, and regional impacts of these temperature and precipitation changes are uncertain, climate researchers have identified several important issues of concern for water planners in California. The climate change impacts of concern are as follows:

Temperature Increases	• More winter precipitation falling as rain rather than snow, leading to reduced snowpack water storage, reduced long term soil humidity, reduced groundwater and downstream flows, and reduced imported water deliveries • Higher irrigation demands as temperatures alter evapotranspiration rates, and growing seasons become longer • Exacerbated water quality issues associated with dissolved oxygen levels, increased algal blooms, and increased concentrations of salinity and other constituents • Impacted habitats for temperature-sensitive fish and other life forms, and increased susceptibility of aquatic habitats to eutrophication
Precipitation Pattern Changes	• Increased flooding (both coastal and inland) caused by more intense storms • Changes to growth and life cycle patterns caused by shifting weather patterns • Threats to soil permeability, adding to increased flood threat and decreased water availability • Reduced water supply caused by the inability to capture precipitation from more intense storms, and a projected progressive reduction in average annual runoff (though some models suggest that there may be some offset from tropical moisture patterns increasingly moving northward) • Increased turbidity caused by more extreme storm events, leading to increased water treatment needs and impacts to habitat • Increased wildfires with less frequent, but more intense rainfall, and possibly differently timed rainfall through the year, potentially resulting in vegetation cover changes • Reduction in hydropower generation potential
Sea Level Rise	• Inundation and erosion of coastal areas (coastal bluffs in particular), including coastal infrastructure • Saline intrusion of coastal aquifers • Increased risk of storm surges and coastal flooding and erosion during and after storms • Changes in near-shore protective biogeography such as loss of sand, tide pools, wetlands, and kelp beds

Although the extent of these changes is uncertain, Suburban is already planning ahead to ensure long lasting reliability of its source for their customers.

2.2.2 DEMOGRAPHICS

The population within Suburban's service area is expected to increase at an annual rate of 0.2 percent. **Table 2.2** shows the current and projected population for the next 25 years. **Table 2.3** shows the current and projected population breakdown for the various subservice areas.

Table 2.2: Population – Current and Projected (DWR Table 3-1 Retail)

Service Area	2020	2025	2030	2035	2040	2045
San Jose Hills	175,529	177,276	179,040	180,822	182,622	184,440
Whittier / La Mirada	122,838	123,805	124,780	125,763	126,753	127,751
Total	298,367	301,081	303,820	306,585	309,375	312,191

Table 2.3: Population Breakdown per Service Area – Current and Projected

Service Areas		2020	2025	2030	2035	2040	2045
San Jose Hills	San Jose Hills	168,843	170,523	172,221	173,935	175,666	177,414
	Glendora	5,249	5,301	5,354	5,407	5,461	5,515
	Covina Knolls	1,437	1,451	1,466	1,480	1,495	1,510
	Subtotal	**175,529**	**177,276**	**179,040**	**180,822**	**182,622**	**184,440**
Whittier / La Mirada	Whittier	66,045	66,565	67,089	67,617	68,150	68,686
	La Mirada	56,793	57,240	57,691	58,145	58,603	59,064
	Subtotal	**122,838**	**123,805**	**124,780**	**125,763**	**126,753**	**127,751**
Total		**298,367**	**301,081**	**303,820**	**306,585**	**309,375**	**312,191**

The service area populations for Suburban was determined using the DWR Population Tool ("WUE"), which uses the service boundaries, US Census data, and number of residential service connections. The tool calculates population by using past US Census data and service connections to obtain persons per connection. Using the persons per connection and current count on service connections would provide the current service population. Future service population can be projected based on the average growth factor.

Suburban does not anticipate any significant increases in employment for the area based on the land availability and the zoning. Densification will occur as single-family lots are converted to multi-family dwellings where it is allowed by zoning classification and the governing agency.

2.2.3 LAND USE

San Jose Hills Service Area

The San Jose Hills Service Area encompasses approximately 24.17 square miles (15,470 acres) and is the successor of the former San Jose Hills Water Company. The Service Area is primarily located along the southerly and easterly sides of the San Gabriel Valley, from just north of the San Bernardino Freeway (I-10) to south of the Pomona Freeway (I-60). The Service Area has a total of approximately 42,700 service connections within the cities of Glendora, Covina, West Covina, La Puente, and Walnut, as well as unincorporated areas of Los Angeles County.

The Service Area is divided into three public water systems, which include: the San Jose Hills water system serving parts of the cities of Hacienda Heights, La Puente, West Covina, and Walnut; the Covina Knolls water system serving portions of the City of Covina; and the Glendora water system serving portions of the City of Glendora. The Service Area serves approximately 75 percent of the City of West Covina, 54 percent of the City of La Puente, 21 percent of the City of Walnut, 6 percent of the City of Glendora, and about 1 percent each of the City of Covina and portions of unincorporated Los Angeles.

Figure 2.2: Suburban's Service Area Comprises of a Variety of Residential, Commercial, and Industrial Uses

Whittier/La Mirada Service Area

The Whittier/La Mirada Service Area encompasses an area of approximately 17.53 square

miles (11,216 acres) and is the successor of the former Whittier Water Company, La Mirada Water Company, and the Murphy Ranch Mutual Water Company. The Service Area is located in the southeasterly portion of Los Angeles, northerly of Interstate 5, east of the San Gabriel Freeway (I-605), and along the southerly side of the Puente Hills. The Service Area has approximately 33,800 service connections within the cities of Whittier, La Mirada, La Habra, and Buena Park, and unincorporated areas of Los Angeles County and Orange County.

The Service Area is divided into two water systems, which include: the Whittier water system serving the City of Whittier, and the La Mirada water system serving the City of La Mirada and services in the City of Buena Park and Orange County. The Service Areas serves the majority of the City of La Mirada and approximately 52 percent of the City of Whittier. Suburban serves approximately 3.88 square miles of unincorporated area of Los Angeles County, Orange County, City of La Habra, and City of Buena Park.

2.2.4 LEGISLATION

The passage of SBx7-7, discussed in **Section 2.4**, has increased efforts to reduce the use of potable supplies in the future. As a retailer, Suburban has provided an assessment of its present and proposed future measures, programs, and policies to help its service area achieve the water use reductions.

Substantial water reductions can be gained by proper landscape design, installation, and maintenance. To improve water savings in this sector, DWR has updated the State Model Water Efficient Landscape Ordinance (MWELO) for cities and counties per Governor Brown's Executive Order B-29-15. MWELO promotes efficient landscapes in new developments and retrofitted landscapes.

The revised MWELO increases water use efficiency standards for new and retrofitted landscapes through more efficient irrigation systems, greywater usage, onsite storm water capture, and by limiting the portion of landscapes which can be covered in turf. It also required reporting by cities and counties on the implementation and enforcement of local ordinances, with required annual implementation reports due by January 31 for the previous year.

2.3 WATER USE WITHIN SUBURBAN'S SERVICE AREA

The knowledge of an agency's water consumption by type of use or by customer class is key to developing that agency's water use profile which identifies when, where, and how much water is used, and by whom within the agency's service area. A comprehensive water

use profile is critical to the assessment of impacts of prior water conservation efforts as well as to the development of future conservation programs.

This section provides an overview of Suburban's water consumption by customer class from 2016 to 2020. The customer classes are categorized as follows: single-family residential, multi-family residential, commercial/industrial/institutional (CII), and dedicated landscape, and fire services. Non-revenue water is discussed later in this section.

2.3.1 HISTORIC WATER DEMAND

Water demands within the Suburban's service area over the past six years were met by the groundwater from Suburban-owned wells in the Main San Gabriel Basin and Central Basin and imported water from various wholesalers. Annual water use since 2015 has ranged from about 41,374 acre-feet (AF) to 45,389 AF (average 43,027 acre-feet per year (AFY)) as shown below in **Table 2.4**. As indicated by the table, annual water use fluctuates each year.

Table 2.4: Six-Year Historic Total Water Demand (AF)

Year	2015	2016	2017	2018	2019	2020
San Jose Hills	23,371	23,052	24,333	24,823	22,984	24,939
Whittier / La Mirada	18,431	18,392	19,078	19,920	18,390	20,451
Total	**41,801**	**41,444**	**43,411**	**44,742**	**41,374**	**45,389**

2.3.2 WATER USE STATISTICS

Suburban maintains records of water consumption and bills its customers on a monthly basis for water. Approximately 64 percent of Suburban's water demand is residential. CII sectors account for approximately 23 percent of Suburban's potable water supply. The remaining portion of Suburban's demand pertains to industrial purposes. Suburban does not provide any sales to agriculture, nor other agencies, saline water intrusion barriers, groundwater recharge, or conjunctive use. Unaccounted for water consists of water losses due to leakage, inaccurate water meters, or unmetered volumes. Water loss calculation was done in accordance with CWC 10631(e)(3)(B). The total number of service connections in 2020 is shown in **Table 2.5**. Water consumption for the combined, San Jose Hills and La Mirada, service area as well as the service area breakdown are shown in **Tables 2.6**, **2.7**, and **2.8**, respectively.

Table 2.5: Suburban's Service Area Service Connections by Sector

Water Sector	San Jose Hills			Whittier/La Mirada	
	San Jose Hills	Glendora	Covina Knolls	Whittier	La Mirada
Single Family	37,542	1,514	481	16,905	14,116
Commercial	1,916	28	17	911	847
Institutional	550	17	-	239	333
Industrial	21	-	-	-	15
Landscape	357	-	-	117	155
Others	68	-	1	18	13
Subtotal	**40,454**	**1,559**	**499**	**18,190**	**15,479**
Total	**42,512**			**33,669**	

Table 2.6: 2020 Water Demand by Sector for Combined Suburban Service Area (AF) (DWR Table 4-1 Retail)

Use Type	2020 Actual		
	Additional Description	Level of Treatment When Delivered	Volume
Single Family		Drinking Water	29,299
Commercial		Drinking Water	7,432
Institutional/Governmental		Drinking Water	1,783
Industrial		Drinking Water	1,245
Landscape		Drinking Water	2,038
Other	Street Sweeping & Const. Water	Drinking Water	62
Losses		Drinking Water	3,531
		TOTAL	45,389

Table 2.7: 2020 Water Demand by Sector for San Jose Hills Service Area (AF) (DWR Table 4-1 Retail)

Use Type	2020 Actual		
	Additional Description	Level of Treatment When Delivered	Volume
Single Family		Drinking Water	16,627
Commercial		Drinking Water	4,213
Institutional/Governmental		Drinking Water	775
Industrial		Drinking Water	901
Landscape		Drinking Water	912
Other	Street Sweeping & Const. Water	Drinking Water	12
Losses		Drinking Water	1,500
		TOTAL	24,939

Table 2.8: 2020 Water Demand by Sector for Whittier / La Mirada Service Area (AF) (DWR Table 4-1 Retail)

Use Type	2020 Actual		
	Additional Description	Level of Treatment When Delivered	Volume
Single Family		Drinking Water	12,673
Commercial		Drinking Water	3,219
Institutional/Governmental		Drinking Water	1,008
Industrial		Drinking Water	344
Landscape		Drinking Water	1,126
Other	Street Sweeping & Const. Water	Drinking Water	50
Losses		Drinking Water	2,031
		TOTAL	20,451

2.3.3 NON-REVENUE WATER (INCLUDING "WATER LOSSES")

Suburban's distribution system water losses are the physical water losses from the distribution system up to the point of customer consumption. A portion of the amount is due to water losses resulting from pressure testing, main flushing, leaks ruptures and meter inaccuracies. This can be seen in the negative losses (theoretical gains) as shown in **Tables 2.9** and **2.10** for the San Jose Hills and Whittier/La Mirada Service Areas, respectively. Water losses is calculated based on the water system balance methodology developed by the American Water Works Association (AWWA) through water loss audit forms. These forms are required to be validated and submitted to DWR on an annual basis. Note that Suburban has completed and validated their water loss audit forms for 2016 to 2019. The water loss for 2020 is an estimate based on the difference between supply and consumer consumption.

Table 2.9: 2016 - 2020 Water Losses for San Jose Hills Service Area (DWR Table 4-4)

Reporting Period Start Date (mm/yyyy)	Volume of Water Loss (AF)
01/2016	1,426.69
01/2017	1,553.73
01/2018	1,152.57
01/2019	1,015.50
01/2020	1,500.00

Table 2.10: 2016 - 2020 Water Losses for Whittier / La Mirada Service Area (DWR Table 4-4)

Reporting Period Start Date (mm/yyyy)	Volume of Water Loss (AF)
01/2016	1,449.39
01/2017	1,404.11
01/2018	1,114.33
01/2019	1,175.83
01/2020	2,031.00

2.4 WATER CONSERVATION ACT

2.4.1 SBX7-7 BACKGROUND

Due to the limited amount of water allowed to be pumped in the San Joaquin Delta, the CA Legislature drafted the Water Conservation Act of 2009 (SBx7-7) to protect statewide water sources. The legislation called for a 20 percent reduction in water use in California by the year 2020. The legislation amended the Water Code to call for 2015 and 2020 water use targets in the 2010 UWMPs, updates or revisions to these targets in the 2015 and 2020 UWMPs, and allows DWR to enforce compliance to the new water use standards. In essence, the bill requires each urban retail water supplier to develop urban water use targets to help meet the 20 percent goal by 2020 and an interim 10 percent goal by 2015.

Figure 2.3: Suburban's Water Conservation Efforts Include Drought Tolerant Landscape

The bill establishes methods for urban retail water suppliers to determine their targets to help achieve statewide water reduction targets, which may or may not be a strict 20 percent level. The retail water supplier must select one of the four target-setting methods as described in **Section 2.4.3**. The retail agency may also choose to comply with SBx7-7 as an individual or as a region in collaboration with other water suppliers. Under the regional compliance option, the retail water supplier is mandated to report the water use target for its individual service area. The bill also includes reporting requirements in the 2010, 2015, and 2020 UWMPs. Beginning in 2016, failure to comply with interim and final targets makes a retail agency ineligible for grants and loans from the state needed to attain water self-sufficiency by 2020; however, if an agency which is not in compliance documents a plan and obtains funding approval to come into compliance, it could then become eligible for grants or loans.

Wholesale water suppliers, including CBMWD, TVMWD, and USGVMWD, are not required to determine baseline daily per capita water use, urban water use target, interim urban water use target, or compliance daily per capita water use. Instead, wholesale water suppliers are required to include in their UWMPs discussions of programs they intend to implement to support the retail water suppliers, such as Suburban, in attaining their reduction goals and targets.

2.4.2 SBX7-7 PROVISIONS

In addition to an overall statewide 20 percent water use reduction, the objective of SBx7-7 is to reduce water use within each hydrologic region in accordance with the agricultural and urban water needs of each region. Currently, DWR recognizes 10 separate hydrologic regions in California as shown in **Figure 2.4.** Each hydrologic region has been established for planning purposes and corresponds to the state's major drainage areas. Suburban is located in the South Coast Hydrologic Region (HR), which includes all of Orange County, most of San Diego and Los Angeles Counties, parts of Riverside, San Bernardino, and Ventura counties, and a small amount of Kern and Santa Barbara Counties. The South Coast HR is shown in **Figure 2.5**.

Per capita water use, measured in gallons per capita per day (GPCD), in the South Coast HR varies between different water agencies, depending on the geographic and economic conditions of the agency's service area. The South Coast HR has an overall baseline per capita water use of 180 GPCD and DWR has established a regional target of 149 GPCD for the region as a compliance target to satisfy SBx7-7 legislation.

Figure 2.4: California's 2020 Water Conservation Goals

Figure 2.5: South Coast Hydrologic Region

2.4.3 SBX7-7 COMPLIANCE OPTIONS

DWR has established four compliance methods for urban retail water suppliers to choose from. Each supplier is required to adopt one of the four methods to comply with SBx7-7 requirements. The four options are shown in **Table 2.11** to the right.

These options were established in order to avoid placing any undue hardship on water agencies that have already been implementing water conservation measures. The basic procedure for determining the applicable water reduction target is illustrated by **Figure 2.6**. If an agency's 10-year baseline is slightly higher than the Hydrologic Region's target, that agency still must achieve a five percent reduction from its 5-year baseline. If an agency has a per capita water use of 100 GPCD or less, that agency will not have to adhere to any reduction targets as that agency is already considered water efficient.

Table 2.11: DWR Compliance Methods

Methods	Description
Method 1	A strict 20 percent reduction from the baseline by 2020 and 10 percent by 2015
Method 2	A budget-based approach by requiring an agency to achieve a performance standard based on three metrics: ○ Residential indoor water use of 55 GPCD ○ Landscape water use commiserate with a Model Landscape Ordinance ○ 10 percent reduction in baseline CII water
Method 3	Requires achievement of 95 percent of the applicable state hydrologic region target as set forth in the State's 20x2020 Water Conservation Plan
Method 4	Requires the subtraction of Total Savings from the Base GPCD: ○ Total Savings includes indoor residential savings, meter savings, CII savings, and landscape and water loss savings

2.4.4 SUBURBAN'S COMPLIANCE OPTION SELECTION

To satisfy the provisions of SBx7-7, Suburban previously established a per capita water use target for the year 2020 as well as an interim target (2015). DWR provided guidelines for determining these targets in its *Methodologies for Calculating Baseline and Compliance Urban Per Capita Water Use* (released 2010; revised 2011 and 2016) and also in the 2015 and 2020 UWMP Guidebooks. The *Methodologies* guidebook made provisions that allowed a water supplier to meet the target requirements by achieving any one of a

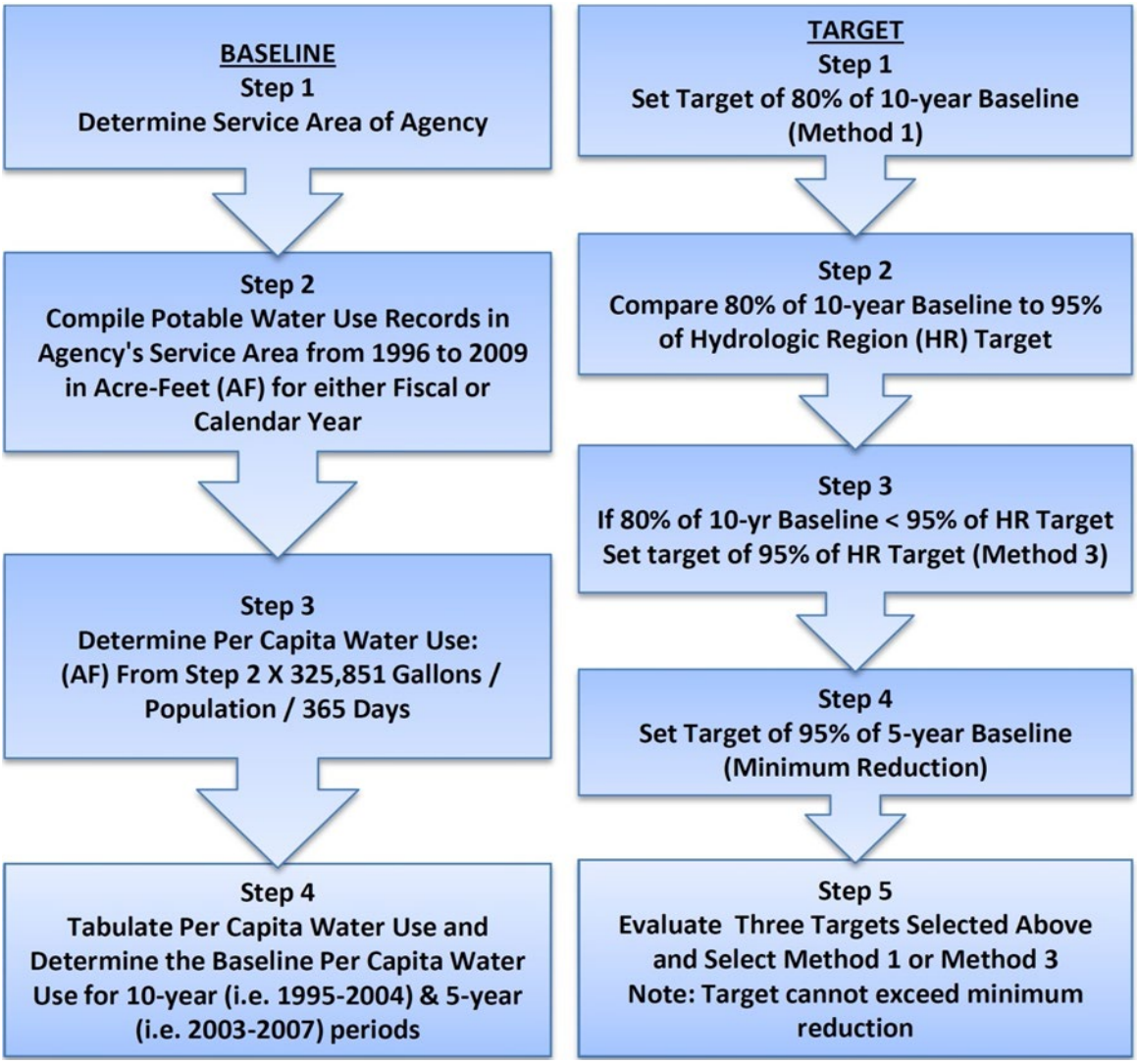


Figure 2.6: Procedures for Determining Baseline & Targets

number of target requirements, provided that the water supplier's per capita water use is low enough relative to the region within which it supplies water. The basic options included a minimum reduction requirement of 5 percent (Water Code § 10620), a 5 percent reduction from the Regional (South Coast HR) target (Water Code § 10608.20(b)(3)), or a strict 20 percent reduction.

Water agencies have the option of changing the Target methodology used in the 2020 UWMP from that which was used in the 2015 UWMP. Method 3 was applied in the 2015 UWMP for the San Jose Hills Service Area and Method 1 was used for the Whittier/La Mirada Service Area. Method 3 was used to for the combined Suburban service area. The methods used remain unchanged in this 2020 UWMP.

The first step to calculating an agency's water use target is to determine its base daily-per-

capita water use (baseline water use). This baseline water use is essentially the agency's gross water use divided by its service area population, reported in GPCD. Gross water use is defined as volume into the distribution system while deducting any recycled water for direct use during a 10-year period. The baseline water use is calculated as a continuous 10-year average during a period which ends no earlier than December 31, 2004 and no later than December 31, 2010. Agencies for which recycled water made up 10 percent or more of 2008 retail water delivery can use up to a 15-year average for the calculation. The base period must end no earlier than December 31, 2007, and no later than December 31, 2010.

2.4.5 BASELINE WATER USE

Recycled water use represents less than 10 percent of Suburban's retail delivery in 2008; therefore, a 10-year instead of a 15-year rolling average was calculated for both the San Jose Hills and Whittier/La Mirada service areas. Suburban's baseline water use is 169 GPCD for San Jose Hills and 189 GPCD for Whittier/La Mirada, which was obtained from the 10-year period January 1, 1999 to December 31, 2008. Suburban's total (combined service areas) baseline water use is 177 GPCD.

Tables 2.12, **2.13**, and **2.14** provide the base period ranges used to calculate the baseline water use as well as the service area population and annual water use data from the base daily per capita water use for Suburban's total, San Jose Hills, and Whitter/La Mirada service area, respectively. The data was used to calculate the continuous 10-year and 5-year average baseline. Moreover, regardless of the compliance method adopted by Suburban, it will need to meet the minimum water use target of 5 percent reduction from a five-year baseline as calculated.

Table 2.12: Past GPCD Water Use for the Combined Suburban Service Area

Calendar Year	Service Area Population	Gross Water use (AF)	Daily Per Capita Water use (GPCD)
1999	263,507	52,698	179
2000	292,404	58,673	179
2001	295,904	58,015	175
2002	295,300	61,615	186
2003	294,697	58,398	177
2004	294,970	59,575	180
2005	295,244	55,864	169
2006	295,239	57,588	174
2007	298,676	60,556	181
2008	298,335	56,609	169
10-Year Average (1999-2008) Base Daily per Capita Water Use:			**177**
5-Year Average (2003-2007) Base Daily per Capita Water Use:			**176**

Table 2.13: Past GPCD Water Use for San Jose Hills Service Area

Calendar Year	Service Area Population	Gross Water use (AF)	Daily Per Capita Water use (GPCD)
1999	147,280	27,534	167
2000	176,993	33,716	170
2001	178,575	33,846	169
2002	178,085	35,630	179
2003	177,595	33,553	169
2004	177,659	34,335	173
2005	177,723	32,157	162
2006	177,382	33,391	168
2007	179,135	34,724	173
2008	178,551	32,264	161
10-Year Average (1999-2008) Base Daily per Capita Water Use:			**169**
5-Year Average (2003-2007) Base Daily per Capita Water Use:			**169**

Table 2.14: Past GPCD Water Use for Whittier/La Mirada Service Area

Calendar Year	Service Area Population	Gross Water use (AF)	Daily Per Capita Water use (GPCD)
1999	116,227	25,164	193
2000	115,411	24,957	193
2001	117,329	24,169	184
2002	117,215	25,985	198
2003	117,102	24,845	189
2004	117,311	25,240	192
2005	117,521	23,707	180
2006	117,857	24,197	183
2007	119,541	25,832	193
2008	119,784	24,345	181
10-Year Average (1999-2008) Base Daily per Capita Water Use:			**189**
5-Year Average (2003-2007) Base Daily per Capita Water Use:			**188**

2.4.6 SBX7-7 WATER USE TARGETS

In its 2010 UWMP, Suburban selected their compliance methods to set their water reduction targets and goals. **Table 2.15** summarizes the selected compliance methods and the 2015 and 2020 targets based on the service area.

Table 2.15: Preferred Compliance Option & Water Use Targets

Service Area	Compliance Method	Baseline	2015 Target	2020 Target
San Jose Hills	Method 3	169	155	142
Whittier / La Mirada	Method 1	189	170	151
Combined	Method 3	177	159	142

Table 2.16 below shows Suburban's GPCD since 2015. As shown, Suburban's 2015 GPCD for San Jose Hills, Whittier/La Mirada, and combined Suburban was **119**, **136**, and **126**, respectively, which is well below their 2015 and 2020 Targets. Furthermore, San Jose Hills, Whittier / La Mirada, and combined Suburban met their 2020 Target by achieving a GPCD of **127**, **149**, and **136**, respectively.

Table 2.16: Suburban's Recent GPCD (2015 - 2020)

Calendar Year	Service Area Population	Gross Water use (AF)	Daily Per Capita Water use (GPCD)
San Jose Hills Service Area			
2015	178,792	23,371	119
2016	178,139	23,052	116
2017	177,487	24,333	122
2018	176,834	24,823	125
2019	176,182	22,984	116
2020	175,529	24,939	127
Whittier / La Mirada Service Area			
2015	120,710	18,431	136
2016	121,136	18,392	136
2017	121,561	19,078	140
2018	121,987	19,920	146
2019	122,412	18,390	134
2020	122,838	20,451	149
Combined Suburban Service Area			
2015	299,502	41,801	126
2016	299,275	41,444	124
2017	299,048	43,411	130
2018	298,821	44,742	134
2019	298,594	41,374	124
2020	298,367	45,389	136

2.4.7 WATER DEMAND IMPACTS FROM COVID-19 PANDEMIC & SBX7-7 COMPLIANCE

DWR recognizes that extraordinary events may have an impact towards water demands. On March 4, 2020, Governor Newsom proclaimed a state of emergency for the entire state due to the spread of COVID-19. Following Governor Newsom's statement, Los Angeles County also declared a state of emergency the same day. On March 11, 2020, the World Health Organization (WHO) declared COVID-19 a global pandemic. As a result, on March 19, 2020, Executive Order N-33-20 ("Safer at Home, Stay at Home" order) and a Public Health Order directed all Californians to stay home with the exception of going to an essential job or to shop for essential needs. This also required most Californians to work remotely from home. This event resulted in a significant increase to water demands for various water agencies, including Suburban. As shown in **Table 2.17**, the gross water use in 2020 is significantly higher than the past years averages.

Table 2.17: Water Usage Comparison Between 2020 and 2015-2019 Average

Service Area	2020 Gross Water Usage (AF)	2015 – 2019 Average (AF)	Difference (AF)
San Jose Hills	24,939	23,712	1,226
Whittier / La Mirada	20,451	18,842	1,609
Combined Suburban	45,389	42,555	2,835

DWR allows water purveyors to make adjustments to their 2020 Gross Water Use in the event of usual events considered as Extraordinary Events, Economic Adjustment, or Weather Normalization; however, according to Section 5.5.1.4 of 2020 UWMP Guidebook, adjustments for COVID-19 are not allowed. This impact resulted in no issues for CVWD to achieve their 2020 targets as shown in **Tables 2.18**, **2.19**, and **2.20**.

Table 2.18: Suburban 2020 Compliance (DWR Table 5-2)

2020 GPCD			2020 Confirmed Target GPCD	Did Supplier Achieve Targeted Reduction for 2020? Y/N
Actual 2020 GPCD	2020 TOTAL Adjustments	Adjusted 2020 GPCD		
136	*0*	*136*	*142*	*Yes*

Table 2.19: Suburban 2020 Compliance for San Jose Hills Service Area (DWR Table 5-2)

2020 GPCD			2020 Confirmed Target GPCD	Did Supplier Achieve Targeted Reduction for 2020? Y/N
Actual 2020 GPCD	2020 TOTAL Adjustments	Adjusted 2020 GPCD		
127	*0*	*127*	*142*	*Yes*

Table 2.20: Suburban 2020 Compliance for Whittier/La Mirada Service Area (DWR Table 5-2)

2020 GPCD			2020 Confirmed Target GPCD	Did Supplier Achieve Targeted Reduction for 2020? Y/N
Actual 2020 GPCD	2020 TOTAL Adjustments	Adjusted 2020 GPCD		
149	*0*	*149*	*151*	*Yes*

2.5 WATER USE REDUCTION PLAN

2.5.1 ON-GOING WATER CONSERVATION EFFORTS

In order to remain below the SBx7-7 targets, Suburban will continue to implement the water use efficiency measures described in **Section 4** of this UWMP and continue to participate in water use efficiency programs offered by MWD rebate programs for its retail agencies. Because residential homes are the largest water use sector in the region, the focus of water conservation efforts will continue to be residential rebate programs and public outreach programs. Single family residential homes and some industrial connections are common in Suburban's service areas.

Figure 2.7: SBx7-7 Seeks to Preserve the Waters of the Bay-Delta

In addition to the SBx7-7 provisions, agencies also sought to manage the provisions of Governor Brown's Executive Order B-29-2015. Governor Brown granted this Executive Order in April 2015 that mandated a statewide 25 percent reduction in water use through February 28, 2016, as compared to the amount used in 2013. This executive order helped to further the goals of SBx7-7. Even after the strict 25 percent reduction was lifted, Californians continued to save water, with cumulative water use savings of about 22

percent between June 2015 and January 2017. As Governor Brown ended the drought state of emergency in most of California in April 2017 with Executive Order B-40-17, state agencies released a long-term plan that advanced measures to better prepare the state for future droughts and make conservation a California way of life.

Through financial incentive programs and various public outreach campaigns and events, Suburban has met its SBx7-7 target as shown previously on **Tables 2.18**, **2.19**, and **2.20**.

2.5.2 FUTURE MWD PROGRAMS

OVERVIEW

In 2016, MWD, in collaboration with its member agencies, released the 2015 Update to the Integrated Water Resources Plan (IRP). The inaugural IRP was adopted in 1996, with previous updates in 2004 and 2010. The 2015 Update continues to assess and address how MWD plans to adapt to the changing conditions facing Southern California. The goals of the 2015 IRP include:

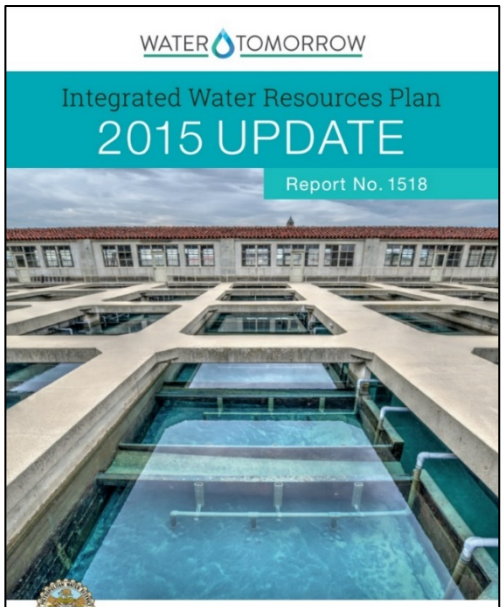


Figure 2.8: MWD's 2015 Integrated Water Resources Plan

- **Maintain Colorado River Aqueduct Supplies:** Develop programs to ensure that a minimum of 900,000 AF is available when needed, with access to 1.2 million acre-feet (MAF) in dry years.
- **Stabilize State Water Project Supplies:** Manage SWP supplies in compliance with regulatory restrictions in the near-term for an average of 980,000 AF of SWP supplies. Pursue a successful outcome in the Delta Conveyance Plan and California EcoRestore efforts for long-term average supplies of about 1.2 MAF.
- **Achieve Additional Conservation Savings:** Pursue further water conservation savings of 485,000 AF annually by 2040 through increased emphasis on outdoor water-use efficiency using incentives, outreach/education and other programs.
- **Develop Additional Local Water Supplies:** Develop 230,000 AF of additional local supplies produced by existing and future projects. The region would reach a target of 2.4 MAF by 2040, a key to providing water supply reliability into the future.

- **Maximize the Effectiveness of Storage & Transfer:** Develop a comprehensive strategy to pursue transfers and exchanges to hedge against shorter-term water demands and supplies imbalances until long-term solutions are in place.

- **Encourage Innovation:** Facilitate innovation in recycled water, desalination, stormwater capture and groundwater cleanup through a growing portfolio of initiatives, technologies and new ideas.

MWD is currently in the process of updating its IRP once again. The 2020 IRP is expected to be completed sometime in 2021.

2.6 DEMAND PROJECTIONS

2.6.1 25 YEAR PROJECTIONS

One of the main objectives of this UWMP is to provide Suburban's future water demand outlook. **Tables 2.21** through **2.26** project future demands based on water sector over the next 25 years. Demand projections were determined using 121 and 140 GPCD, based on the past five-year average and projection population growth for the San Jose Hills, and Whittier/La Mirada Service Areas, respectively. Per capita consumption rates should be expected to remain under the specific GPCD and trend further below that rate to continue water conservation efforts to combat climate change. It is important to note that Suburban does utilize recycled water within its service boundaries. This is further discussed in **Section 6**.

Table 2.21: Combined Suburban's Demand Projections by Sector (AF) (DWR Table 4-2 Retail)

Use Type	Additional Description	Projected Water Use				
		2025	2030	2035	2040	2045
Single Family		28,399	28,656	28,915	29,176	29,441
Commercial		7,999	8,072	8,144	8,218	8,292
Institutional		2,057	2,075	2,093	2,112	2,130
Industrial		1,076	1,086	1,096	1,107	1,117
Landscape		1,380	1,392	1,404	1,417	1,429
Other	Street Sweeping & Const. Water	57	58	58	59	59
Losses		2,651	2,675	2,699	2,723	2,747
TOTAL		43,620	44,013	44,410	44,811	45,215

Table 2.22: Suburban's Demand Projections by Sector for San Jose Hills Service Area (AF) (DWR Table 4-2 Retail)

Use Type	Additional Description	Projected Water Use				
		2025	2030	2035	2040	2045
Single Family		16,033	16,192	16,353	16,516	16,681
Commercial		4,395	4,439	4,483	4,528	4,573
Institutional		924	933	943	952	962
Industrial		814	823	831	839	847
Landscape		603	609	615	621	627
Other	Street Sweeping & Const. Water	16	17	17	17	17
Losses		1,302	1,315	1,329	1,342	1,355
TOTAL		**24,089**	**24,328**	**24,570**	**24,815**	**25,062**

Table 2.23: Suburban's Demand Projections by Sector for Whittier/La Mirada Service Area (AF) (DWR Table 4-2 Retail)

Use Type	Additional Description	Projected Water Use				
		2025	2030	2035	2040	2045
Single Family		12,366	12,463	12,561	12,660	12,760
Commercial		3,604	3,633	3,661	3,690	3,719
Institutional		1,133	1,142	1,151	1,160	1,169
Industrial		262	264	266	268	270
Landscape		777	783	789	795	802
Other	Street Sweeping & Const. Water	41	41	41	42	42
Losses		1,349	1,360	1,370	1,381	1,392
TOTAL		**19,531**	**19,685**	**19,840**	**19,996**	**20,153**

Table 2.24: Combined Suburban Total Water Demands (AF) (DWR Table 4-3 Retail)

	2020	2025	2030	2035	2040	2045
Potable Water, Raw, Other Non-potable	45,389	43,620	44,013	44,410	44,811	45,215
Recycled Water Demand	710	1,630	1,630	1,630	1,630	1,630
Optional Deduction of Recycled Water Put Into Long-Term Storage	0	0	0	0	0	0
TOTAL WATER USE	46,100	45,250	45,643	46,040	46,441	46,845

Table 2.25: Suburban Total Water Demands for San Jose Hills Service Area (AF) (DWR Table 4-3 Retail)

	2020	2025	2030	2035	2040	2045
Potable Water, Raw, Other Non-potable	24,939	24,089	24,328	24,570	24,815	25,062
Recycled Water Demand	710	700	700	700	700	700
Optional Deduction of Recycled Water Put Into Long-Term Storage	0	0	0	0	0	0
TOTAL WATER USE	25,649	24,789	25,028	25,270	25,515	25,762

Table 2.26: Suburban Total Water Demands for Whittier/La Mirada Service Area (AF) (DWR Table 4-3 Retail)

	2020	2025	2030	2035	2040	2045
Potable Water, Raw, Other Non-potable	20,451	19,531	19,685	19,840	19,996	20,153
Recycled Water Demand	0	930	930	930	930	930
Optional Deduction of Recycled Water Put Into Long-Term Storage	0	0	0	0	0	0
TOTAL WATER USE	20,451	20,461	20,615	20,770	20,926	21,083

2.6.2 LOW-INCOME HOUSEHOLD PROJECTIONS

One significant change to the UWMP Act since 2005 is the requirement for retail water suppliers to develop water use projections for "low-income" households at the single-family and multi-family level. These projections assist retail suppliers with compliance with Section 65589.7 of the Government Code, which requires suppliers to grant a priority for the provision of service to low-income households. Consistent with this Code section, a low-income household is defined as a household earning 80 percent or less of the area's median income.

This 2020 UWMP utilizes the Regional Housing Needs Assessment (RHNA) or Regional Housing Needs Plan information to obtain a percentage of low-income households within an area. The information was developed by the Local Council of Governments, in coordination with the California Department of Housing and Community Development. The RHNA plan lists every city within the Southern California region and provides percentages of very low-

and low-income households. The area Suburban serves is major parts of the San Gabriel Valley and parts of Los Angeles County, including unincorporated areas.

Existing and projected housing needs for Los Angeles County were incorporated into the most recent RHNA Subcommittee's report titled 6th Cycle Final RHNA Allocation Plan of the Southern California Association of Governments (SCAG). This plan covers the planning period from October 2021 to October 2029. Based on the RHNA plan, the percentage of very low- and low-income households combined was 47 percent for the San Jose Hills Service Area and 44 percent for the Whittier/La Mirada Service Area.

Therefore, from inference, it is estimated that approximately 47 percent and 44 percent of the projected water demands within the San Jose Hills and Whittier/La Mirada Service Areas, respectively, will be for housing needed for low-income households. **Table 2.27** provides the projected water needs for low-income household.

Table 2.27: Projected Water Demands for Low-Income Residential Households

Service Area		2025	2030	2035	2040	2045
San Jose Hills	Normal Demand	16,033	16,192	16,353	16,516	16,681
	Low-Income Demand	7,540	7,615	7,690	7,767	7,844
Whittier / La Mirada	Normal Demand	12,366	12,463	12,561	12,660	12,760
	Low-Income Demand	5,433	5,476	5,519	5,563	5,607

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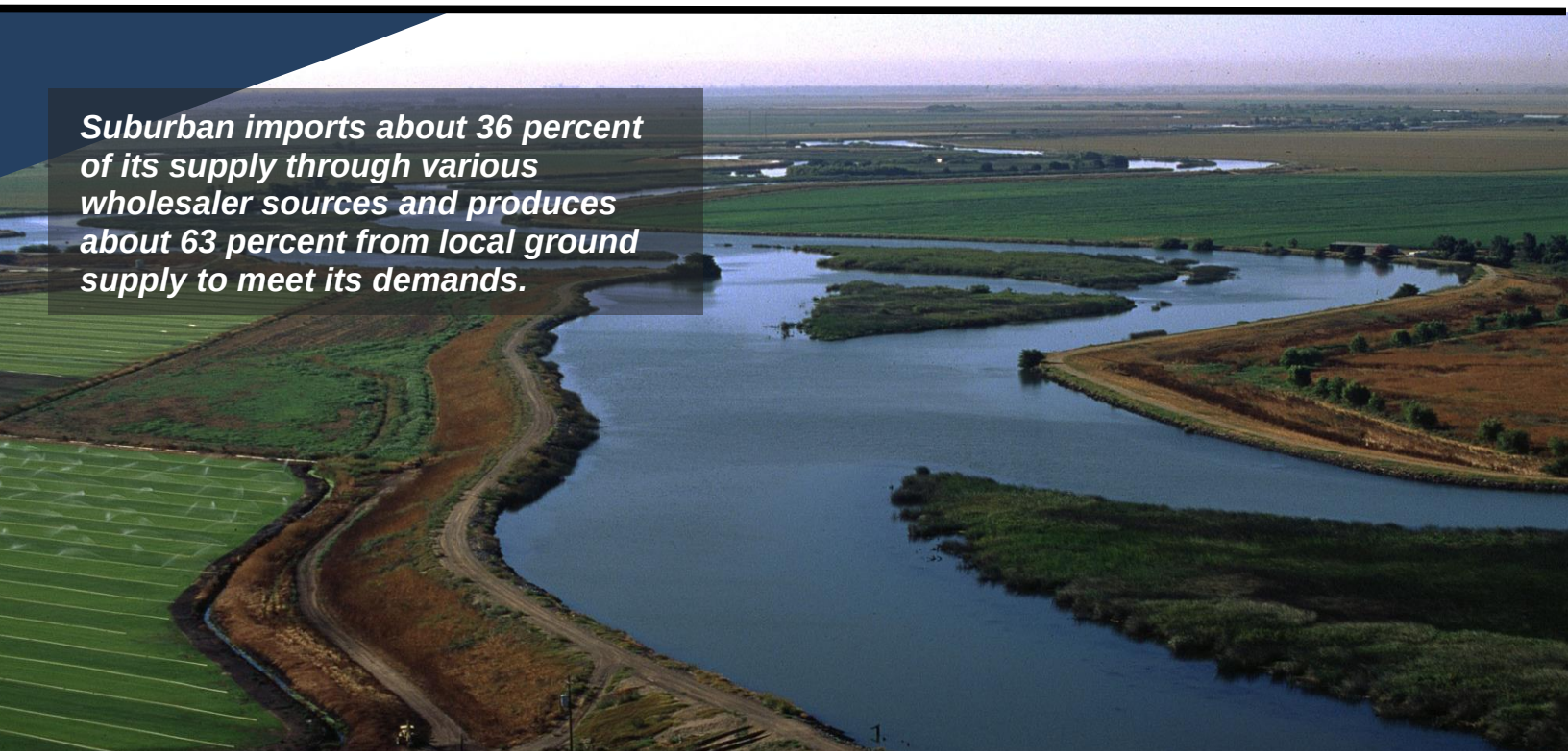


SECTION 3: WATER SOURCES & SUPPLY RELIABILITY

2020 URBAN WATER MANAGEMENT PLAN

SECTION 3 WATER SOURCES & SUPPLY RELIABILITY

3.1 OVERVIEW

Suburban has the legal right to pump groundwater from both the Main Basin and Central Basin and can purchase treated surface and groundwater from Covina Irrigation Company (CIC), treated groundwater from California Domestic Water Company (CDWC), and imported surface and reclaimed water from MWD through its member agencies, USGVMWD, CBMWD, and TVMWD. Furthermore, Suburban utilizes recycled water purchased from USGVMWD for landscape irrigation. Recycled water is further discussed in **Section 6**. Suburban serves the cities of Glendora, Covina, West Covina, La Puente, Walnut, Whittier, La Mirada, La Habra, and Buena Park as well as sections of unincorporated Los Angeles County and Orange County. Suburban's service area is currently divided into two main service areas: the San Jose Hills Service Area and the Whittier/La Mirada Service Area. Areas served by Suburban are primarily developed land, including residential, commercial, and industrial customers. This section discusses water supply, quality, and water reliability under all foreseeable hydrologic conditions from 2025 through 2045.

3.2 IMPORTED WATER

Suburban purchases water imported by MWD through its MWD member agencies: CBMWD, USGVMWD, and TVMWD.

- Formed in 1952, CBMWD represents water retailers for the purchase of imported water from MWD and, in the 1990s, expanded its mission to include the delivery of recycled water. CBMWD serves all or parts of 24 cities and unincorporated Los Angeles County, including Suburban's Whittier/La Mirada system.

- USGVMWD was formed in 1959, annexed to MWD in 1963, and began delivery of recycled water in 1983. USGVMWD serves all or parts of 17 cities and portions of unincorporated Los Angeles County, including Suburban's San Jose Hills system.

- TVMWD was established in 1950 as a MWD member agency. In 1987, TVMWD (and

partners) constructed the Miramar Water and Hydroelectric Facility to treat State Water Project surface water. TVMWD provides water to 13 customers, including Suburban's San Jose Hills system.

3.2.1 WATER SOURCES (MWD)

MWD has access to imported water from the Colorado River and the Sacramento-San Joaquin River Delta in Northern California. These two water systems provide Southern California with over 2 million acre-feet (MAF) of water annually for urban uses.

Colorado River

The Colorado River supplies California with 4.4 MAF annually for agricultural and urban uses with approximately 3.85 MAF used for agriculture in Imperial and Riverside Counties. The remaining unused portion (600,000 to 800,000 AF) is used for urban purposes in MWD's service area.

Figure 3.1: Parker Dam at Colorado River

Bay-Delta

In addition to the Colorado River, the Sacramento-San Joaquin River Delta has historically provided a significant amount of supply annually to Southern California. The Delta is located at the confluence of the Sacramento and San Joaquin Rivers east of the San Francisco Bay and is the West Coast's largest estuary. The Delta supplies Southern

California with over 1 MAF of water annually which has been significantly reduced in recent years.

The use of water from the Sacramento-San Joaquin Delta continues to be a critical issue as it competes between uses for water supply and ecological habitat that jeopardizes the Delta's ability to meet either need and may threaten the estuary's ecosystem.

An ongoing planning effort to increase long-term supply reliability for both the State Water Project (SWP) and Central Valley Project (CVP) is taking place. This plan, formerly known as the Bay Delta Conservation Plan (BDCP), includes co-equal goals to improve water supply reliability and restore the Delta ecosystem. In April 2015, state and federal agencies announced a new sub-alternative, California WaterFix and California EcoRestore, which replaced the proposed BDCP as the state's preferred project. The new alternative reflects the state's proposal to separate the conveyance facility and habitat restoration measures into two separate efforts: California WaterFix and California EcoRestore. These two efforts are a direct reflection of public comments and fulfill the requirement of the 2009 Delta Reform Act to meet co-equal goals. Preparation of the BDCP and now California WaterFix is through a collaboration of state, federal, and local water agencies, state and federal fish agencies, environmental organizations, and other interested parties. Several "isolated conveyance system" alternatives considered in the plan would divert water from the north Delta to the south Delta where pumped water travels into the south-of-Delta stretches of the SWP and CVP. The new conveyance facilities would allow for greater flexibility in balancing the needs of the estuary with the reliability of water supplies. The plan also provides other benefits, such as reducing the risk of long-term outages from Delta levee failures.

However, plans for the California WaterFix did not fall through as it did not gain support from Governor Newsom. In his speech to the state addressed in February 2019, Newsom announced that he did not "support WaterFix as currently configured," but does "support a single tunnel". As a result, on April of 2019, Governor Newsom issued Executive Order N-10-19, which announced a new single tunnel project known as the Delta Conveyance Project (DCP). Later that year, DWR initiated planning and environmental review for the DCP to protect the reliability of SWP supplies from the effects of climate change and seismic events, among other risks. DWR's current schedule for the DCP environmental planning and permitting extends to the end of 2024. DCP will potentially be operational in 2040 following extensive planning, permitting, and construction.

Aqueduct Systems

Figure 3.2: Colorado River Aqueduct

In order to provide Southern California with imported water, MWD utilizes two separate aqueduct systems (one for each source of supply) to obtain its supplies. These two aqueduct systems convey water from each source into two separate reservoirs whereupon MWD pumps the water to one of its five treatment facilities. One of these aqueduct systems, known as the Colorado River Aqueduct (CRA), serves as MWD's primary water delivery system and first constructed shortly after MWD's incorporation in 1928. The CRA, which is owned and operated by MWD, spans 242 miles and conveys water from the Colorado River to Lake Mathews.

Figure 3.3: California Aqueduct or "SWP"

In addition to the CRA, MWD receives water from northern California via the California Aqueduct. Also known as the State Water Project (SWP), the California Aqueduct is 444 miles long and carries Delta water to Southern California and is operated by DWR.

The previously mentioned aqueducts supply Southern California with a significant amount of its water and are crucial to its sustainability. In addition to these two water systems, there are also several other aqueducts vital to the State. The major aqueducts in California are shown in **Figure 3.4**.

Figure 3.4: Aqueduct Systems in California

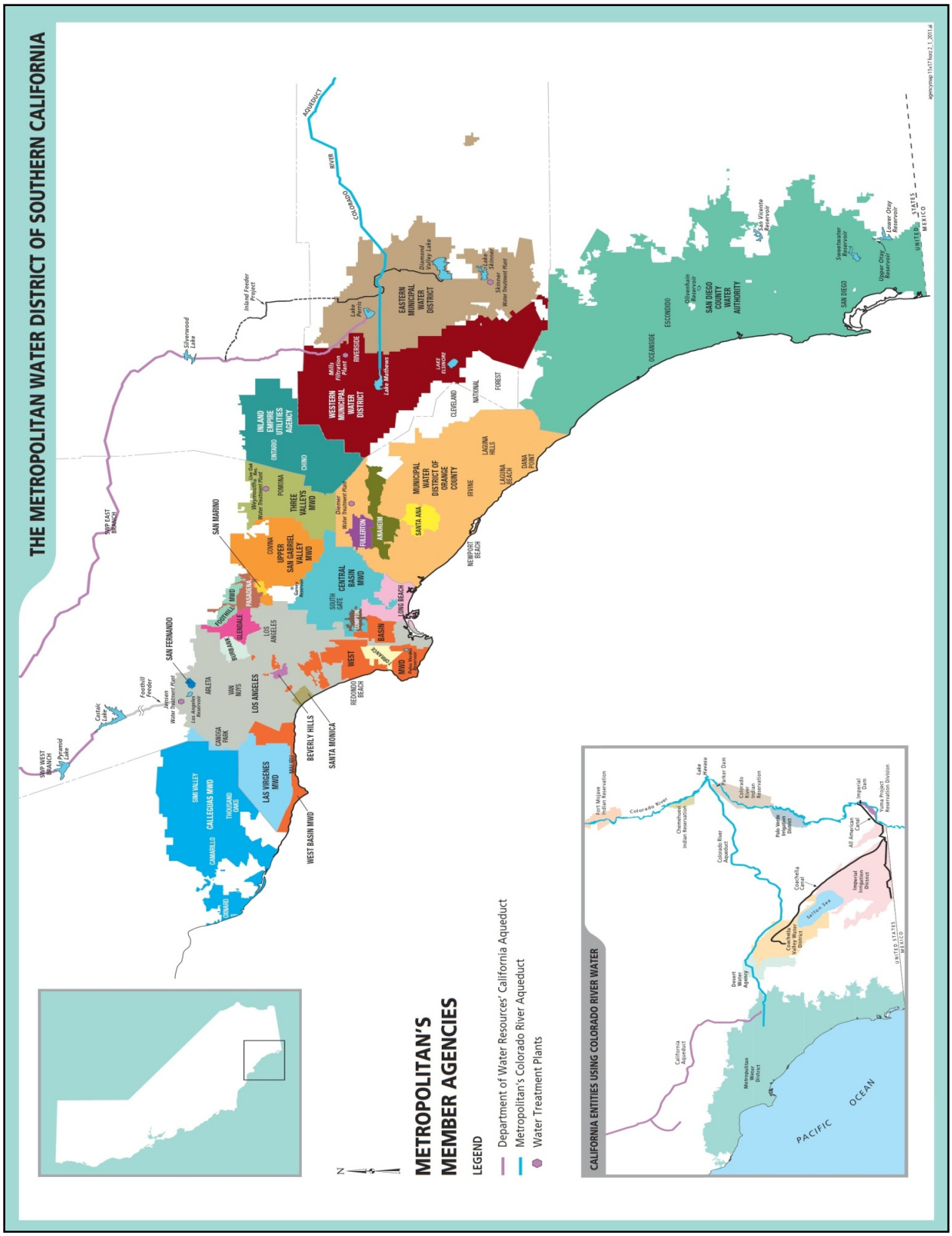


Figure 3.5: MWD Service Area Map

3.2.2 PURCHASED WATER

Suburban purchases water from other retailers to supplement their supplies. In the San Jose Hills Service Area, Suburban purchases water from:

- City of Covina
- City of Glendora
- Covina Irrigating Company
- La Puente Valley County Water District
- Rowland Water District
- Valencia Heights Water Company
- Valley County Water District
- Walnut Valley Water District

In the Whittier/La Mirada Service Area, Suburban purchases water from:

- California Domestic Water Company
- City of Whittier
- La Habra Heights County Water District
- Orchard Dale Water District
- San Gabriel Valley Water Company

These retailers supply imported water, groundwater, and surface water. The supply of imported water is discussed in the previous subsection, while the groundwater and surface water are discussed in the following subsections.

3.3 GROUNDWATER

Suburban produces groundwater from the Main San Gabriel Basin (Main Basin) to serve both the Whittier/La Mirada system and the San Jose Hills Service Area. Suburban additionally supplies the Whittier/La Mirada Service Area with Central Basin groundwater. A significant amount of Suburban's purchased water from other retailers is produced from these basins, as discussed in the following subsections. **Figure 3.6** shows the basin boundaries and Suburban's service areas.

3.3.1 CENTRAL GROUNDWATER BASIN

The deteriorating groundwater situation in the Central Basin and in the adjoining West Coast Basin led to the formation of the Central Basin Water Association in 1950, a similar association was formed for the West Coast Basin. The Central Basin and West Coast Basin Associations were largely responsible for the creation of the Central and West Basin Water Replenishment District (CWBWRD) in 1959, known today as the Water Replenishment District of Southern California (WRD). Its objective is to replenish and maintain the groundwater basins by purchasing imported water, recharging the basins, and halting sea water intrusion.

The Central Basin covers approximately 270 square miles and is bounded on the north by the Hollywood Basin and the Elysian, Repetto, Merced, and Puente Hills; to the east by the

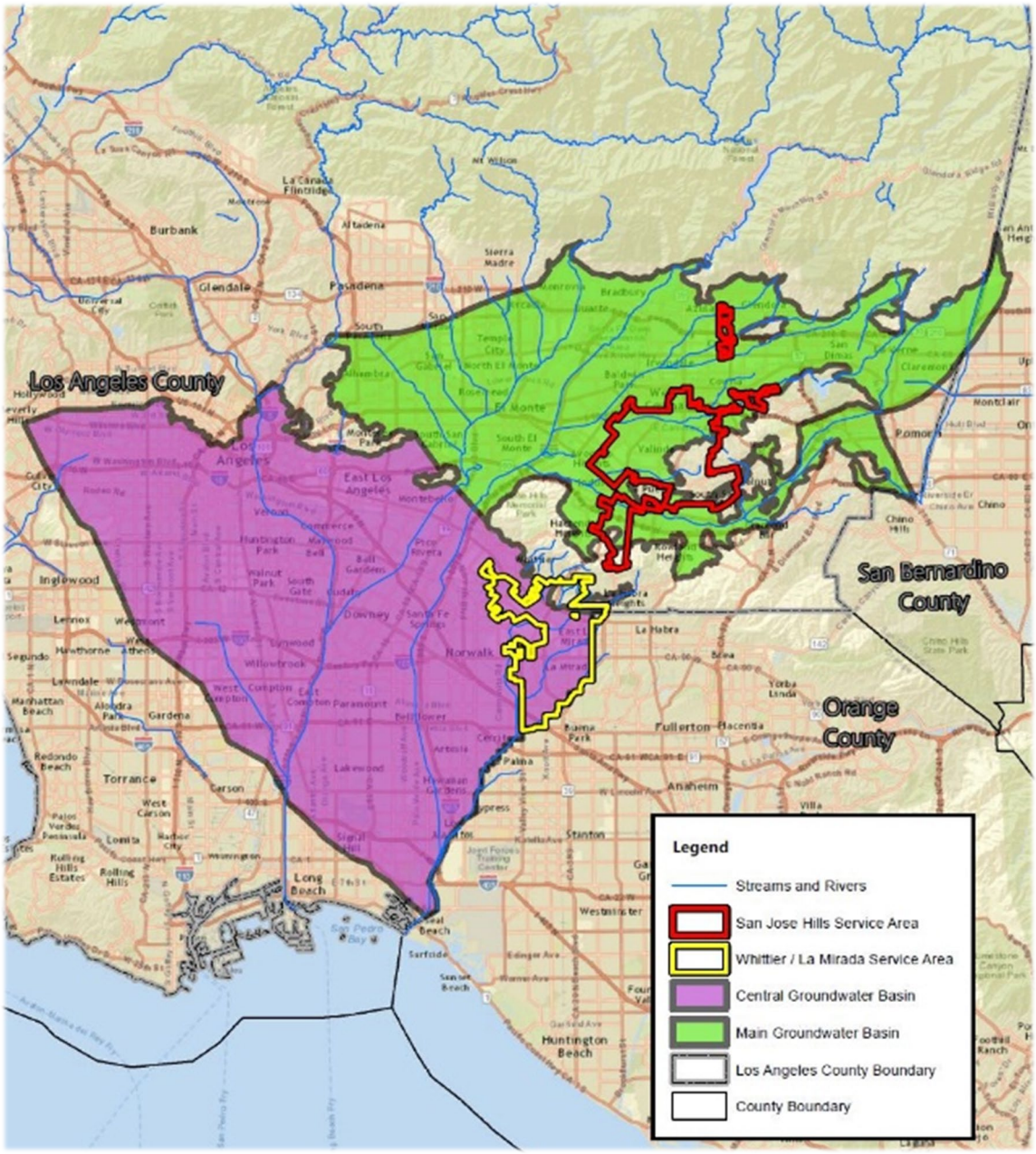


Figure 3.6: Suburban Water Systems Groundwater Basins

Los Angeles County/Orange County line; and to the south and west by the Newport Inglewood Uplift, a series of discontinuous faults and folds that form a prominent line of northwest-trending hills including the Baldwin Hills, Dominguez Hills, and Signal Hill.

The Central Basin is divided into four sections—the Los Angeles Forebay, the Montebello Forebay, the Whittier Area, and the Pressure Area. The two forebays represent areas of unconfined aquifers that allow percolation of surface water down into the deeper production aquifers to replenish the rest of the basin. The Whittier Area and Pressure Area

are confined aquifer systems that receive relatively minimal recharge from surface water, but are replenished from the upgradient forebay areas or other groundwater basins.

Groundwater in the Central Basin is recharged via surface spreading at the Whittier Narrows Dam, Montebello Forebay Spreading Grounds (MFSG), which consists of the Rio Hondo Spreading Grounds and San Gabriel Coastal Spreading Grounds, infiltration in the unlined portions of the Lower San Gabriel River, and via direct injection at the Alamitos Barrier Project (ABP) shown in **Figure 3.7**. The lower San Gabriel River extends from the Whittier Narrows Dam though the Pacific coastal plain ending at Long Beach. Through most of the Montebello Forebay, the San Gabriel River is unlined, allowing spreading by percolation through its unlined bottom. The river is lined from about Firestone Avenue through the remainder of the Central Basin.

Figure 3.7: WRD's Service Area

Natural recharge to the Central Basin includes surface infiltration of precipitation and applied water (such as landscape irrigation), subsurface inflow from the surrounding mountains (referred to as mountain-front recharge), through the Los Angeles and Whittier Narrows and along the boundary with the Orange County Basin, and through stormwater percolation at the spreading grounds and unlined portions of rivers. Sources of artificial recharge include recycled water, imported water, and stormwater. The volume of recharge varies significantly from year to year based on precipitation and availability of imported water. Artificial replenishment of the basin via the spreading grounds and injection barrier has historically averaged approximately 142,500 AFY since 1959, whereas production has averaged approximately 205,000 AFY (WRD, 2016). Projects recently implemented and currently planned for implementation by WRD are increasing the amount of the artificial recharge from both stormwater and recycled water in the Central Basin.

The ABP is jointly owned by LACDPW and the Orange County Water District (OCWD). As shown in **Figure 3.8**, the project can be divided into three major segments: (1) the main supply line that runs easterly and then southerly from the pressure reducing station to the T-vault, (2) the west leg that runs westerly to all injection wells west of the T-vault, and (3) the east leg that runs southerly and easterly to all injection wells east of the T-vault. Additionally, the City of Long Beach has four aquifer storage and recovery (ASR) wells that can be used to inject imported water available in wet years into the Central Basin. The combined injection capacity is estimated to exceed 3,250 AFY (MWD, 2007).

Groundwater Rights

Since the Central Groundwater Basin underwent an adjudication process in the early 1960's, the total amount of allowable extraction rights have remained the same. Some of the parties with groundwater pumping rights are located outside of Central Basin's service area.

3.3.2 MAIN SAN GABRIEL BASIN

For the most part, the Main Basin coincides with the San Gabriel Valley floor, which is located in eastern Los Angeles County, and overlies the majority of the San Gabriel Valley with a surface area of 167 square miles of valley terrain. The basin is bounded by the San Gabriel Mountains to the north, San Jose Hills to the east, Puente Hills to the south, Raymond Basin to the Northwest, and by a series of hills and the Whittier Narrows to the southwest. The Main Basin serves as a natural storage reservoir, transmission system, and filtering medium for wells constructed therein.

Figure 3.8: Alamitos Barrier Project Facilities

Basin Geology

The Main Basin consists of a roughly bowl-shaped depression in the bedrock, filled with alluvial deposits. Materials within the Main Basin vary in size from relatively coarse gravel near the mountains to fine and medium-grained sand containing silt and clay as the distance from the mountains increases. The principal water-bearing formations are unconsolidated and semi-consolidated sediments that vary in size from coarse gravel to fine-grained sands. The interstices between these alluvial particles throughout the Main Basin fill with water and transmit water readily to wells.

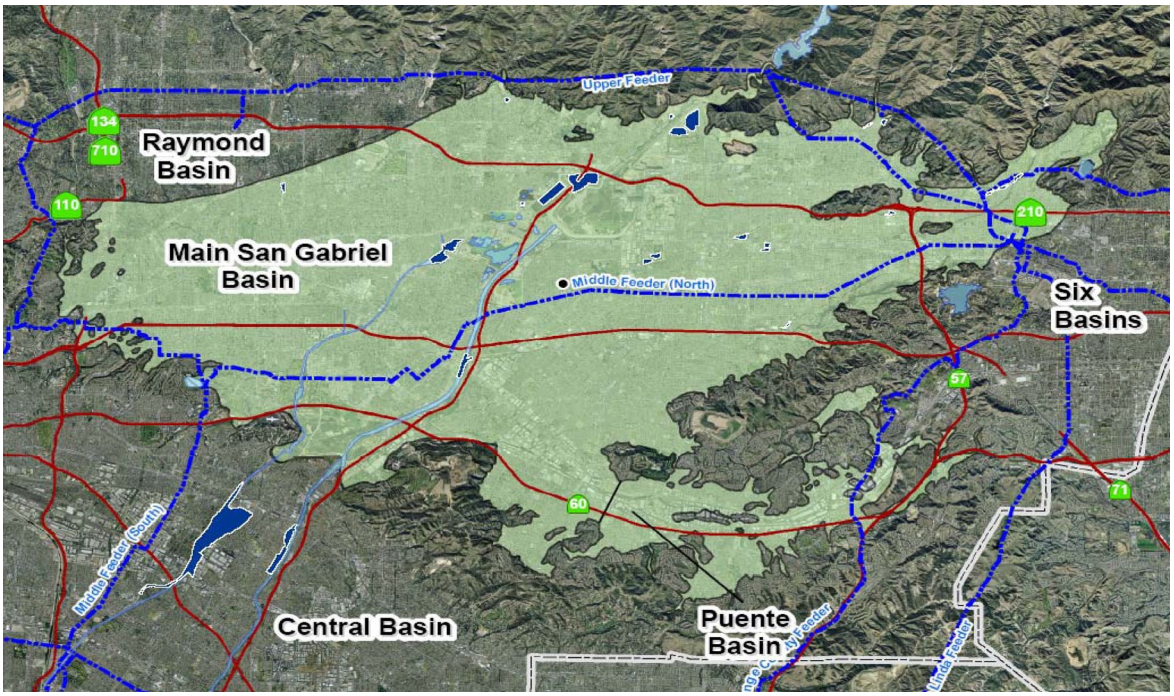


Figure 3.9: Map of Main San Gabriel Basin

Basin Hydrology

The major sources of replenishment to the Main Basin are direct penetration of rainfall on the valley floor, percolation of runoff from the mountains (from snowfall and rainfall), percolation of imported water, and return flow from applied water. Rainfall occurs predominantly in the winter months and is more intense at higher elevations and closer to the San Gabriel Mountains. The magnitude of annual replenishment from direct penetration of local rainfall and return flow from applied water is not easily quantifiable. Percolation of runoff from the mountains and valley floor, along with percolation of imported water, have been estimated by the San Gabriel River Watermaster (River Watermaster). LACDPW maintains records on the amount of local and imported water conserved in water spreading facilities and stream channels.

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

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

To protect residents of the San Gabriel Valley from flooding that can result during periods of intensive rainfall, the LACDPW and the U.S. Army Corps of Engineers have constructed an extensive system of dams, debris basins, reservoirs, and flood control channels. The dams and reservoirs also operate as water conservation facilities.

The dams and reservoirs that control the flow of the San Gabriel River and the Rio Hondo include: Cogswell Reservoir on the west fork of the San Gabriel River, San Gabriel Reservoir at the confluence of the west and east forks of the San Gabriel River, Morris Reservoir near the mouth of the San Gabriel Canyon, Santa Fe Reservoir in the northerly portion of the Basin, and Whittier Narrows Reservoir at the southwestern end of San Gabriel Valley.

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

The paths of the surface streams are mirrored in the soils and in the direction of groundwater movement in the Main Basin. The tributary creeks and washes, carrying

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

Figure 3.10: San Gabriel River Channel

The management of water resources in the Main San Gabriel Basin is provided by Watermaster services under two separate court judgments: the Long Beach Judgment and the Main Basin Judgment. The Long Beach Judgment established the River Watermaster, and the Main Basin Judgment established the Basin Watermaster. Through the Long Beach Judgment and the Main Basin Judgment, operations of the Main Basin are optimized to conserve local water to meet the needs of the parties of the Main Basin Judgment.

3.3.3 LONG BEACH JUDGMENT

On May 12, 1959, the Board of Water Commissioners of the City of Long Beach, the CBMWD, and the City of Compton, as plaintiffs, filed an action against the San Gabriel Valley Water Company and 24 other producers of groundwater from the San Gabriel Valley as defendants. This action sought a determination of the rights of the defendants in and to the waters of the San Gabriel River system and to restrain the defendants from an alleged interference with the rights of plaintiffs and persons represented by the Central Basin in such waters. After six years of study and negotiation, a Stipulation for Judgment

was filed on February 10, 1965, and Judgment (Long Beach Judgment) was entered on September 24, 1965. Under the terms of the Long Beach Judgment, the water supply of the San Gabriel River system was divided at Whittier Narrows, the boundary between San Gabriel Valley upstream and the coastal plain of Los Angeles County downstream.

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

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

Figure 3.11: San Gabriel River Upper Regions

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

The River Watermaster meets periodically during the year to adopt a budget, to review activities affecting water supply in the San Gabriel River system area, to compile and review data, to make its determinations of usable water received by the Lower Area, and to prepare it annual report to the Court and to the parties. The River Watermaster has rendered annual reports for the water years 1963-64 through 2013-14 and operations of the

Figure 3.12: San Gabriel River Lower Regions

river system under that Court Judgment and through the administration by the River Watermaster have been satisfactory since its inception.

One major result of the Long Beach Judgment was to leave the Main San Gabriel Basin free to manage its water resources so long as it meets its downstream obligation to the Lower Area under the terms of the Long Beach Judgment. Reference to the Long Beach Judgment is included in **Appendix F**.

3.3.4 MAIN BASIN JUDGMENT

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

Under the terms of the Main Basin Judgment, all rights to the diversion of surface water and production of groundwater within the Main Basin and its Relevant Watershed were adjudicated. The Main Basin Judgment provides for the administration of the provisions of the Main Basin Judgment by a nine-member Watermaster. Six of those members are nominated by water producers (producer members), and three members (public members) are nominated by Upper District and San Gabriel Districts that overlie most of the Main Basin. The nine-member board employs a staff, an attorney, and a consulting engineer. The Main Basin Watermaster holds public meetings on a regular monthly basis throughout the year.

The Main Basin Judgment does not restrict the quantity of water which Parties may extract from the Basin. Rather, it provides a means for replacing all annual extractions in excess of a Party's annual right to extract water with Supplemental Water. The Main Basin Watermaster annually establishes an Operating Safe Yield for the Main Basin, which is then used to allocate to each Party its portion of the Operating Safe Yield which can be produced free of a Replacement Water Assessment. If a producer extracts water in excess of its right under the annual Operating Safe Yield, it must pay an assessment for Replacement Water which is sufficient to the purchase of 1 acre-foot of Supplemental Water to be spread in the Main Basin for each acre-foot of excess production. All water production is metered and is reported quarterly to the Main Basin Watermaster.

In addition to Replacement Water Assessments, the Main Basin Watermaster levies an Administration Assessment to fund the administration of the Main Basin management program under the Court Judgment and a Make-up Obligation Assessment in order to fulfill the requirements for any make-up Obligation under the Long Beach Judgment and to supply 50 percent of the administration costs of the River Watermaster service. The Main Basin Watermaster levies an In-lieu Assessment and may levy special Administration Assessments.

Water rights under the Main Basin Judgment are transferable by lease or purchase so long as such transfers meet the requirements of the Judgment. There is also provision for Cyclic Storage Agreements by which Parties and non-parties may store imported Supplemental Water in the Main Basin under such agreements with the Main Basin Watermaster pursuant to uniform rules and conditions and Court approval.

The Main Basin Judgment provides that the Main Basin Watermaster will not allow imported water to be spread in the central part of the Main Basin when the groundwater elevation at the Baldwin Park Key Well (Key Well) exceeds 250 feet; and that the Main Basin Watermaster will, insofar as practicable, spread imported water in the Main Basin to maintain the groundwater elevation at the Key Well above 200 feet. One of the principal reasons for

the limitation on spreading imported water when the Key Well elevation exceeds 250 feet is to reserve ample storage space in the Basin to capture native surface water runoff when it occurs and to optimize the conservation of such local water. Under the terms of the Long Beach Judgment, any excess surface flows that pass through the Main Basin at Whittier Narrows to the Lower Area, which is then conserved in the Lower Area through percolation to groundwater storage, is credited to the Upper Area as Usable Surface Flow.

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

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

The Main Basin Watermaster has entered into a Cyclic Storage Agreement with each of the three municipal water districts. One is with the MWD and Upper District, which permits MWD to deliver and store imported water in the Main Basin in an amount not to exceed 100,000 AF for future Replacement Water use. The second Cyclic Storage Agreement is with TVMWD and permits MWD to deliver and store 40,000 AF for future Replacement Water use. The third is with San Gabriel District and generally contains the same conditions as the agreement with MWD except that the stored quantity is not to exceed 50,000 AF. As of February 2016, San Gabriel District had about 2,164 AF in its Cyclic Storage account.

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

3.3.5 CENTRAL BASIN JUDGMENT

On January 2, 1962, the Central and West Basin Water Replenishment District (now WRD), as plaintiff, filed an action, naming more than 700 parties as defendants. It sought to adjudicate water rights of groundwater from the Central Basin. The Central Basin Judgment was signed on October 11, 1965.

Under the terms of the Central Basin Judgment, the Parties have an Allowed Pumping Allocation (APA) of groundwater; however, the Parties may exceed their APA since the annual allowable extractions19 equals the APA plus Carryover and is adjusted for leases. Carryover is a provision which allows a pumper to carry over a portion of its unused APA to the next year. Suburban has an APA of 3,721 AFY with an allowance to carry over 20 percent (744 AFY).

The Judgment established the DWR as Central Basin Watermaster. Amended twice to address administration and basin management issues, the Central Basin Judgment was recently modified again. The third amendment was entered by the Los Angeles Superior Court on December 23, 2013 and established a new Watermaster to replace DWR. The Watermaster is now composed of three bodies: Water Rights Panel (Panel), Administrative Body (WRD), and Storage Panel, which consists of Panel plus the WRD Board of Directors. The Panel is made up of seven Central Basin water rights holders. Reference to the Central Basin Judgment is included in **Appendix I.**

3.4 SURFACE WATER

Suburban does not use self-supplied surface water as part of its water supply. The surface water which Suburban utilized was purchased from the City of Covina and CIC, and is described as purchased water. Only the San Jose Hills Service Area receives this purchased surface water; the Whittier/La Mirada Service Area does not receive purchased surface water.

The surface waters of the San Gabriel River, allocated as diversion rights, are coordinated by the San Gabriel River Water Committee (Committee of Nine) and the San Gabriel Valley Protective Association (SGVPA). Formed in 1889, the Committee of Nine is a group of water agencies that holds rights to the first 135 cubic feet per second of flow in the San Gabriel River. As a 25-member board of water agencies, the SGVPA holds the remaining rights and storage space in Cogswell, San Gabriel, and Morris Dams.

3.5 WATER QUALITY

In 1974, Congress passed the Safe Drinking Water Act in order to protect public health by regulating the nation's drinking water supply. As required by the Safe Drinking Water Act, Suburban provides annual Water Quality Reports to its customers.

To ensure quality of its water, Suburban considers risks to drinking water, including: turbidity, microbiological content, organic and inorganic chemical concentration, radionuclide content, and disinfection by-product concentration. Adverse health effects from these contaminants include not only acute effects but also chronic effects, which may occur if contaminants are ingested at unsafe levels over many years.

The two main sources of Suburban's water supply are imported water from CBMWD, TVMWD, and USGVMWD (MWD water) and groundwater from the Central and Main Basins. Since MWD draws the majority of its water from the CRA and the SWP, the quality of Suburban's imported water supply is closely related to the quality of these two sources.

Figure 3.13: Health Standards Protect Drinking Water

3.5.1 IMPORTED WATER QUALITY

MWD is responsible for providing water of a high quality throughout its service area. The water delivered by MWD is tested both for currently regulated contaminants and for additional contaminants of concern. Over 300,000 water quality tests are conducted each year to regulate the safety of its water. MWD's supplies originate primarily from the CRA and from the SWP. The two sources, proportional to each year's availability of the source, is then treated and delivered throughout MWD's service area.

Figure 3.14: MWD's Weymouth Treatment Plant Provides a Safe Supply of Water

MWD's primary sources face individual water quality issues of concern. The CRA water source contains a higher level of total dissolved solids (TDS) and a lower level of organic material, while the SWP contains a lower TDS level while its level of organic materials is much higher, lending to the formation of disinfection byproducts. To remediate the CRA's high level of salinity and the SWP's high level of organic materials, MWD has been blending CRA water with SWP supplies as well as implementing updated treatment processes to decrease the disinfection byproducts. In addition, MWD engages in efforts to protect its Colorado River supplies from threats of uranium, perchlorate, and chromium VI while also investigating the potential water quality impact of emerging contaminants, N-nitrosodimethylamine (NDMA) and pharmaceuticals and personal care products (PPCPs). MWD has assured its ability to overcome the above-mentioned water quality concerns through its protection of source waters, implementation of renovated treatment processes, and blending of its two sources. While unforeseeable water quality issues could alter reliability, MWD's current strategies ensure the deliverability of high-quality water.

Figure 3.15: Native Rock adds to the Salinity of the Colorado River Water Supplies

3.5.2 GROUNDWATER QUALITY

Groundwater in the Central and Main Basins are continually monitored for the quality of the water because of its susceptibility to seawater intrusion, potential contamination from adjacent basins, and migration of shallow contamination into deeper aquifers. The Alamitos Barrier, located in the southwest portion of Central Basin's service area, provides a buffer between the groundwater basin and seawater intrusion. The available supply of replenishment water to physical recharge the Basin includes local and imported water. The local water that recharges the groundwater basin comes from storm flows from the San Gabriel Valley and flow obligations under the San Gabriel River Judgment with the Upper Area of the Central Basin. This water is defined as "Make-Up" Water. Imported water is purchased from MWD to be used for seawater barrier injection at the Alamitos Barrier.

3.5.3 WATER QUALITY IMPACTS

Because of ongoing treatment efforts, MWD does not expect water quality concerns to impact supply reliability.

MWD's primary sources of water, the CRA and SWP, face individual water quality issues of concern. The CRA water source contains a higher level of TDS and a lower level of organic materials, while the SWP contains a lower TDS level and a much higher level of organic materials. To remediate the CRA's high level of salinity and the SWP's high level of organic materials, MWD practices regular blending of CRA water with SWP supplies as well as implementing updated treatment processes to decrease disinfection byproduct formation. In addition, MWD engages in efforts to protect its Colorado River supplies from threats of uranium, perchlorate, and chromium VI while also investigating the potential water quality impacts of emerging contaminants, such as NDMA and PPCPs. MWD assures its ability to overcome the above-mentioned water quality concerns through its protection of source waters, implementation of renovated treatment processes, and blending of its two sources. While unforeseeable water quality issues could alter reliability, MWD's current strategies ensure the deliverability of high-quality water. Because of these efforts, MWD's 2020 UWMP indicates that none of the water quality challenges described below will affect the reliability of its supplies over the course of the next 20 years.

3.6 CURRENT WATER SUPPLY

3.6.1 IMPORTED WATER PURCHASES

In 2020, Suburban currently relies on 8,087 AF of imported water for the San Jose Hills Service Area and 8,362 AF for the Whittier/La Mirada Service Area wholesaled by MWD

through various wholesaler sources to supplement local groundwater. Imported water represents approximately 32 percent (San Jose Hills Service Area) and 41 percent (Whittier/La Mirada Service Area) of Suburban's total water supply. MWD's principal sources of water originate from two sources - the Colorado River via the Colorado Aqueduct and the Lake Oroville watershed in Northern California through the SWP. This water is treated at MWD's Weymouth Treatment Plant. Because of SWP's lower salinity level, MWD blends SWP water with CRA to reduce the salinity of the delivered water.

Tables 3.1 and **3.2** show the recent imported and purchase water in the past six years.

Table 3.1: Amount of Imported Water Between 2015 - 2020 for San Jose Hills Service Area (AF)

Wholesaler Source	2015	2016	2017	2018	2019	2020
City of Covina	-	-	-	-	-	2
Covina Irrigating	2,627	3,302	4,653	6,110	6,018	4,616
City of Glendora	261	19	24	2	3	9
La Puente Valley	-	13	-	-	-	-
Rowland County	-	-	-	-	-	-
USGVMWD	4,703	243	109	619	2,579	1,080
Walnut Valley WD	2,819	1,856	827	1,956	4,507	2,379
Total Imported Water	10,410	5,432	5,612	8,687	13,106	8,087
% of Total Water Supply	**43%**	**23%**	**22%**	**34%**	**56%**	**32%**

Table 3.2: Amount of Imported Water Between 2015 - 2020 for Whittier/La Mirada Service Area (AF)

Wholesaler Source	2015	2016	2017	2018	2019	2020
Cal Domestic	5,570	5,589	6,106	5,760	4,467	8,108
CBMWD	6	-	22	298	40	291
City of Fullerton	-	-	-	2	-	-
City of La Habra	-	-	-	-	-	-
La Habra Heights	-	-	-	2	-	-
Orchard Dale	-	7	1	-	-	(42.40)
San Gabriel	12	3	3	3	4	2
City of Whittier	-	-	45	1	0.5	3
Total Imported Water	5,588	5,599	6,177	6,066	4,512	8,362
% of Total Water Supply	**30%**	**30%**	**32%**	**30%**	**25%**	**41%**

3.6.2 GROUNDWATER PRODUCTION

Suburban produces groundwater from both the Main Basin and the Central Basin. As a Party to the Main Basin Judgment, Suburban is entitled to a prescriptive pumping right of 34,200 AF for 2020, equating to 22.8 percent of the Operating Safe Yield (OSY) of 150,000 of the Main Basin determined by the Main San Gabriel Basin Watermaster. Suburban's pumping right amount varies annual and is dependent on the Main Basin's OSY determined based on groundwater supplies and climatological conditions. As a Party to the Central Basin Judgment, Suburban has an allowed pumping allocation of 3,721 AFY in Central Basin. Other users in both basins are well documented in the annual watermaster reports.

Tables 3.3 and **3.4** show Suburban's recent groundwater production from the Central and Main Basins in the past six years from 2015 to 2020.

Table 3.3: Amount of Groundwater Pumped Between 2015 – 2020 for San Jose Hills Service Area (AF)

Basin Name(s)	2015	2016	2017	2018	2019	2020
Main Basin	12,960	17,619	18,722	16,136	9,878	16,852
% of Total Water Supply	54%	74%	75%	63%	42%	66%

Table 3.4: Amount of Groundwater Pumped Between 2015 - 2020 (AF) for Whittier/La Mirada Service Area

Basin Name(s)	2015	2016	2017	2018	2019	2020
Central Basin	3,578	2,924	2,827	2,297	2,038	1,562
Main Basin	9,264	9,869	10,074	11,557	11,841	10,527
Total Groundwater	12,842	12,793	12,901	13,854	13,879	12,089
% of Total Water Supply	70%	70%	68%	70%	75%	59%

3.6.3 RECYCLED WATER DISTRIBUTION

Suburban provides recycled water in the San Jose Hills Service Area, but not within the Whittier/La Mirada Service Area. The recycled water used in the San Jose Hills Service Area is produced by the Los Angeles County Sanitation District (LACSD) and distributed by USGVMWD to Suburban's customers. Recycled water has been used since 1972 in the region and has been extensively reviewed by agencies in both local and regional studies. Many water agencies throughout Southern California use or plan to use recycled water for non- potable demands. These uses include groundwater recharge, industrial water for cooling towers and non-food manufacturing, and the irrigation of golf courses, cemeteries, freeway landscaping, parks, playgrounds, and schoolyards. A more detailed discussion on recycled water can be found in **Section 6**.

Table 3.5 shows Suburban's recent recycled water distribution from LACSD by USGVMWD in the past six years from 2015 to 2020. At this point, recycled water is only used in the San Jose Hills Service Area.

Table 3.5: Amount of Recycled Water Distributed Between 2015 - 2020 (AF)

Recycled Water Source(s)	2015	2016	2017	2018	2019	2020
USGVMWD	743	696	704	665	576	710
% of Total Water Supply	3%	3%	3%	3%	2%	3%

3.6.4 2020 SUMMARY OF SUBURBAN WATER SUPPLIES

Tables 3.6, **3.7**, and **3.8** show Suburban's water supplies and max total right / safe yield in 2020. As shown, Suburban does not utilize 100 percent of their full supply capabilities to meet their demands.

Table 3.6: Combined Suburban Water Supplies in 2020 (AF) (DWR Table 6-8 Retail)

Water Supply	Additional Detail on Water Supply	2020	
		Actual Volume	Water Quality
Groundwater (not desalinated)	Main San Gabriel Basin	27,379	Drinking Water
Groundwater (not desalinated)	Central Basin	1,562	Drinking Water
Purchased or Imported Water	All Imports	16,449	Drinking Water
Recycled Water	CBMWD	710	Recycled Water
	Total	46,100	

Table 3.7: Suburban Water Supplies in 2020 for San Jose Hills Service Area (AF) (DWR Table 6-8 Retail)

Water Supply	Additional Detail on Water Supply	2020	
		Actual Volume	Water Quality
Groundwater (not desalinated)	San Jose Hills Region - Main San Gabriel Basin	16,852	Drinking Water
Purchased or Imported Water	San Jose Hills Region - All Imports	8,087	Drinking Water
Recycled Water	San Jose Hills Region - Recycled Water	710	Recycled Water
	Total	25,649	

Table 3.8: Suburban Water Supplies in 2020 for Whittier/La Mirada Service Area (AF) (DWR Table 6-8 Retail)

Water Supply	Additional Detail on Water Supply	2020	
		Actual Volume	Water Quality
Groundwater (not desalinated)	Whittier/La Mirada Region - Main San Gabriel Basin	10,527	Drinking Water
Groundwater (not desalinated)	Whittier/La Mirada Region - Central Basin	1,562	Drinking Water
Purchased or Imported Water	Whittier/La Mirada Region - All Imports	8,362	Drinking Water
	Total	20,451	

3.7 PROJECTED CLIMATE CHANGE IMPACTS TO SUPPLIES

Extensive research has been done on the future impacts due to climate change on the State of California. The state released its latest research on climate, called the California's Fourth Climate Change Assessment (California Assessment), detailing the potential impacts of climate change that affects California such as temperature, sea level rise, droughts, and wildfires. The assessment utilizes historic data and the latest computer models to analyze these potential impacts. Alongside with the California Assessment, released regional assessments as well. The California Assessment for the Los Angeles Region detail the major impacts of climate change in Los Angeles County as well as Ventura, Orange, San Bernardino, and Riverside County. The LA Region report outlines the key projected climate change impacts:

- Continued future warming over the LA region (max temperatures to increase by 4-5°F by mid-century and 5-8°F by late century)
- Extreme temperatures and number of extreme hot days is expected to increase
- Dry and wet extremes expected to increase
- Sea level projected to rise by 1-2 feet by mid-century and 8-10 feet by end of century based on most extreme projections
- Increased likelihood of wildfires throughout Southern California

3.7.1 TEMPERATURE

The LA Region report of the California Assessment anticipates temperatures to increase throughout Southern California. Based on historic records from 1896 to 2015 from the National Oceanic and Atmospheric Administration (NOAA), studies indicate a trend of annual average, maximum, and minimum temperature increase of around 0.16°C per

decade. In recent years, the top five warmest years in terms of annual average temperatures have occurred since 2012 where 2014 was the warmest, followed by 2015, 2017, 2016, and 2012. Based on computer models (RCP4.5 and RCP8.5), the number of extremely hot days is expected to increase. For instance, historical records at the Los Angeles International Airport experiences nearly 15 days per year of temperatures equal to or greater than 90°F. Models project that the number of days may increase to a range of 50 to 90 of such days per year by the end of the century.

3.7.2 PRECIPITATION

Precipitation for the LA region is also impacted by climate change. Based on historical records, precipitation is flexible from year to year, and only five storms are typically observed per year making up roughly 50 percent of the annual precipitation total. As a result, precipitation in the LA region shows no typical trend. Based on the LA Region report of the California Assessment, dry and wet extremes are both expected to increase in the future. Based on computer models (RCP8.5), some areas are expected to have increased precipitation by 25 to 30 percent. Similarly, computer models also project increased periods of extremely dry years by double or more by the end of the century. The extreme dry years can lead to prolonged drought periods, significantly impacting water supplies within the region.

3.7.3 CLIMATE CHANGE IMPACTS TO SUBURBAN'S WATER SUPPLIES

Climate data has been recorded in California since 1858. Since then, California has experienced several periods of severe drought: 1928-34, 1976-77, 1987-91, 2007-09, and most recently in 2012-15. California has also experienced several periods of less severe drought. The year 1977 is considered to be the driest year of record in the Four Rivers Basin by DWR. These rivers flow into the Delta and are the source of water for the SWP. Southern California sustained few adverse impacts from the 1976-77 drought, but the 1987-91 drought created considerably more concern.

The drought of 2007-09 resulted in significant impacts on the state's water supplies. SBx7-7 was signed into law by Governor Schwarzenegger that requires mandatory water conservation up to 20 percent by 2020. The recent drought in 2012-15 brought a significant hit to the state's water supplies. The drought strained reservoir levels all across the state. **Table 3.9** compares the reservoir levels in October 2013 during the drought and in present day (February 2021). As shown, the majority of the state's reservoirs were all below average levels. To this day, California is still in a recovery stage from the recent droughts. In January of 2014, Governor Brown declared a state of emergency and directed state officials to take all necessary actions to prepare for water shortages. As the drought

prolonged into 2015, to help cope with the drought mitigation, Governor Brown issued an Executive Order in April 2015 that mandated a statewide 25 percent reduction in potable water use from a baseline year of 2013.

Table 3.9: California Reservoirs Level During Drought (2013) and Current (2021)

Reservoir	Drought Period (Oct. 30, 2013)	Current Levels (Feb. 9, 2021)	Historic Average
Trinity Lake	50%	51%	72%
Lake Shasta	38%	48%	70%
Lake Oroville	43%	36%	54%
New Melones Lake	43%	65%	108%
San Luis Reservoir	21%	54%	67%
Millerton Lake	54%	30%	47%
Perris Lake	45%	93%	114%
Castaic Lake	85%	77%	92%
Pine Flat Reservoir	16%	23%	47%
Lake McClure	25%	38%	77%
Don Pedro Reservoir	50%	68%	98%
Folsom Lake	30%	30%	57%

The effects of the drought was observed in Suburban's supplies. **Figures 3.16** and **3.17** on the following page show the imported and groundwater supplies from 2015 to 2020 for the service areas for San Jose Hills and Whittier/La Mirada, respectfully. In recent years, Suburban heavily relied on groundwater sources for their supplies (an average of 64 and 68 percent of total potable supplies for the San Jose Hills and Whittier/La Mirada Service Areas, respectfully). Compared to 2010, groundwater comprised of 56 and 71 percent of total potable supplies for the San Jose Hills and Whittier/La Mirada Service Areas, respectfully.

The San Jose Hills shows the most significant change in supply when compared from 2010 to present. In 2010, groundwater and imported water comprised up of 56 and 44 percent, respectfully. Compared to the 2015 - 2020 average, groundwater and imported water comprised of 64 and 36 percent, respectfully. The decrease reliance in imported supplies shows that majority of supplies can be utilized through groundwater. Imported supplies from CIC for the San Jose Hills area is primarily from surface water and groundwater. Therefore, most of San Jose Hills supplies primarily from local sources. This is also possible due to reduced demand requirements from consumers and increase awareness of water conservation.

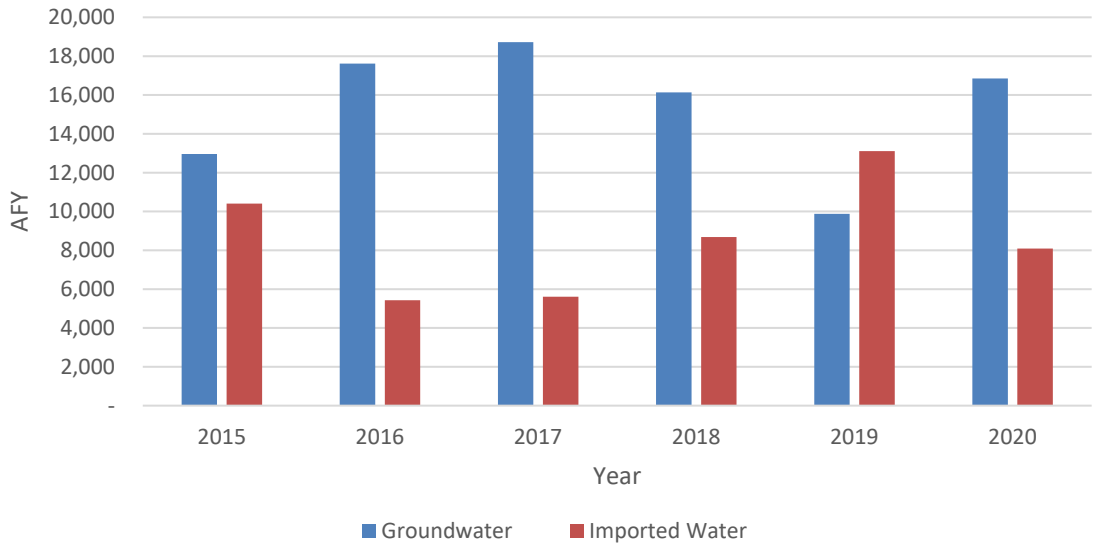


Figure 3.16: Imported and Groundwater Supplies for San Jose Hills Service Area (2015 - 2020)

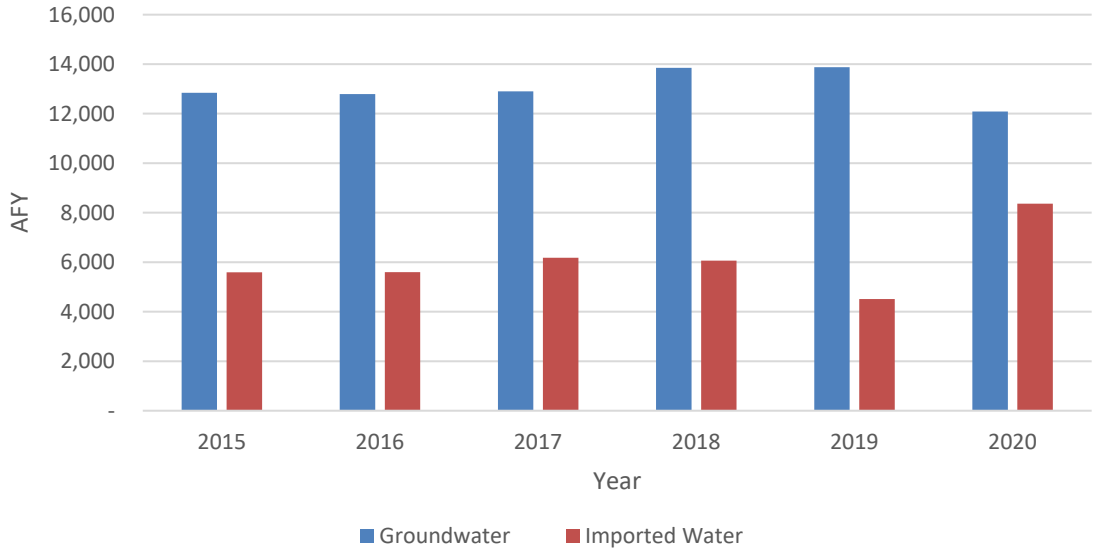


Figure 3.17: Imported and Groundwater Supplies for Whittier/La Mirada Service Area (2015 - 2020)

3.8 WATER SUPPLY PROJECTIONS

Based on MWD's supply projections that it will be able to meet full service demands under all three hydrologic scenarios, Suburban's wholesale suppliers, CBMWD, USGVMWD, and TVMWD, conclude that they would also be able to meet the demands of its retail agencies under these conditions.

CWC section 10631(k) requires the wholesale agency to provide information to the urban retail water supplier for inclusion in its UWMP which identifies and quantifies the existing and planned sources of water available from the wholesale agency. **Table 3.10** indicates the projected supplies for Suburban's combined service area. **Tables 3.11** and **3.12** shows the breakdown of projections for the San Jose Hills and La Mirada/Whittier service area, respectively.

The wholesaler's water availability projections by source for the next 25 years as provided to Suburban by all of its wholesaler sources. Main Basin groundwater projections is based on the past 10-year average of the prescribed adjudicated rights for Suburban of 29,000 AF. Both San Jose Hills and La Mirada/Whittier service area pump from the Main Basin. Based on a 10-year average, San Jose Hills and La Mirada/Whittier service area pumps 58 percent and 42 percent, respectively, from the total. Therefore, the projected groundwater supplies for the San Jose Hills and La Mirada/Whittier service area will be 16,715 AF and 12,285 AF, respectively. Central Basin groundwater projections is based on Suburban's adjudicated right of 3,721 AF which remained the same throughout the years. Recycled water projections are based on current and future demands on various recycled water usages within Suburban's service area.

Table 3.10: Combined Suburban Projected Water Supplies for 2025 – 2045 (AF) (DWR Table 6-9 Retail)

Water Supply	Additional Detail on Water Supply	Projected Water Supplies				
		2025	2030	2035	2040	2045
Groundwater (not desalinated)	All Regions - Main Basin	29,000	29,000	29,000	29,000	29,000
Groundwater (not desalinated)	Central Basin	3,721	3,721	3,721	3,721	3,721
Purchased or Imported Water	Whittier/La Mirada Region - All Imports	8,200	8,200	8,200	8,200	8,200
Purchased or Imported Water	San Jose Hills Region - All Imports	18,200	18,200	18,200	18,200	18,200
Recycled Water	San Jose Hills Region (USGVMWD)	700	700	700	700	700
Recycled Water	Whittier/La Mirada Region (CBMWD)	930	930	930	930	930
	Total	60,751	60,751	60,751	60,751	60,751

Table 3.11: San Jose Hills Projected Water Supplies for 2025 – 2045 (AF) (DWR Table 6-9 Retail)

Water Supply	Additional Detail on Water Supply	Projected Water Supplies				
		2025	2030	2035	2040	2045
Groundwater	San Jose Hills Region - Main Basin	16,715	16,715	16,715	16,715	16,715
Recycled Water	San Jose Hills Region - All Imports	700	700	700	700	700
Purchased or Imported Water	San Jose Hills Region - Recycled Water	18,200	18,200	18,200	18,200	18,200
	Total	35,615	35,615	35,615	35,615	35,615

Table 3.12: Whittier/La Mirada Projected Water Supplies for 2025 – 2045 (AF) (DWR Table 6-9 Retail)

Water Supply	Additional Detail on Water Supply	Projected Water Supplies				
		2025	2030	2035	2040	2045
Groundwater (not desalinated)	Whittier/La Mirada Region - Main Basin	12,285	12,285	12,285	12,285	12,285
Groundwater (not desalinated)	Central Basin	3,721	3,721	3,721	3,721	3,721
Purchased or Imported Water	Whittier/La Mirada Region - All Imports	8,200	8,200	8,200	8,200	8,200
Recycled Water	Whittier/La Mirada Service Area	930	930	930	930	930
	Total	25,136	25,136	25,136	25,136	25,136

3.9 SUPPLY VS DEMAND

3.9.1 MWD'S SUPPLY OUTLOOK

Colorado River Supplies

Water supply from the CRA continues to be a critical issue for Southern California as MWD competes with several agricultural water agencies in California for unused water rights to the Colorado River. Although California's allocation has been established at 4.4 MAF annually, MWD's allotment stands at 550,000 AFY with additional amounts increasing MWD's allotment to 842,000 AFY if there is any unused water from the agricultural agencies.

MWD recognizes that competition from other states and other agencies within California has decreased the CRA's supply reliability. In 2003, the Quantification Settlement Agreement (QSA) facilitated the transfer of water from agricultural agencies to urban uses. This historic agreement provides California the means to implement transfers and supply programs, which will allow California to live within the State's 4.4 MAF basic annual apportionment of Colorado River water.

MWD's Colorado River Allocation continues to be a critical issue.

Lake Mead, located on the Colorado River, is the largest reservoir in the United States. In 2015, it reached its lowest level since the 1930s when the reservoir first filled. As of March 18, 2021, the water level in Lake Mead measured 1,085.7 feet above mean sea level, which is 39 percent of capacity and only 11 feet above the level (1,075 feet) that would trigger a first-ever shortage declaration on the Colorado River.

State Water Project Supplies

The reliability of the SWP affects the MWD member agencies' ability to plan for future growth and supply. DWR develops and releases The State Water Project Delivery Capability Report (DCR) where it provides updates and supply estimations on the SWP delivery capabilities. The latest edition of the report (2019 DCR) incorporates current regulatory requirements for the SWP, and utilizes climate change models from CalSim-II to project supply impacts and estimations.

On an annual basis, each of the 29 SWP contractors, including MWD, request an amount of SWP water based on their anticipated yearly demand. In most cases, MWD's requested supply is equivalent to its full Table A amount. After receiving the requests, DWR assesses the amount of water supply available based on precipitation, snow pack on Northern California watersheds, volume of water in storage, projected carry over storage, and Sacramento-San Joaquin Bay Delta regulatory requirements. For example, according to the 2019 DCR, the total SWP annual delivery of water to contractors ranged from 2009 to 2018 as shown in **Figure 3.18**. Due to the uncertainty in water supply, contractors are not typically guaranteed their full Table A amount, but instead a percentage of that amount based on available supply.

Each December, DWR provides the contractors with their first estimate of allocation for the following year. As conditions develop throughout the year, DWR revises the allocations. Currently, the total contractor requested allocation for Table A water is 4.2 MAF. MWD initially requested 1.9 MAF, which is 45 percent of the total contractors' requests for Table A water. Due to the variability in supply for any given year, it is important to understand the reliability of the SWP to supply a specific amount of water each year to the contractors.

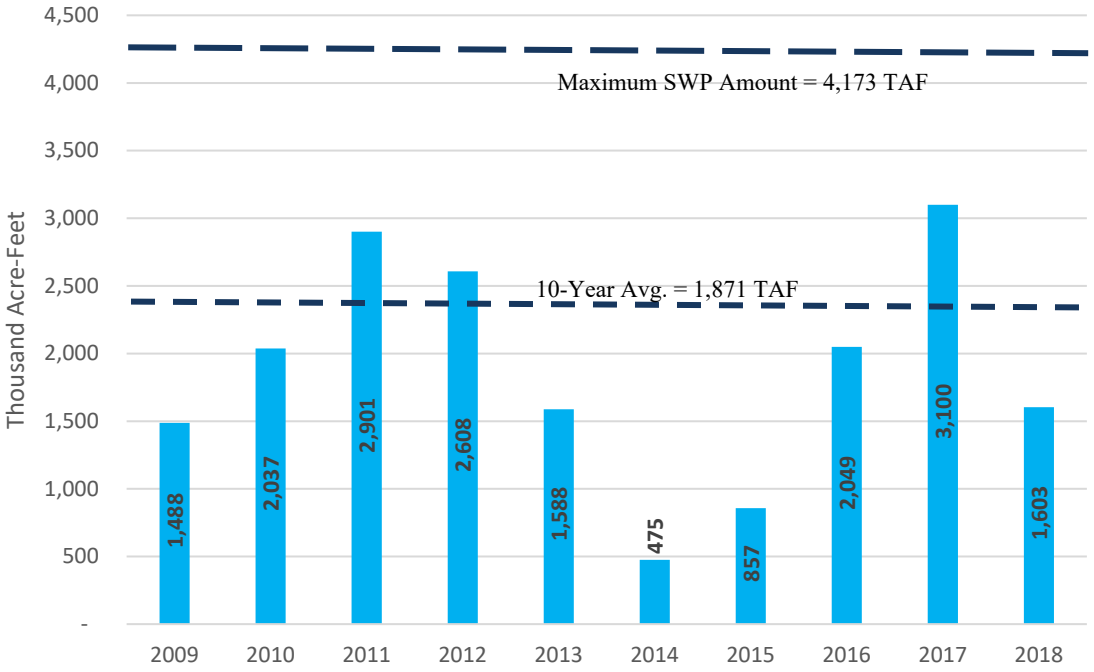


Figure 3.18: SWP Table A Deliveries (2009 - 2018)

With the state undergoing a second consecutive dry year, DWR has already taken the steps to prolong the SWP supplies. On March 2021, DWR decreased the allocation of 2021 SWP deliveries for the contractors from 422,848 AF to 210,266 AF. Based on the recent low amount of precipitation and runoff, and an assessment of overall water supply conditions, SWP supplies are projected to be 5 percent of most SWP contractor's 2021 requested Table A Amounts. This reduction decreased MWD's initial request from 1,911,500 AF to 95,575 AF.

Storage Reservoir Supplies

Statewide, storage reservoir levels rise and fall due to seasonal climate changes, which induce increase in demand. During periods of drought, reservoir levels typically drop significantly and may limit the amount of supplies available. As a result, both DWR and MWD monitor reservoir levels regularly. Previously shown, **Table 3.9** compares the statewide reservoir levels during the recent drought period (2012-2015) with current levels (February 2021). **Figure 3.19** shows the MWD reservoir levels. As shown, the majority of the state's reservoirs were all at below average levels, and to this day, the state is still in a recovery stage from the recent droughts.

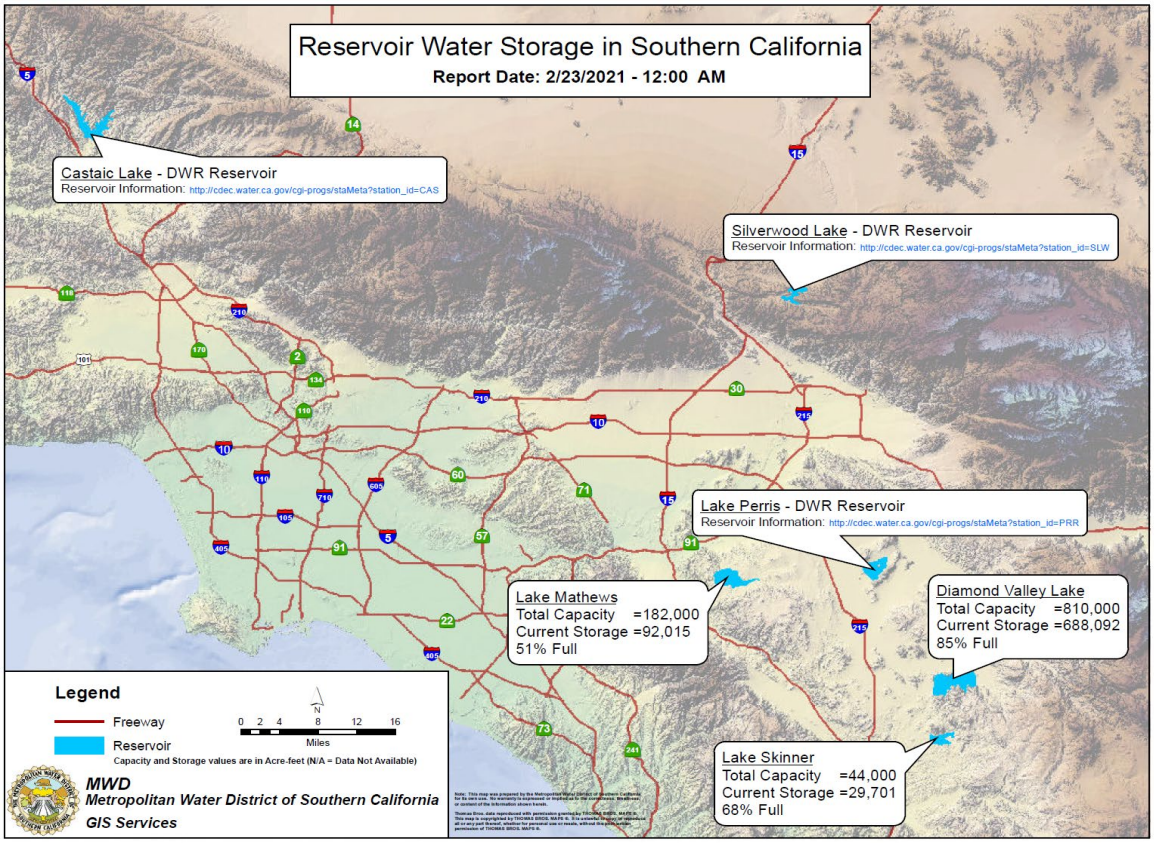


Figure 3.19: MWD Reservoir Levels (Feb. 2021)

3.9.2 MWD'S PROJECTED SUPPLY VS DEMAND COMPARISONS

MWD evaluated supply reliability by projecting supply and demand conditions for the single and multi-year drought cases based on conditions affecting the SWP (MWD's largest and most variable supply). For this supply source, the single driest-year was 1977, and the three-year dry period was 1990-1992. MWD's analysis illustrated in **Tables 3.13** and **3.14**, correspond to MWD's 2020 UWMP Tables 2-1, 2-2, 2-3, 2-4, 2-5, and 2-6. These tables demonstrate that the region can provide reliable water supplies not only under normal conditions but also under both the single driest year and the multiple dry year hydrologies.

Table 3.13: MWD Regional Imported Water Supply Reliability Projections
Average and Single Dry Years (AF) for 2025 to 2045

	Row	Region Wide Projections	2025	2030	2035	2040	2045
Supply	A	Projected Supply: Average Year	3,932,000	3,962,000	3,960,000	3,598,000	3,622,000
	B	Projected Supply: Dry Year	2,727,000	2,791,000	2,789,000	2,551,000	2,572,000
	C = B/A	Projected Dry Yr. / Avg. Yr. Supply (%)	**69.4%**	**70.3%**	**70.4%**	**70.9%**	**71.0%**
Demand	D	Projected Average Year Demand	1,274,000	1,256,000	1,273,000	1,294,000	1,319,000
	E	Projected Dry Year Demand	1,402,000	1,387,000	1,408,000	1,431,000	1,457,000
	F=E/D	Projected Dry Year / Avg. Year (%)	**110.0%**	**110.4%**	**110.6%**	**110.6%**	**110.5%**
Surplus	G = A-D	Projected Surplus: Average Year	2,658,000	2,706,000	2,687,000	2,304,000	2,303,000
	H = B-E	Projected Surplus: Dry Year	1,325,000	1,404,000	1,381,000	1,120,000	1,115,000
Programs Under Dev.	I	Projected Capability of Programs (Average Year)	47,000	113,000	13,000	372,000	347,000
	J	Projected Capability of Programs (Dry Year)	0	0	0	0	0
Potential Surplus	K=A+I-D	Projected Surplus: Average Year	2,705,000	2,819,000	2,700,000	2,676,000	2,650,000
	L=B+J-E	Projected Surplus: Dry Year	1,325,000	1,404,000	1,381,000	1,120,000	1,115,000
Comparison	I = A/D	Projected Avg. Yr. Supply/Demand (%)	**308.6%**	**315.4%**	**311.1%**	**278.1%**	**274.6%**
	J = A/E	Projected Dry Yr. Supply/Demand (%)	**280.5%**	**285.7%**	**281.3%**	**251.4%**	**248.6%**

Table 3.14: MWD Regional Imported Water Supply Reliability Projections
Average and Multiple Dry Years (AF) 2025 to 2045

	Row	Region Wide Projections	2025	2030	2035	2040	2045
Supply	A	Projected Supply: Average Year	3,932,000	3,962,000	3,960,000	3,598,000	3,622,000
	B	Projected Supply: Multiple Dry Year	2,198,000	2,210,000	2,209,000	1,973,000	1,995,000
	C = B/A	Projected Dry Yr. / Avg. Yr. Supply (%)	**55.9%**	**55.8%**	**55.8%**	**54.8%**	**55.1%**
Demand	D	Projected Average Year Demand	1,274,000	1,256,000	1,273,000	1,294,000	1,319,000
	E	Projected Dry Year Demand	1,412,000	1,414,000	1,435,000	1,457,000	1,484,000
	F=E/D	Projected Dry Year / Avg. Year (%)	**110.8%**	**112.6%**	**112.7%**	**112.6%**	**112.5%**
Surplus	G = A-D	Projected Surplus: Average Year	2,658,000	2,706,000	2,687,000	2,304,000	2,303,000
	H = B-E	Projected Surplus: Multiple Dry Year	786,000	796,000	774,000	516,000	511,000
Programs Under Dev.	I	Projected Capability of Programs (Average Year)	47,000	113,000	13,000	372,000	347,000
	J	Projected Capability of Programs (Multiple Dry Year)	10,000	0	0	235,000	213,000
Potential Surplus	K=A+I-D	Projected Surplus: Average Year	2,705,000	2,819,000	2,700,000	2,676,000	2,650,000
	L=B+J-E	Projected Surplus: Multiple Dry Year	796,000	796,000	774,000	751,000	724,000
Comparison	I = A/D	Projected Avg. Yr. Supply/Demand (%)	**308.6%**	**315.4%**	**311.1%**	**278.1%**	**274.6%**
	J = A/E	Projected Dry Yr. Supply/Demand (%)	**278.5%**	**280.2%**	**276.0%**	**246.9%**	**244.1%**

3.10 SUBURBAN'S SUPPLY RELIABILITY

3.10.1 OVERVIEW

It is required that every urban water supplier assess the reliability to provide water service to its customers under normal, dry, and multiple dry water years. Suburban depends on a combination of imported and local supplies to meet its water demands and has taken numerous steps to ensure that it has adequate supplies.

3.10.2 IMPORTED WATER RELIABILITY

MWD is participating in the development of groundwater, groundwater recovery, recycled water systems, desalination opportunities, and collection of urban return flows to augment the reliability of the imported water system. There are various factors that may impact reliability of supplies, such as legal, environmental, water quality, and climatic, which are discussed below. The water supplies are projected to meet full-service demands; MWD's 2020 UWMP finds that MWD is able to meet with existing supplies full service demands of its member agencies in 2025 through 2045 during normal years, single dry year, and multiple dry years.

MWD's 2015 Integrated Water Resources Plan (IRP) update describes the core resource strategy used to meet full-service retail demands under all foreseeable hydrologic conditions from 2020 through 2040. The foundation of MWD's resource strategy for achieving regional water supply reliability consists of developing and implementing water resources programs and activities through its IRP preferred resource mix. This preferred resource mix includes conservation, local resources, such as water recycling and groundwater recovery, Colorado River supplies and transfers, SWP supplies and transfers, in-region surface reservoir storage, in-region groundwater storage, out-of-region banking, treatment, conveyance and infrastructure improvements. All of Suburban's wholesaler sources are reliant on MWD for all of its imported water. With the addition of planned supplies under development, MWD's 2020 UWMP finds that MWD will be able to meet full-service demands from 2025 through 2045, even under a repeat of the worst drought. **Table 3.15** shows the reliability of the MWD's supply for single dry year and multiple dry year scenarios. MWD's single dry year is based on the drought in 1977. MWD's five-consecutive dry years is based on from 1988 to 1992, which

Table 3.15: MWD Supply Reliability
Single & Multiple Dry Years

		Base Year	Percent Available
Average Year		1922 - 2017	100%
Single Dry Year		1977	100%
Multiple Dry Years	Year 1	1988	100%
	Year 2	1989	100%
	Year 3	1990	100%
	Year 4	1991	100%
	Year 5	1992	100%

represents as the driest five-consecutive year historic sequence for MWD's water supply. In addition to meeting full-service demands from 2025 through 2045, MWD projects reserve and replenishment supplies to refill system storage.

3.10.3 FACTORS CONTRIBUTING TO SUBURBAN'S IMPORTED WATER SUPPLY RELIABILITY

The Act requires a description of the reliability of the water supply and vulnerability to seasonal or climatic shortage. The following are some of the factors identified by MWD which may have an impact on the reliability of MWD supplies.

Environment - Endangered species protection needs in the Sacramento-San Joaquin River Delta have resulted in operational constraints to the SWP system. The Bay-Delta's declining ecosystem caused by agricultural runoff, operation of water pumps, and other factors has led to historical restrictions in SWP supply deliveries. SWP and CVP delivery restrictions due to the biological opinions have reduced SWP and CVP supplies by approximately 5.2 MAF since in 2008.

Legal - Listings of additional species under the Endangered Species Act and new regulatory requirements could further impact SWP operations by requiring additional export reductions, releases of additional water from storage, or other operational changes impacting water supply operations. Additionally, any challenges to the QSA in the court systems may have impacts on the Imperial Irrigation District and San Diego County Water Authority transfer. If there are negative impacts, San Diego could become more dependent on the Metropolitan supplies. One such challenge was settled in 2013 upholding the validity of the QSA.

Water Quality - Water imported from the CRA contains high levels of salts. The operational constraint is that this water needs to be blended with SWP supplies to meet the target salinity of 500 mg/L of TDS. Another water quality concern is related to the quagga mussel. Controlling the spread and impacts of quagga mussels within the CRA requires extensive maintenance and results in reduced operational flexibility.

Climate Change - Changing climate patterns are expected to shift precipitation patterns and affect water supply. Unpredictable weather patterns will make water supply planning even more challenging. The areas of concern for California include the reduction in Sierra Nevada snowpack, increased intensity and frequency of extreme weather events, and rising sea levels causing increased risk of levee failure.

Legal, environmental, and water quality issues may have impacts on MWD supplies. It is believed, however, that climatic factors would have more of an impact than the others. Climatic conditions have been projected based on historical patterns; however, severe pattern changes may occur in the future. **Table 3.16** shows the factors that may affect inconsistency of supply. These and other factors are addressed in greater detail in MWD's 2020 UWMP.

Table 3.16: Factors which may Affect Inconsistency of Supply

Name of Supply	Legal	Environmental	Water Quality	Climatic
State Water Project	✓	✓	✓	✓
Colorado River			✓	✓

3.10.4 SUBURBAN'S PROJECTED SUPPLY VS DEMAND COMPARISONS

To project future supply and demand comparisons, it will be assumed that demand will increase annually based on population growth and a constant of 121 GPCD for the San Jose Hills Service Area and 140 GPCD for the Whittier/La Mirada Service Area in accordance with SBx7-7 requirements. During times of drought, however, demand will increase at a time when supply will decrease. **Tables 3.17** and **3.18** outline the various base years and demand increases to project during single and multiple dry drought periods. **Tables 3.19**, **3.20**, and **3.21** shows the basis for supply projections during normal, single-dry and multiple dry years for Suburban.

Table 3.17: Suburban Demand during Single & Multiple Dry Years for San Jose Hills Service Area

		Base Year	Percent Increases
Single Dry Year		2017-2018	103%
Multiple Dry Years	Year 1	2015	98%
	Year 2	2015	98%
	Year 3	2015	98%
	Year 4	2015	98%
	Year 5	2015	98%

Table 3.18: Suburban Demand during Single & Multiple Dry Years for Whittier/La Mirada Service Area

		Base Year	Percent Increases
Single Dry Year		2017-2018	102%
Multiple Dry Years	Year 1	2015	96%
	Year 2	2015	96%
	Year 3	2015	96%
	Year 4	2015	96%
	Year 5	2015	96%

Tables 3.22 to **3.30** provide an analysis of Suburban's supply and demand projections.

Table 3.19: Combined Suburban Basis of Water Year Data (DWR Table 7-1 Retail)

Water Source		Groundwater			Imported Water			Recycled Water		
		Base Year	Volume Available (AF)	% of Average	Base Year	Volume Available (AF)	% of Average	Base Year	Volume Available (AF)	% of Average
Normal Year		2011-2020	32,721	100%	2010	26,400	100%	2015-2020	1,730	100%
Single Dry Year		2015	22,589	69%	2015	23,398	89%	2019	1,506	87%
Multiple Dry Years	Year 1	2012	30,425	93%	2015	23,398	89%	2016	1,626	94%
	Year 2	2013	29,858	91%	2015	23,398	89%	2017	1,634	94%
	Year 3	2014	27,481	84%	2015	23,398	89%	2018	1,595	92%
	Year 4	2015	22,589	69%	2015	23,398	89%	2019	1,506	87%
	Year 5	2016	31,728	97%	2015	23,398	89%	2020	1,640	95%

Table 3.20: San Jose Hills Basis of Water Year Data (DWR Table 7-1 Retail)

Water Source		Groundwater			Imported Water			Recycled Water		
		Base Year	Volume Available (AF)	% of Average	Base Year	Volume Available (AF)	% of Average	Base Year	Volume Available (AF)	% of Average
Normal Year		2011-2020	16,715	100%	2010	18,200	100%	2015-2020	800	100%
Single Dry Year		2015	11,003	66%	2015	18,000	99%	2019	576	72%
Multiple Dry Years	Year 1	2012	15,249	91%	2015	18,000	99%	2016	696	87%
	Year 2	2013	14,189	85%	2015	18,000	99%	2017	704	88%
	Year 3	2014	13,777	82%	2015	18,000	99%	2018	665	83%
	Year 4	2015	11,003	66%	2015	18,000	99%	2019	576	72%
	Year 5	2016	17,952	107%	2015	18,000	99%	2020	710	89%

Table 3.21: Whittier/La Mirada Basis of Water Year Data (DWR Table 7-1 Retail)

Water Source		Groundwater			Imported Water			Recycled Water		
		Base Year	Volume Available (AF)	% of Average	Base Year	Volume Available (AF)	% of Average	Base Year	Volume Available (AF)	% of Average
Normal Year		2011-2020	16,006	100%	2010	8,200	100%	2015-2020	930	100%
Single Dry Year		2015	11,586	72%	2015	5,398	66%	2019	930	100%
Multiple Dry Years	Year 1	2012	15,176	95%	2015	5,398	66%	2016	930	100%
	Year 2	2013	15,668	98%	2015	5,398	66%	2017	930	100%
	Year 3	2014	13,704	86%	2015	5,398	66%	2018	930	100%
	Year 4	2015	11,586	72%	2015	5,398	66%	2019	930	100%
	Year 5	2016	13,776	86%	2015	5,398	66%	2020	930	100%

Normal Year

Normal year water supply and demand comparisons for Suburban combined, San Jose Hills and La Mirada/Whittier service areas are shown on **Tables 3.22**, **3.23**, and **3.24**, respectively.

Table 3.22: Combined Suburban Normal Year Supply & Demand Comparison (AF)
(DWR Table 7-2 Retail)

	2025	2030	2035	2040	2045
Supply totals	60,751	60,751	60,751	60,751	60,751
Demand totals	45,250	45,643	46,040	46,441	46,845
Difference	15,501	15,108	14,711	14,310	13,906

Table 3.23: San Jose Hills Normal Year Supply & Demand Comparison (AF)
(DWR Table 7-2 Retail)

	2025	2030	2035	2040	2045
Supply totals	34,200	34,200	34,200	34,200	34,200
Demand totals	24,175	24,415	24,658	24,904	25,151
Difference	10,025	9,785	9,542	9,296	9,049

Table 3.24: Whittier/La Mirada Normal Year Supply & Demand Comparison (AF)
(DWR Table 7-2 Retail)

	2025	2030	2035	2040	2045
Supply totals	25,136	25,136	25,136	25,136	25,136
Demand totals	20,461	20,615	20,770	20,926	21,083
Difference	4,675	4,521	4,366	4,210	4,053

Single Dry Year

Single dry year water supply and demand comparisons for Suburban combined, San Jose Hills and La Mirada/Whittier service areas are shown on **Tables 3.25**, **3.26**, and **3.27**, respectively.

Table 3.25: Combined Suburban Single Dry Year Single Dry Year Supply & Demand Comparison (AF)
(DWR Table 7-3 Retail)

	2025	2030	2035	2040	2045
Supply totals	47,493	47,493	47,493	47,493	47,493
Demand totals	46,364	46,767	47,174	47,585	48,000
Difference	1,129	726	319	(92)	(507)

Table 3.26: San Jose Hills Single Dry Year Single Dry Year Supply & Demand Comparison (AF)
(DWR Table 7-3 Retail)

	2025	2030	2035	2040	2045
Supply totals	29,579	29,579	29,579	29,579	29,579
Demand totals	25,535	25,782	26,032	26,283	26,538
Difference	4,044	3,797	3,547	3,295	3,041

Table 3.27: Whittier/La Mirada Single Dry Year Supply & Demand Comparison (AF)
(DWR Table 7-3 Retail)

	2025	2030	2035	2040	2045
Supply totals	17,914	17,914	17,914	17,914	17,914
Demand totals	20,828	20,985	21,143	21,302	21,462
Difference	(2,914)	(3,071)	(3,229)	(3,388)	(3,548)

Multiple Dry Year

Multiple dry year water supply and demand comparisons for Suburban combined, San Jose Hills and La Mirada/Whittier service areas are shown on **Tables 3.28**, **3.29**, and **3.30**, respectively.

Table 3.28: Combined Suburban Multiple Dry Years Supply & Demand Comparison (AF)
(DWR Table 7-4 Retail)

		2025	2030	2035	2040	2045
First year	Supply totals	55,449	55,449	55,449	55,449	55,449
	Demand totals	44,062	44,445	44,832	45,223	45,618
	Difference	11,387	11,003	10,616	10,226	9,831
Second year	Supply totals	54,890	54,890	54,890	54,890	54,890
	Demand totals	44,062	44,445	44,832	45,223	45,618
	Difference	10,828	10,444	10,057	9,666	9,272
Third year	Supply totals	52,513	52,513	52,513	52,513	52,513
	Demand totals	44,062	44,445	44,832	45,223	45,618
	Difference	8,451	8,068	7,681	7,290	6,895
Fourth year	Supply totals	47,493	47,493	47,493	47,493	47,493
	Demand totals	44,062	44,445	44,832	45,223	45,618
	Difference	3,431	3,048	2,661	2,270	1,875
Fifth year	Supply totals	56,766	56,766	56,766	56,766	56,766
	Demand totals	44,062	44,445	44,832	45,223	45,618
	Difference	12,705	12,321	11,934	11,543	11,149

Table 3.29: San Jose Hills Multiple Dry Years Supply & Demand Comparison (AF)
(DWR Table 7-4 Retail)

		2025	2030	2035	2040	2045
First year	Supply totals	33,945	33,945	33,945	33,945	33,945
	Demand totals	24,374	24,610	24,848	25,088	25,331
	Difference	9,571	9,336	9,098	8,857	8,614
Second year	Supply totals	32,893	32,893	32,893	32,893	32,893
	Demand totals	24,374	24,610	24,848	25,088	25,331
	Difference	8,519	8,284	8,046	7,805	7,562
Third year	Supply totals	32,481	32,481	32,481	32,481	32,481
	Demand totals	24,374	24,610	24,848	25,088	25,331
	Difference	8,107	7,872	7,634	7,393	7,150
Fourth year	Supply totals	29,579	29,579	29,579	29,579	29,579
	Demand totals	24,374	24,610	24,848	25,088	25,331
	Difference	5,205	4,969	4,731	4,491	4,248
Fifth year	Supply totals	36,662	36,662	36,662	36,662	36,662
	Demand totals	24,374	24,610	24,848	25,088	25,331
	Difference	12,289	12,053	11,815	11,574	11,331

Table 3.30: Whittier/La Mirada Multiple Dry Years Supply & Demand Comparison (AF)
(DWR Table 7-4 Retail)

		2025	2030	2035	2040	2045
First year	Supply totals	21,504	21,504	21,504	21,504	21,504
	Demand totals	19,688	19,836	19,985	20,135	20,287
	Difference	1,816	1,668	1,519	1,368	1,217
Second year	Supply totals	21,996	21,996	21,996	21,996	21,996
	Demand totals	19,688	19,836	19,985	20,135	20,287
	Difference	2,309	2,161	2,012	1,861	1,710
Third year	Supply totals	20,032	20,032	20,032	20,032	20,032
	Demand totals	19,688	19,836	19,985	20,135	20,287
	Difference	344	196	47	(103)	(255)
Fourth year	Supply totals	17,914	17,914	17,914	17,914	17,914
	Demand totals	19,688	19,836	19,985	20,135	20,287
	Difference	(1,774)	(1,921)	(2,071)	(2,221)	(2,372)
Fifth year	Supply totals	20,104	20,104	20,104	20,104	20,104
	Demand totals	19,688	19,836	19,985	20,135	20,287
	Difference	416	268	119	(31)	(183)

Based on the data contained in **Tables 3.22** to **3.30**, Suburban can expect to meet the majority of future demands through 2045 for all climatologic classifications. Several areas in the analysis indicate supply deficits, especially within the Whittier/La Mirada service area. Note that groundwater supplies are shared amongst the entire Suburban service area and shortfalls within one service area are supplemented by the surplus within the other service area. Also note that these projections do not include groundwater right agreements with other agencies. Suburban typically has agreements with other agencies to pump additional groundwater if they anticipate to exceed their adjudicated rights within the Main Basin, and this amount varies annually. Furthermore, Suburban's imported water supply capacities may potentially be reduced significantly due to reductions in MWD's storage reservoirs resulting from increases in regional demand.

3.11 REDUCED DELTA RELIANCE REPORTING

3.11.1 INTRODUCTION

Figure 3.20: Delta Plan Aims to Protect Bay-Delta's Fragile Ecosystem

An urban water supplier that anticipates participating in or receiving water supply benefits from a proposed project ("covered action") such as a multi-year water transfer, conveyance facility, or new diversion that involves transferring water through, exporting water from, or using water in the Delta, should provide information in their 2015 and 2020 UWMPs that can then be used in the covered action process to demonstrate consistency with Delta Plan Policy WR P1, Reduce Reliance on the Delta Through Improved Regional Water Self-Reliance (California Code Reg., tit. 23, § 5003). A "covered action" is an activity that may cause either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment, directly undertaken by any public agency that will occur, in whole or in part, within the boundaries of the Delta or Suisun Marsh.

3.11.2 INFEASIBILITY OF ACCOUNTING SUPPLIES FROM THE DELTA WATERSHED FOR MWD'S MEMBER AGENCIES AND THEIR CUSTOMERS

MWD's service area, as a whole, reduces reliance on the Delta through investments in non-Delta water supplies, local water supplies, and regional and local demand management

measures. MWD's member agencies coordinate reliance on the Delta through their membership in MWD, a regional cooperative providing wholesale water service to its 26 member agencies. Accordingly, regional reliance on the Delta can only be measured regionally, not by individual MWD member agencies and not by the customers of those member agencies.

MWD's member agencies, and those agencies' customers, indirectly reduce reliance on the Delta through their collective efforts as a cooperative. MWD's member agencies do not control the amount of Delta water they receive from MWD. MWD manages a statewide integrated conveyance system consisting of its participation in the SWP, its CRA including Colorado River water resources, programs and water exchanges, and its regional storage portfolio. Along with the SWP, CRA, storage programs, and MWD's conveyance and distribution facilities, demand management programs increase the future reliability of water resources for the region. In addition, demand management programs provide system-wide benefits by decreasing the demand for imported water, which helps to decrease the burden on the MWD's infrastructure and reduce system costs, and free up conveyance capacity to the benefit of all member agencies.

MWD's costs are funded almost entirely from its service area, with the exception of grants and other assistance from government programs. Most of MWD's revenues are collected directly from its member agencies. Properties within MWD's service area pay a property tax that currently provides approximately 8 percent of the fiscal year 2021 annual budgeted revenues. The rest of MWD's costs are funded through rates and charges paid by MWD's member agencies for the wholesale services it provides to them. Thus, MWD's member agencies fund nearly all operations MWD undertakes to reduce reliance on the Delta, including Colorado River Programs, storage facilities, Local Resources Programs and Conservation Programs within MWD's service area.

Because of the integrated nature of MWD's systems and operations, and the collective nature of MWD's regional efforts, it is infeasible to quantify each of MWD member agencies' individual reliance on the Delta. It is infeasible to attempt to segregate an entity and a system that were designed to work as an integrated regional cooperative.

In addition to the member agencies funding MWD's regional efforts, they also invest in their own local programs to reduce their reliance on any imported water. Moreover, the customers of those member agencies may also invest in their own local programs to reduce water demand. However, to the extent those efforts result in reduction of demands on MWD, that reduction does not equate to a like reduction of reliance on the Delta. Demands on MWD are

not commensurate with demands on the Delta because most of MWD member agencies receive blended resources from MWD as determined by MWD, not the individual member agency. For most member agencies, the blend varies from month-to-month and year-to-year due to hydrology, operational constraints, use of storage, and other factors.

3.12 ENERGY INTENSITY

3.12.1 OVERVIEW

New to the 2020 UWMP, it is required that every urban water supplier assess the energy required to distribute their water supply to their consumers or member agencies. The water supplier's energy intensity is required for to the preparation of an UWMP, as defined in CWC Section 10631.2(a). Energy intensity vary with climate, topography, source characteristics, proximity, and other factors. Therefore, urban water suppliers face issues related to the economic costs of the energy required for their operations, as well as issues related to the sustainable supply of energy and water. Knowing how much energy is needed to deliver water to customers is important because of its significance for the State's total energy demands, and for its implications regarding greenhouse gas (GHG) emissions and climate goals for the region and state.

This section includes an assessment of the energy intensity of the water supply operation for Suburban. Energy is required for the pumping, conveyance, treatment and distribution of water, and for collection, treatment, and discharge of wastewater, and/or conveyance and distribution of recycled water.

Energy intensity in respect to water supplies is a measure of unit energy consumption an urban water supplier expends per AF to convey water from the point where the supplier acquires the water to the point of delivery. Energy for public water and wastewater services are measured in kilowatt-hours of electricity, which is then normalized by water volume to express energy intensity in kilowatt-hour per acre-feet (kWh/AF).

Some of the main differences between energy use associated with various water supply sources are the distances the water must be transported from its origins (the amount of pumping necessary to harvest and distribute the water) and the location of treatment facilities in relation to the end users, among others.

3.12.2 WATER USE AND ENERGY RELATIONSHIP

Energy production can emit a number of different types of Greenhouses Gas (GHGs).

California's Air Resources Board recognizes that energy production accounts for between 30 and 40 percent of total GHG production in California, and include the following inventory of GHGs: Carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), sulfur hexafluoride (SF6), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and nitrogen trifluoride (NF3). These GHGs vary in magnitude in terms of their GHG strength, and therefore are converted to be equivalent to CO2 for the purposes of measuring GHG emission across the state. CO2 emissions (or the equivalent for other GHGs) are the common measurement for GHG emissions. Currently, statewide water uses accounts for nearly 20 percent of electricity use, and 30 percent of non-power plant related natural gas consumption. Water use and energy are linked in at least three critical ways:

- *Water pumping and purification*: The amount of energy used to pump water will depend upon the source (e.g., surface versus groundwater), the distance and height the water must be moved, and treatment requirements.
- *Wastewater treatment*: The amount of energy used in wastewater treatment plant typically ranges from 1,100 to 4,600 kWh per million gallons of wastewater treated.
- *Water heating*: In an average California home, 41 percent of the water is used for dishwashing, faucets, laundry, and bathing water that is often heated.

These amounts, in total, are so significant that one must also count the amount of GHGs from the fossil fuels that are burned to produce the oil, gas, coal and other combustibles which are then burned to produce the electricity. Suburban understand the water-energy nexus and aims to conserving water saves the energy that would have been used to convey, treat, and distribute the water. Reducing the energy consumption in water operations leads to the decreases production of GHGs.

3.12.3 ENERGY USAGE AND INTENSITY

In order to determine energy use related to water supply processes under Suburban's operational control, Suburban collected billing and energy quantity data provided by Southern California Edison (SCE) for 2016 (January 1, 2016 to December 31, 2016) representing the comprehensive one-year reporting period. The billing amounts for each facility were converted to an energy use quantity measured in kWh for electricity. **Tables 3.31**, **3.32**, and **3.33** summarizes the energy intensity for Combined Suburban, San Jose Hills and Whittier/La Mirada Service Areas, respectively. Note that the total water shown in the table includes potable and non-potable supplies. Due to the nature of the current system, data for energy consumption for non-potable supplies is combined along with potable supplies.

Table 3.31: Combined Suburban Total Energy Intensity (DWR Table O1-B)

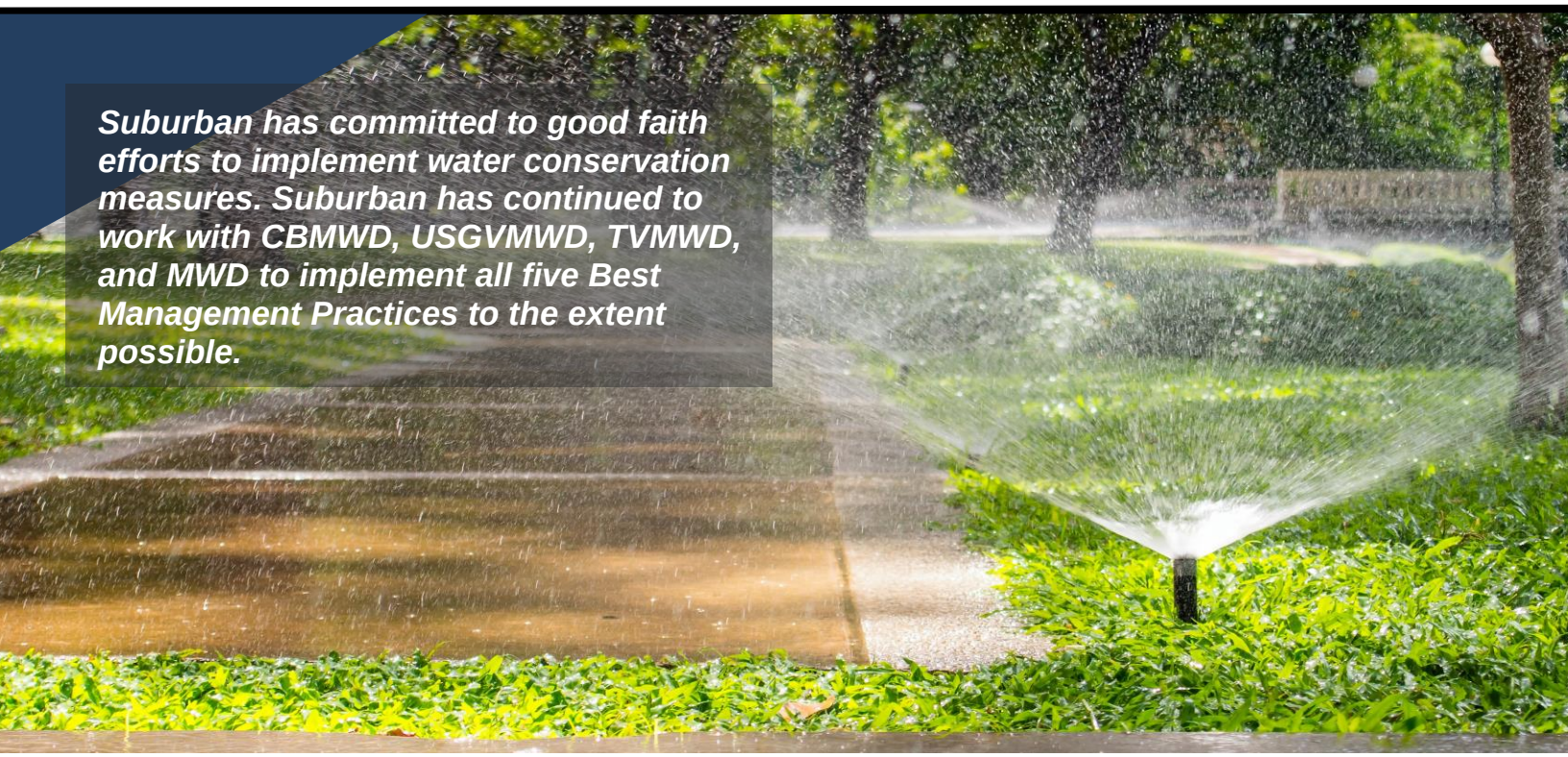
Enter Start Date for Reporting Period	1/1/2020	Urban Water Supplier Operational Control		
End Date	12/31/2020			
☐ Is upstream embedded in the values reported?		Sum of All Water Management Processes	Non-Consequential Hydropower	
Water Volume Units Used	*AF*	Total Utility	Hydropower	Net Utility
Volume of Water Entering Process (volume unit)		*46100*		*46100*
Energy Consumed (kWh)		*23119451*		*23119451*
Energy Intensity (kWh/vol. converted to MG)		*1539.1*	*#DIV/0!*	*1539.1*

Table 3.32: San Jose Hills Total Energy Intensity (DWR Table O1-B)

Enter Start Date for Reporting Period	1/1/2020	Urban Water Supplier Operational Control		
End Date	12/31/2020			
☐ Is upstream embedded in the values reported?		Sum of All Water Management Processes	Non-Consequential Hydropower	
Water Volume Units Used	*AF*	Total Utility	Hydropower	Net Utility
Volume of Water Entering Process (volume unit)		*25649*		*25649*
Energy Consumed (kWh)		*11347409*		*11347409*
Energy Intensity (kWh/vol. converted to MG)		*1357.7*	*#DIV/0!*	*1357.7*

Table 3.33: Whittier/La Mirada Total Energy Intensity (DWR Table O1-B)

Enter Start Date for Reporting Period	1/1/2020	Urban Water Supplier Operational Control		
End Date	12/31/2020			
☐ Is upstream embedded in the values reported?		Sum of All Water Management Processes	Non-Consequential Hydropower	
Water Volume Units Used	*AF*	Total Utility	Hydropower	Net Utility
Volume of Water Entering Process (volume unit)		*20451*		*20451*
Energy Consumed (kWh)		*11772042*		*11772042*
Energy Intensity (kWh/vol. converted to MG)		*1766.5*	*#DIV/0!*	*1766.5*



SECTION 4: CONSERVATION MEASURES

2020 URBAN WATER MANAGEMENT PLAN

SECTION 4 CONSERVATION MEASURES

4.1 OVERVIEW

As a result of diminished existing supplies and difficulty in developing new supplies, water conservation is important to Southern California's sustainability. Agencies statewide acknowledge that efficient water use is the foundation of its current and future water planning and operations policies.

In 2007, Suburban became a signatory to the Memorandum of Understanding Regarding Water Conservation in California (MOU) and a member of the California Urban Water Conservation Council (CUWCC), establishing a firm commitment to the implementation of the Best Management Practices (BMPs) or Demand Management Measures (DMMs). The CUWCC was a consensus-based partnership of agencies and organizations concerned with water supply and conservation of natural resources in California. By becoming a signatory, Suburban committed to implement a specific set of locally cost-effective conservation practices in its service area.

In March 2018, the CUWCC disbanded, and members of the CUWCC worked together to form the California Water Efficiency Partnership (CalWEP). CalWEP's mission is to maximize urban water efficiency and conservation throughout California by supporting and integrating innovative technologies and practices; encouraging effective public policies; advancing research, training, and public education; and building collaborative approaches and partnerships. The CUWCC (now CalWEP) drafted the MOU in 1991. At that time, the MOU established 14 BMPs which define policies, programs, practices, rules, regulations, or ordinances that result in the more efficient use or conservation of water. Eventually the original 14 BMPs were diminished to 5 BMPs as shown on **Section 4.1.1**.

This section of the UWMP satisfies the requirements of § 10631 (f) & (j) of the CWC and describes how Suburban implements each applicable BMP. This section also provides an estimate of existing conservation savings where information is available.

4.1.1 CalWEP BMPS

The updated CalWEP BMPs from 2015 will still be in effect for the 2020 UWMP. **Table 4.1** provides an overview of the BMPs.

Table 4.1: Conservation Measures

BMP	Description
BMP 1: Utility Operations	*Deals with water waste prohibitions, water efficiency ordinances, metering, conservation pricing, and other items related to managing water use.*
BMP 2: Public Education & Outreach	*Deals with outreach efforts including emails, newsletters, advertisements, presentations, promotions, etc. related to outreach & education.*
BMP 3: Residential Programs	*Deals with showerheads, faucets, toilets, turf removal, and leak detection surveys related to residential water use.*
BMP 4: Commercial, Industrial, & Institutional Programs	*Deals with toilets, urinals, steamers, cooling towers, food/restaurant equipment, medical equipment, and items related to commercial, institutional, and industrial water use.*
BMP 5: Landscape Programs	*Deals with establishing parameters for large landscapes, including measurements, budgets, audits, prohibitions, incentives, etc., related to large landscapes.*
Other	Any additional BMPs supported by Suburban are listed on the following pages.

4.2 SUBURBAN CONSERVATION PROGRAMS

As Signatory to the CalWEP MOU, Suburban has committed to use good-faith efforts to implement all applicable BMPs. Suburban actively implements all of the measures with good faith effort by achieving and maintaining the staffing, funding, and in general, the priority levels necessary to achieve a high level of activity. Water conservation is an integral part of the Suburban's water policies.

Suburban, in conjunction with CBMWD, USGVMWD, and TVMWD, plays an active role in promoting water use efficiency in its service area. As an investor-owned water utility, and in accordance with the approval and requirements of the California Public Utilities Commission, Suburban established Suburban's Water Shortage Contingency Plan which is the combination of Tariff Rule No. 14.1 and Tariff Schedule No. 14.1 (**Appendix J**). This plan details actions and restrictions to be followed during the various stages of a water shortage, which are divided into four stages. The actions to be undertaken during each stage are described in **Section 5**: Water Shortage Contingency Plan. Suburban works with CBMWD, USGVMWD, TVMWD, and MWD towards implementing the DMMs through means of various conservation measures.

4.2.1 BMP 1: UTILITY OPERATIONS

This BMP deals with water waste prohibitions, water efficiency ordinances, metering, conservation pricing, and other items related to managing water use. As a CPUC-regulated utility, Suburban is governed by Tariff Rule No. 14.1 Water Shortage Contingency Plan and Tariff Rule No. 20 Water Conservation. The Water Shortage Contingency Plan allows Suburban to institute voluntary conservation measures. If further reduction is needed, Suburban can institute mandatory conservation measures using Tariff Schedule No. 14.1, which specifies enforcement criteria and fines for violations. It also allows Suburban to restrict and/or disconnect water service for customers using water in a wasteful manner. Both the San Jose Hills and Whittier/La Mirada Service Areas are subject to these regulations.

Water Waste Prohibition Ordinance

Suburban adopted their Water Shortage Contingency Plan that is a combination of Tariff Rule No. 14.1 and Tariff Schedule No. 14.1. as water conservation measures.

The Water Shortage Contingency Plan's goal is to reduce the risk and severity of water shortages and to notify its customers of the current conservation stage.

The Water Shortage Contingency Plan (which includes Tariff Rule No. 14.1 and Tariff Schedule No. 14.1) was updated in August 2015 stating waste water prohibitions to its customers. The prohibitions apply to the following:

- Water hose usage
- Leaks
- Windy and rainy days
- Construction water restrictions
- Hotels/Motels
- Prohibiting outdoor watering during or 48 hours following a rain event
- Overspray and Runoff
- Irrigation Times
- Vehicle Washing
- Fire hydrants
- Reporting of waste water
- New Development
- Fountains
- Hand Watering
- Swimming pools
- Drinking water
- Pre-rinse spray valve

A detailed description of each prohibition is shown in **Section 5**: Water Shortage Contingency Plan.

Tariff Rule No. 11.B.3 contains a Water Waste Prohibition Policy allowing termination of water service to customers who do not comply with a notice to remedy their wasteful practice within five days.

The Water Conservation Manager works cooperatively with property owners to reduce water waste. Also, Suburban's field staff reports all visible water waste situations observed to Customer Service for additional follow-up by Suburban's Water Conservation Manager.

Figure 4.1: Water Waste is Prohibited by Suburban

Metering

All of Suburban's customers, both in the San Jose Hills and the Whittier/La Mirada Service Areas are metered, with the exception of fire services. Fire service accounts have a flat fee charged for availability. Suburban maintains metering accuracy utilizing its meter replacement schedule. All Suburban water accounts are metered and billed monthly based on block rates. Suburban has a block rate structure based upon a billing unit of 100 cubic feet, commonly stated as a unit. The water rate structure is a two-tier increasing block rate. **Tables 4.2** and **4.3** on the following page provides a summary of Suburban's water rate structures for San Jose Hills and Whittier /La Mirada Residential Service Areas.

Conservation Pricing

All of Suburban's utility water accounts are metered and billed monthly based on commodity rates. Suburban has a commodity rate structure based upon a billing unit of 100 cubic feet, commonly abbreviated as a unit. Current rates for both service areas as shown on **Tables 4.2** and **4.3**.

Suburban offers the Water Invoice and Statement Help (WISH) program, a rate assistance program for low-income residents. This program is also qualified to non-profit group living facilities, agricultural employee housing facilities, and migrant farm worker housing centers.

Table 4.2: Current Water Rates (as of 01/01/2021) for San Jose Hills Service Area

Sector	Water		
	Area	Block	Rate
Residential (Metered)	Tariff Area No. 1	Block 1	$3.212/Unit
	Tariff Area No. 1	Block 2	$3.606/Unit
	Tariff Area No. 2	Block 1	$3.343/Unit
	Tariff Area No. 2	Block 2	$3.685/Unit
	Tariff Area No. 3	Block 1	$3.486/Unit
	Tariff Area No. 3	Block 2	$3.985/Unit
Non- Residential (Metered)	Tariff Area No. 1	-	$3.308/Unit
	Tariff Area No. 2	-	$3.421/Unit
	Tariff Area No. 3	-	$3.547/Unit
Recycled (Metered)	Tariff Area No. 1	-	$2.811/Unit
	Tariff Area No. 2	-	$2.907/Unit
	Tariff Area No. 3	-	$3.015/Unit

[1] Quantity Rate unit is 100 cu. ft.

Table 4.3: Current Water Rates (as of 01/01/2021) for Whittier/La Mirada Service Area

Sector	Water		
	Area	Block	Rate
Residential (Metered)	Tariff Area No. 1	Block 1	$2.921/Unit
	Tariff Area No. 1	Block 2	$3.297/Unit
	Tariff Area No. 2	Block 1	$3.104/Unit
	Tariff Area No. 2	Block 2	$3.423/Unit
	Tariff Area No. 3	Block 1	$3.356/Unit
	Tariff Area No. 3	Block 2	$3.639/Unit
Non- Residential (Metered)	Tariff Area No. 1	-	$2.99/Unit
	Tariff Area No. 2	-	$3.168/Unit
	Tariff Area No. 3	-	$3.458/Unit

[1] Quantity Rate unit is 100 cu. ft.

Programs to Assess & Manage Distribution System Real Loss

Suburban monitors water loss in its distribution system on a daily basis. It is Suburban's highest priority to repair all known distribution system and service connection leaks as soon as possible. In 2020, non-revenue water averaged less than 6.5 percent of total gross water usage.

A significant portion of non-revenue water could be attributed to meter inaccuracy. Also, it appears that distribution system leaks are the most-likely culprit for loss of water.

Suburban recognizes the need to optimize local water resources, minimize the need for imported water, and discourage wasteful practices. Suburban conducts water audits, and repairs on an ongoing basis. Through metering, Suburban closely monitors water production and consumption, and investigates any unaccounted- for water to determine water loss. Furthermore, Suburban has an extensive capital improvement program, which replaces aging pipeline prone to leakage.

Suburban's water losses are calculated and validated through AWWA's Water Loss Audits. Furthermore, Suburban's field staff regularly watches for water waste and leaks then notifies and works with customers to address the situation. Supervisors, customer service staff, meter readers, and the flushing/sampling crew inspect customer usage routinely for anomalies. Incidents of water waste are investigated and recommendations for correction are provided. Water sources are regulated and can be disconnected in cases of excessive leakage and/or facilities failure.

4.2.2 BMP 2: PUBLIC EDUCATION & OUTREACH

This BMP deals with outreach efforts including emails, newsletters, advertisements, presentations, promotions, etc., related to outreach & education.

School Programs

Suburban sponsors a very successful theatre program for the schools within its service area. The National Theatre for Children (NTC) is the largest in-school touring educational theatre company in the world. Each year NTC performs a play that focuses on the importance of water, ways in which water gets polluted, and ways to conserve water in 20 schools within Suburban's service area reaching approximately 8,000 to 10,000 students each year.

General Public Outreach (Conservation Coordinator)

Suburban created a Water Conservation Manager position in 2002. The Conservation Managers' duties include coordination work related to water conservation, education, and public outreach.

General Public Information (Brochures, Mailings, Website, Etc.)

Suburban's San Jose Hills and Whittier/La Mirada Districts promote water conservation through a variety of information programs and public events. Suburban offers conservation brochures and materials, activity books, public outreach displays, oral presentations, and

landscape workshops to inform the public of conservation efforts at a variety of different local community events throughout the year. Suburban raises awareness about water conservation through paid advertising, press releases, news ads, and media events and provides its customers with a water usage comparison on their water bills. Additionally, Suburban's web page (www.suburbanwatersystems.com) provides information related to programs, rebates, water saving tips, and announcements about upcoming events.

Suburban provides water conservation literature, brochures, landscape advice and tips, home water conservation devices etc., directly to the public and its customers. These materials are available at Suburban's Administrative Offices and during special events. Suburban also maintains a library of water resource/conservation education films and videos online.

4.2.3 BMP 3: RESIDENTIAL PROGRAMS

This BMP deals with showerheads, faucets, toilets, and leak detection surveys related to residential water use.

Suburban Irrigation Controllers Program – In 2018 Suburban commenced a Landscape Survey and Irrigation Retrofit Program. This program is marketed to the top 30 percent of Suburban's highest using residential customers. Customers are provided with an in-depth report about their past water usage, and are provided a new smart irrigation controller, and new efficient sprinkler heads. The smart controller adjusts irrigation times based on weather and evapotranspiration rates to only provide the amount water required, preventing over watering, and conserving water. At the end of 2020, Suburban has installed over 500 smart controllers. In addition to assisting the customer water their landscaping more efficiently, this customer encounter is an opportunity to provide materials and tips for other ways to save water both indoors and outdoors.

SoCal Water$mart – Suburban participates in various MWD programs aimed at increasing landscape water use efficiency for residential customers, including rebate programs that provide financial incentives. SoCal Water$mart is the conservation rebate program offered through MWD. The program offers rebates for high-efficiency clothes washers (HEWC), ultra high-efficiency toilets (UHET), weather-based irrigation controllers (WBIC), soil moisture sensor system (SMSS), rotating sprinkler nozzles, rain barrels/cisterns, and turf removal, as described below.

- ***Weather-Based Irrigation Controllers Program*** – Under this regional program, residential and small commercial properties are eligible for a rebate when they purchase

and install a weather-based irrigation controller, which has the potential to save 13,500 gallons a year per residence. Rebates start at $80 per controller for landscapes less than 1 acre in area and $35 per station for more than 1 acre.

- ***Rotating Nozzle Rebate Program –*** This rebate program is offered to both residential and commercial customers. Through this program, site owners will purchase and install rotary nozzles, which can use up to 20 percent less water than conventional fan spray nozzles, in existing irrigation systems. These sprinklers reduce runoff onto sidewalks and into local storm drain system and provide uniform water distribution onto the landscape. MWD offers $2 per nozzle with a minimum of 30 nozzles.

- ***Rain Barrels & Cisterns Program –*** Residential and commercial customers can receive rebates for installing rain barrels and/or cisterns to collect rainwater for re-use for watering their landscapes. Customers may receive rebates starting at $35 per barrel or $250-$350 per cistern. The barrels and cisterns must adhere to specified design guidelines.

- ***Soil Moisture Sensor System Program*** – For large residential sites, a soil moisture sensor, which measures soil moisture content in the active root zone, can be installed to receive rebates starting at $80 or $35 per SMSS. The sensor must be connected to a compatible irrigation system controller.

- ***Turf Removal Program*** – Through this program, residential and small commercial customers of participating retail water agencies are eligible to receive a minimum of $2 per square foot of turf removed for qualifying projects.

- ***High-Efficiency Clothes Washers*** – Residents in Suburban's service area are eligible to receive a $85 rebate when they purchase a new High Efficiency Clothes Washer (HECW). Rebates are available on a first-come, first-served basis, while funds last. To qualify for a rebate, the HECW must have a water factor of 4.0 or less. An HECW with a water factor of 4.0 will use approximately 14

Figure 4.2: High-Efficient Washing Machines

gallons of water per load compared to a conventional top-loading clothes washer which can use 40 gallons or more per load. Depending on use, these machines can save 10,000 gallons of water per year. Participants are encouraged to contact their local gas and/or electric utility as additional rebates may be available.

4.2.4 BMP 4: COMMERCIAL, INDUSTRIAL, & INSTITUTIONAL PROGRAMS

Suburban currently offers financial incentives under MWD's SoCal Water$mart Program, which offers rebates for various water efficient devices to some CII customers.

SoCal Water$mart – MWD offers rebates to assist CII customers in replacing high-flow plumbing fixtures with low-flow fixtures. Rebates are available only on those devices listed in **Table 4.4** and must replace higher water use devices. Installation of devices is the responsibility of each participant. Participants may purchase and install as many of the water saving devices as are applicable to their site.

Table 4.4: CII Retrofit Devices & Rebate Amounts under SoCal Water$mart Program

Retrofit Device	Rebate Amount
High Efficiency Toilet	$40
Ultra-Low & Zero Water Urinal	$200
Connectionless Food Steamers	$485 per compartment
Air-Cooled Ice Machines	$1,000
Cooling Tower Conductivity Controller	$625
pH / Conductivity Controller	$1,750
Dry Vacuum Pumps	$125 per 0.5 HP
Weather Based Irrigation Controller and Computer Irrigation Controller	$35 per station and $80 per controller
Rotating Nozzles for Pop-up Spray Head Retrofits	$2 (minimum of 30 per rebate)

4.2.5 BMP 5: LANDSCAPE PROGRAMS

Suburban offers their own landscape surveys and workshops as well as supports large landscape conservation programs through USGVMWD, CBMWD, TVMWD, and MWD's regional programs, which are shown on the following page.

Landscape Surveys – Beginning in 2018, Suburban offered free irrigation system retrofits and landscape surveys to their customers. This includes offering free smart sprinkler controllers, high-efficiency nozzles, and a landscape survey to qualifying customers. Suburban contracted with *EcoTech Services* to carry out these surveys in hopes to help customers use water more efficiently. A total of 526 customers have participated in this program.

Figure 4.3: Postcard for Residential Landscape Program offered by Suburban from 2018 to 2020

Landscape Workshops & Webinars – Suburban holds approximately four landscape workshops each year for customers to assist them with efficient watering and landscaping techniques. Between 2016 and 2020, Suburban hosted 20 classes reaching 545 customers.

SoCal Water$mart Program – Suburban, through MWD and its Member Agencies, offered rebates through SoCal Water$mart program for landscape plumbing retrofitting. Landscape rebates are available for WBIC, SMSS, rotating sprinkler nozzles, and turf removal. The available landscape programs are described in **Section 4.2.3** and listed below:

- Weather-Based Irrigation Controllers Program (WBIC)
- Rotating Nozzle Rebate Program
- Rain Barrels & Cisterns Program
- Soil Moisture Sensor System Program (SMSS)
- Turf Removal Program

California Friendly Landscape Training – In addition to landscape classes hosted and sponsored directly by Suburban, Suburban also supports MWD's California Friendly Landscape and Gardening Training, which provides education to residential homeowners and professional landscape contractors on a variety of landscape water use efficiency practices. These classes are hosted by USGVMWD to encourage participation across the USGVMWD's service area (including Suburban). These classes are offered throughout the year and taught in both English and Spanish languages.

4.2.6 OTHER USGVMWD, CBMWD, AND TVMWD CONSERVATION MEASURES

WHOLESALE AGENCY PROGRAMS

Suburban is a retail water agency. Therefore, this BMP does not apply. Suburban is a member agency of USGVMWD, CBMWD, and TVMWD. At various times, these wholesalers provide additional financial incentives or resources when funding is available.

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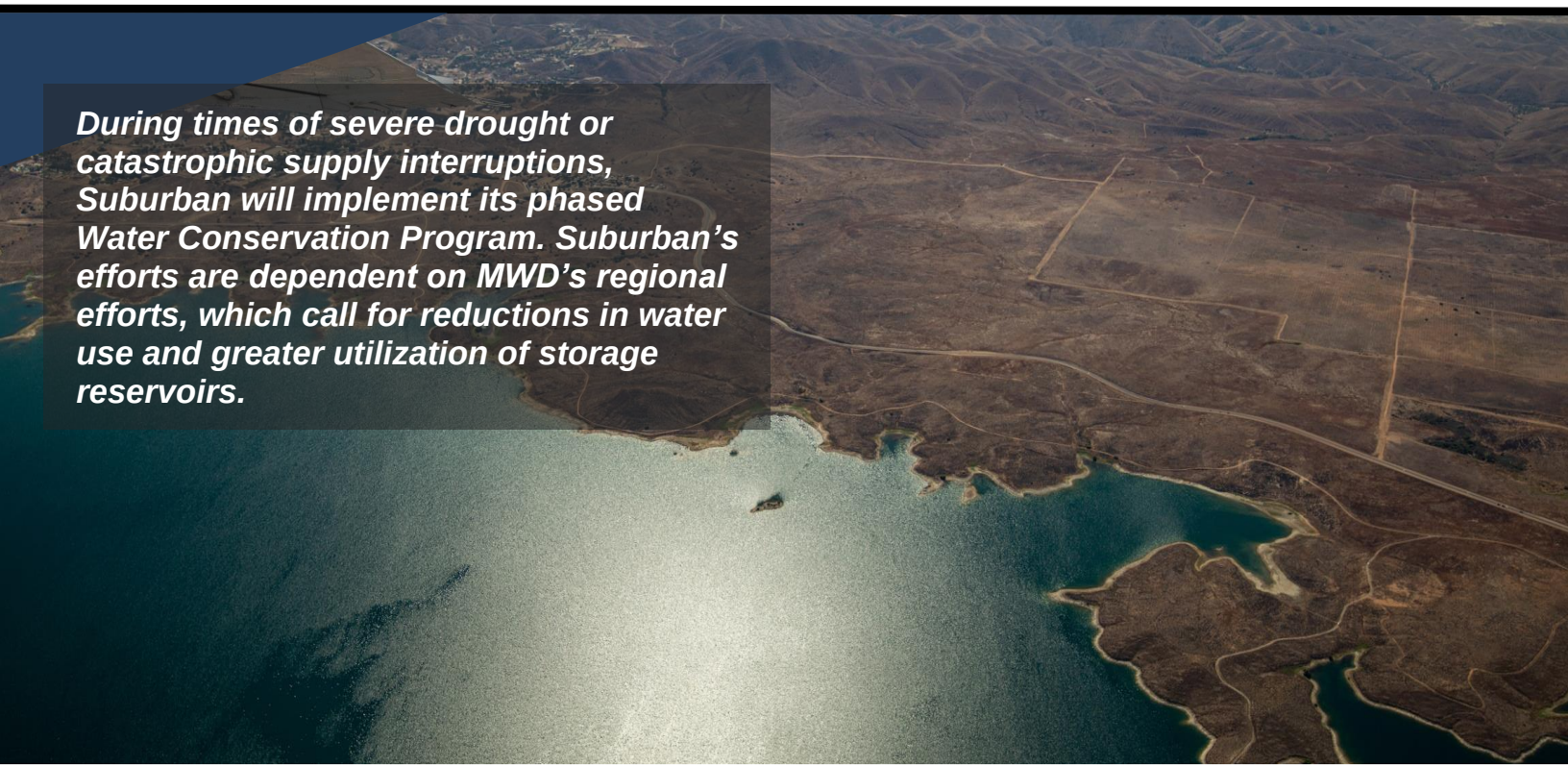

During times of severe drought or catastrophic supply interruptions, Suburban will implement its phased Water Conservation Program. Suburban's efforts are dependent on MWD's regional efforts, which call for reductions in water use and greater utilization of storage reservoirs.

SECTION 5: WATER SHORTAGE CONTINGENCY PLAN

2020 URBAN WATER MANAGEMENT PLAN

SECTION 5 WATER SHORTAGE CONTINGENCY PLAN

5.1 OVERVIEW

Water supplies may be interrupted or reduced significantly in a number of ways, including droughts, earthquakes, and power outages, that hinder a water agency's ability to effectively deliver water. The ability to manage water supplies in times of drought or other emergencies is an important part of water resources management for a community.

Recent water supply challenges throughout the American Southwest and the State of California have resulted in the development of a number of policy actions that water agencies would implement in the event of a water shortage. In Southern California, the development of such policies has occurred at both the wholesale and retail level. This section addresses elements related to the urban water supplier's Water Shortage Contingency Plan (WSCP) describing new and existing policies that MWD and Suburban have in place to respond to water supply shortages, including a catastrophic interruption and greater than a 50 percent reduction in water supply.

5.2 WATER SUPPLY RELIABILITY ANALYSIS

5.2.1 WATER SERVICE RELIABILITY ASSESSMENT

Southern California is expected to experience an increase in regional demands in the years 2025 through 2045 as a result of population growth. Although increases in demand are expected, future demands are effectively limited due to the requirements of SBx7-7. It can be reasonably expected that the majority of agencies have met or were near their compliance targets for 2020 and will continue to meet, or will soon meet, their per-capita usage limit in the future.

The data in the MWD 2020 UWMP shows supply reliability projections for average and single dry years and is important to effectively project and analyze supply and demand over the next 25 years for many regional agencies. Projected supplies during single and multiple dry year scenarios indicate MWD's projected supply will exceed its projected single dry year demands in all years. Likewise, for average years, MWD supply exceeds projected demands for all years.

Due to the semi-arid nature of Suburban's climate and as a result of past drought conditions, Suburban is vulnerable to water shortages due to its climatic environment and seasonally hot summer months. **Section 3** describes the water availability during single and multiple dry year scenarios. **Tables 5.1** through **5.9** summarize the supply and demand comparisons during normal, single-dry year, and multiple dry year for Suburban's service areas.

Table 5.1: Combined Suburban Normal Year Supply & Demand Comparison (AF) (DWR Table 7-2 R)

	2025	2030	2035	2040	2045
Supply totals	60,851	60,851	60,851	60,851	60,851
Demand totals	45,250	45,643	46,040	46,441	46,845
Difference	15,601	15,208	14,811	14,410	14,006

Table 5.2: San Jose Hills Normal Year Supply & Demand Comparison (AF) (DWR Table 7-2 R)

	2025	2030	2035	2040	2045
Supply totals	35,615	35,615	35,615	35,615	35,615
Demand totals	24,789	25,028	25,270	25,515	25,762
Difference	10,826	10,587	10,345	10,100	9,853

Table 5.3: Whittier/La Mirada Normal Year Supply & Demand Comparison (AF) (DWR Table 7-2 R)

	2025	2030	2035	2040	2045
Supply totals	25,136	25,136	25,136	25,136	25,136
Demand totals	20,461	20,615	20,770	20,926	21,083
Difference	4,675	4,521	4,366	4,210	4,053

Table 5.4: Combined Suburban Single Dry Year Supply & Demand Comparison (AF) (DWR Table 7-3 R)

	2025	2030	2035	2040	2045
Supply totals	47,493	47,493	47,493	47,493	47,493
Demand totals	46,364	46,767	47,174	47,585	48,000
Difference	1,129	726	319	(92)	(507)

Table 5.5: San Jose Hills Single Dry Year Supply & Demand Comparison (AF) (DWR Table 7-3 R)

	2025	2030	2035	2040	2045
Supply totals	29,579	29,579	29,579	29,579	29,579
Demand totals	25,535	25,782	26,032	26,283	26,538
Difference	4,044	3,797	3,547	3,295	3,041

Table 5.6: Whittier/La Mirada Single Dry Year Supply & Demand Comparison (AF) (DWR Table 7-3 R)

	2025	2030	2035	2040	2045
Supply totals	17,914	17,914	17,914	17,914	17,914
Demand totals	20,828	20,985	21,143	21,302	21,462
Difference	(2,914)	(3,071)	(3,229)	(3,388)	(3,548)

Table 5.7: Combined Suburban Multiple Dry Year Supply & Demand Comparison (AF) (DWR Table 7-4 R)

		2025	2030	2035	2040	2045
First year	Supply totals	55,449	55,449	55,449	55,449	55,449
	Demand totals	44,062	44,445	44,832	45,223	45,618
	Difference	11,387	11,003	10,616	10,226	9,831
Second year	Supply totals	54,890	54,890	54,890	54,890	54,890
	Demand totals	44,062	44,445	44,832	45,223	45,618
	Difference	10,828	10,444	10,057	9,666	9,272
Third year	Supply totals	52,513	52,513	52,513	52,513	52,513
	Demand totals	44,062	44,445	44,832	45,223	45,618
	Difference	8,451	8,068	7,681	7,290	6,895
Fourth year	Supply totals	47,493	47,493	47,493	47,493	47,493
	Demand totals	44,062	44,445	44,832	45,223	45,618
	Difference	3,431	3,048	2,661	2,270	1,875
Fifth year	Supply totals	56,766	56,766	56,766	56,766	56,766
	Demand totals	44,062	44,445	44,832	45,223	45,618
	Difference	12,705	12,321	11,934	11,543	11,149

Table 5.8: San Jose Hills Multiple Dry Year Supply & Demand Comparison (AF) (DWR Table 7-4 R)

		2025	2030	2035	2040	2045
First year	Supply totals	33,945	33,945	33,945	33,945	33,945
	Demand totals	24,374	24,610	24,848	25,088	25,331
	Difference	9,571	9,336	9,098	8,857	8,614
Second year	Supply totals	32,893	32,893	32,893	32,893	32,893
	Demand totals	24,374	24,610	24,848	25,088	25,331
	Difference	8,519	8,284	8,046	7,805	7,562
Third year	Supply totals	32,481	32,481	32,481	32,481	32,481
	Demand totals	24,374	24,610	24,848	25,088	25,331
	Difference	8,107	7,872	7,634	7,393	7,150
Fourth year	Supply totals	29,579	29,579	29,579	29,579	29,579
	Demand totals	24,374	24,610	24,848	25,088	25,331
	Difference	5,205	4,969	4,731	4,491	4,248
Fifth year	Supply totals	36,662	36,662	36,662	36,662	36,662
	Demand totals	24,374	24,610	24,848	25,088	25,331
	Difference	12,289	12,053	11,815	11,574	11,331

Table 5.9: Whittier/La Mirada Multiple Dry Year Supply & Demand Comparison (AF) (DWR Table 7-4 R)

		2025	2030	2035	2040	2045
First year	Supply totals	21,504	21,504	21,504	21,504	21,504
	Demand totals	19,688	19,836	19,985	20,135	20,287
	Difference	1,816	1,668	1,519	1,368	1,217
Second year	Supply totals	21,996	21,996	21,996	21,996	21,996
	Demand totals	19,688	19,836	19,985	20,135	20,287
	Difference	2,309	2,161	2,012	1,861	1,710
Third year	Supply totals	20,032	20,032	20,032	20,032	20,032
	Demand totals	19,688	19,836	19,985	20,135	20,287
	Difference	344	196	47	(103)	(255)
Fourth year	Supply totals	17,914	17,914	17,914	17,914	17,914
	Demand totals	19,688	19,836	19,985	20,135	20,287
	Difference	(1,774)	(1,921)	(2,071)	(2,221)	(2,372)
Fifth year	Supply totals	20,104	20,104	20,104	20,104	20,104
	Demand totals	19,688	19,836	19,985	20,135	20,287
	Difference	416	268	119	(31)	(183)

As shown in **Tables 5.1** to **5.9**, Suburban can meet the majority of future demands through 2045. The Whittier/La Mirada service area indicates supply deficits in the analysis. Because groundwater supplies are shared amongst both Suburban service areas, a shortfall of groundwater supplies in one service area may be supplemented by the surplus within the other service area. Furthermore, these projections do not include groundwater right agreements with outside agencies. Suburban typically has agreements with other agencies to pump additional groundwater if they anticipate to exceed their adjudicated rights within the Main Basin and this amount varies annually.

5.2.2 FIVE-YEAR DROUGHT RISK ASSESSMENT

During a five-year drought, Suburban's service areas may import water to meet demands in excess of their adjudicated pumping rights as necessary. Imported water supplies, like groundwater, are subject to demand increases and reduced supplies during dry years; however, MWD modeling in its 2020 UWMP, as referenced in **Tables 3.13** and **3.14** in **Section 3**, results in 100 percent reliability for full-service demands through the year 2045 for all climatic conditions. Based on the conditions described above, Suburban anticipates the ability to meet water demand for all climatic conditions for the near future.

New to the 2020 UWMP is the Drought Risk Assessment (DRA) over a 5-year period examining the reliability of Suburban's water supplies. **Tables 5.10** to **5.12** show the results of the analysis. The analysis was done utilizing DWR's DRA Planning Tool to determine supply and demand projections, and to analyze Suburban's vulnerability to droughts. The tool also allows water purveyors to utilize potential water usage saving or supply augmentation methods to mitigate supply shortfalls. These water usages saving methods (restrictions) and supply augmentation methods are further discussed in the WSCP. As shown, both of Suburban's service areas are capable to meet the projected demands based on the estimated water supplies during drought conditions without the need for WSCP stage implementation and supply augmentation.

Table 5.10: Combined Suburban Five-Year Drought Risk Assessment (AF) (DWR Table 7-5)

	2021	2022	2023	2024	2025
Total Water Use	40,616	40,690	40,763	40,837	40,911
Total Supplies	55,449	54,890	52,513	47,493	56,766
Surplus/Shortfall w/o WSCP Action	14,833	14,200	11,750	6,656	15,855
Planned WSCP Actions (Use Reduction and Supply Augmentation)					
Supply Augmentation Benefit from WSCP Response	0	0	0	0	0
Use Reduction Savings Benefit from WSCP Response	0	0	0	0	0
Revised Surplus/Shortfall	14,833	14,200	11,750	6,656	15,855
Resulting % Use Reduction from WSCP Action	0%	0%	0%	0%	0%

Table 5.11: San Jose Hills Five-Year Drought Risk Assessment (AF) (DWR Table 7-5)

	2021	2022	2023	2024	2025
Total Water Use	23,898	23,946	23,993	24,041	24,089
Total Supplies	33,945	32,893	32,481	29,579	36,662
Surplus/Shortfall w/o WSCP Action	10,047	8,947	8,488	5,538	12,574
Planned WSCP Actions (Use Reduction and Supply Augmentation)					
Supply Augmentation Benefit from WSCP Response	0	0	0	0	0
Use Reduction Savings Benefit from WSCP Response	0	0	0	0	0
Revised Surplus/Shortfall	12,574	5,538	8,488	8,947	10,047
Resulting % Use Reduction from WSCP Action	0%	0%	0%	0%	0%

Table 5.12: Whittier/La Mirada Five-Year Drought Risk Assessment (AF) (DWR Table 7-5)

	2021	2022	2023	2024	2025
Total Water Use	16,718	16,744	16,770	16,796	16,823
Total Supplies	21,504	21,996	20,032	17,914	20,104
Surplus/Shortfall w/o WSCP Action	4,786	5,252	3,262	1,118	3,281
Planned WSCP Actions (Use Reduction and Supply Augmentation)					
Supply Augmentation Benefit from WSCP Response	0	0	0	0	0
Use Reduction Savings Benefit from WSCP Response	0	0	0	0	0
Revised Surplus/Shortfall	4,786	5,252	3,262	1,118	3,281
Resulting % Use Reduction from WSCP Action	0%	0%	0%	0%	0%

Response to a future drought would follow the water use efficiency mandates of Tariff Rule No. 14.1 along with implementation of the appropriate stage of regional plans, such as MWD's Water Surplus Drought Management (WSDM) Plan as described later in this section.

5.3 ANNUAL WATER SUPPLY AND DEMAND ASSESSMENT PROCEDURES

Under CWC Section 10632(a)(2), beginning by July 1, 2022, each urban water supplier is required to prepare their annual water supply and demand assessment (Annual Assessment) and submit an Annual Water Shortage Assessment Report to DWR. The Annual Water Shortage Assessment Report will be due by July 1 of every year, as required by CWC Section 10632.1.

This section outlines Suburban's procedures used in conducting an Annual Assessment, including the following: 1) written decision-making process for determining water supply reliability; and 2) key data inputs and assessment methodology for evaluating the water supply reliability for the current year and one dry year.

5.3.1 DECISION-MAKING PROCESS

Suburban's Annual Assessment will be mostly based on daily recorded water production and supply figures, which are reported to the Water Production Manager on a daily basis throughout the year. To determine its water supply reliability and actual reductions in water

use during declared water shortages or emergencies, Suburban can rely on its daily records as well as the monthly totals. These periodical analyses are used by Suburban to manage resources to meet projected demands and adjust to changing conditions (i.e., precipitation) throughout the year.

Starting in 2022, Suburban staff will submit and present a finalized Annual Water Shortage Assessment Report to the Board of Directors for approval by June each year. Suburban staff will also present determination of recommended water shortage response actions deemed appropriate as a result of the Annual Assessment. Following approval, Suburban staff will submit the approved Annual Water Shortage Assessment Report to DWR by July 1 of every year. The functional procedures for the decision-making process are depicted in the following timeline shown in **Figure 5.1**.

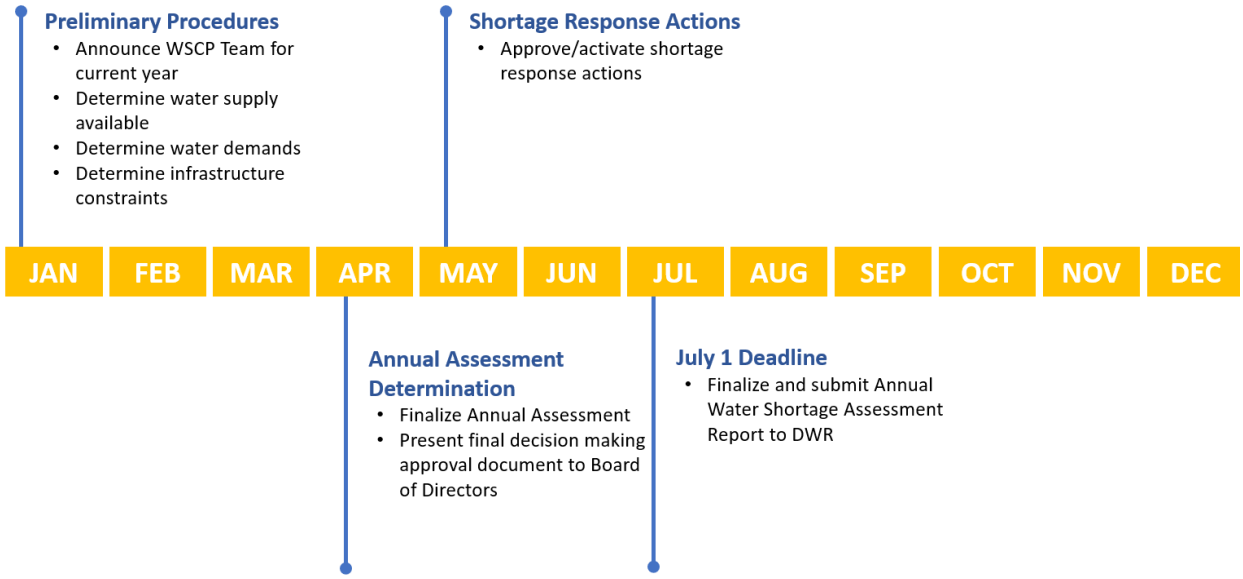

Figure 5.1: Sample Annual Assessment Decision-Making Process Timeline

5.3.2 KEY DATA INPUTS AND ASSESSMENT METHODOLOGY

This section defines the key data inputs and assessment methodology used to evaluate the water supply reliability for the anticipated conditions for the current year and for one dry year that follows. The Annual Assessment determination will focus on the current year unconstrained demand, infrastructure constraints, and total water supply availability. Moreover, the Annual Assessment will consider the current year's weather, population growth, policies in place that will impact demands, and other influencing factors. The current year available supply will incorporate the hydrological regulatory conditions for the current year and following dry year.

LOCALLY APPLICABLE EVALUATION CRITERIA

The locally applicable evaluation criteria that will be consistently relied on for each Annual Assessment include the following:

1) Assumed unconstrained demand (i.e., demand without any conservation measures) for current year and one dry year
2) Assumed total water supply availability for current year and one dry year
3) Existing infrastructure capabilities and plausible constraints
   - Any known issues with the water facilities (including water quality conditions limiting local sources)
   - Planned power outages for operation and maintenance
   - New construction and repairs
   - Environmental mitigation measures
   - Other constraints that may affect near-term water supply reliability

WATER SUPPLY SOURCES DESCRIPTION AND QUANTIFICATION

As part of the Annual Assessment, the total available water supply evaluation criteria will comprise of Suburban's water supply sources as shown and quantified in **Tables 5.13** through **5.18**.

Table 5.13: Combined Suburban Water Supplies in 2020 (AF) (DWR Table 6-8 Retail)

Water Supply	Additional Detail on Water Supply	2020	
		Actual Volume	Water Quality
Groundwater (not desalinated)	Main San Gabriel Basin	27,379	Drinking Water
Groundwater (not desalinated)	Central Basin	1,562	Drinking Water
Purchased or Imported Water	All Imports	16,449	Drinking Water
Recycled Water	CBMWD	710	Recycled Water
	Total	46,100	

Table 5.14: San Jose Hills Water Supplies in 2020 (AF) (DWR Table 6-8 Retail)

Water Supply	Additional Detail on Water Supply	2020	
		Actual Volume	Water Quality
Groundwater (not desalinated)	San Jose Hills Region - Main San Gabriel Basin	16,852	Drinking Water
Purchased or Imported Water	San Jose Hills Region - All Imports	8,087	Drinking Water
Recycled Water	San Jose Hills Region - Recycled Water	710	Recycled Water
	Total	25,649	

Table 5.15: Whittier/La Mirada Water Supplies in 2020 (AF) (DWR Table 6-8 Retail)

Water Supply	Additional Detail on Water Supply	2020	
		Actual Volume	Water Quality
Groundwater (not desalinated)	Whittier/La Mirada Region - Main San Gabriel Basin	10,527	Drinking Water
Groundwater (not desalinated)	Whittier/La Mirada Region - Central Basin	1,562	Drinking Water
Purchased or Imported Water	Whittier/La Mirada Region - All Imports	8,362	Drinking Water
	Total	20,451	

Table 5.16: Combined Suburban Projected Water Supplies for 2025 – 2045 (AF) (DWR Table 6-9 Retail)

Water Supply	Additional Detail on Water Supply	Projected Water Supplies				
		2025	2030	2035	2040	2045
Groundwater (not desalinated)	All Regions - Main Basin	29,000	29,000	29,000	29,000	29,000
Groundwater (not desalinated)	Central Basin	3,721	3,721	3,721	3,721	3,721
Purchased or Imported Water	Whittier/La Mirada Region - All Imports	8,200	8,200	8,200	8,200	8,200
Purchased or Imported Water	San Jose Hills Region - All Imports	18,200	18,200	18,200	18,200	18,200
Recycled Water	San Jose Hills Region (USGVMWD)	700	700	700	700	700
Recycled Water	Whittier/La Mirada Region (CBMWD)	930	930	930	930	930
	Total	60,751	60,751	60,751	60,751	60,751

Table 5.17: San Jose Hills Projected Water Supplies for 2025 – 2045 (AF) (DWR Table 6-9 Retail)

Water Supply	Additional Detail on Water Supply	Projected Water Supplies				
		2025	2030	2035	2040	2045
Groundwater	San Jose Hills Region - Main Basin	16,715	16,715	16,715	16,715	16,715
Recycled Water	San Jose Hills Region - All Imports	700	700	700	700	700
Purchased or Imported Water	San Jose Hills Region - Recycled Water	18,200	18,200	18,200	18,200	18,200
	Total	35,615	35,615	35,615	35,615	35,615

Table 5.18: La Mirada/Whittier Projected Water Supplies for 2025 – 2045 (AF) (DWR Table 6-9 Retail)

Water Supply	Additional Detail on Water Supply	Projected Water Supplies				
		2025	2030	2035	2040	2045
Groundwater (not desalinated)	Whittier/La Mirada Region - Main Basin	12,285	12,285	12,285	12,285	12,285
Groundwater (not desalinated)	Central Basin	3,721	3,721	3,721	3,721	3,721
Purchased or Imported Water	Whittier/La Mirada Region - All Imports	8,200	8,200	8,200	8,200	8,200
Recycled Water	Whittier/La Mirada Service Area	930	930	930	930	930
	Total	25,136	25,136	25,136	25,136	25,136

Imported Water Purchases

Suburban purchases water imported by MWD through its MWD member agencies: CBMWD, USGVMWD, and TVMWD. In addition, Suburban purchases imported water, groundwater, and surface water from other retailers to supplement their supplies.

In the San Jose Hills Service Area, Suburban purchases water from:

- City of Covina
- City of Glendora
- Covina Irrigating Company
- La Puente Valley County Water District
- Rowland Water District
- Valencia Heights Water Company
- Valley County Water District
- Walnut Valley Water District

In the Whittier/La Mirada Service Area, Suburban purchases water from:

- California Domestic Water Company
- City of Whittier
- La Habra Heights County Water District
- Orchard Dale Water District
- San Gabriel Valley Water Company

Groundwater Supply

Suburban produces groundwater from the Main Basin to serve both the Whittier/La Mirada system and the San Jose Hills Service Area. Suburban additionally supplies the Whittier/La Mirada Service Area with Central Basin groundwater.

Surface Water Supply

Suburban uses surface water purchased from the City of Covina and CIC, and is described as purchased water. Only the San Jose Hills Service Area receives this purchased surface water. The surface waters of the San Gabriel River, allocated as diversion rights, are coordinated by the Committee of Nine and the SGVPA.

Recycled Water Supply

Suburban provides recycled water in the San Jose Hills Service Area, but not within the Whittier/La Mirada Service Area. The recycled water used in the San Jose Hills Service Area is produced by LACSD and distributed by USGVMWD to Suburban's customers.

5.4 SHORTAGE STAGES AND SHORTAGE RESPONSE ACTIONS

5.4.1 MWD STAGES OF ACTION

WATER SURPLUS & DROUGHT MANAGEMENT PLAN (WSDM)

In addition to the provisions of Tariff Rule No. 14.1, Suburban also works in conjunction with its wholesalers (CBMWD, USGVMWD, and TVMWD) and MWD to implement conservation measures within the framework of MWD's Water Surplus and Drought Management (WSDM) Plan. The WSDM Plan was developed in 1999 by MWD with assistance and input from its member agencies. The plan addresses both surplus and shortage contingencies. MWD's WSDM Plan documents the stages of action that it would undertake in response to a water supply shortage.

The WSDM Plan guiding principle is to minimize adverse impacts of water shortage. The plan guides the operations of water resources (local resources, Colorado River, SWP, and regional storage) to ensure regional reliability. It identifies the expected sequence of resource management actions MWD will take during surpluses and shortages of water to minimize the probability of severe shortages, which require curtailment of full-service demands. Mandatory allocations are avoided to the extent practical; however, in the event of an extreme shortage, an allocation plan will be implemented.

Figure 5.2: Severe Droughts Highlight the Importance of Conservation Ordinances (Lake Oroville in 2014)

In addition to its WSDM Plan, MWD developed a Water Supply Allocation Plan (WSAP), which provides a standardized methodology for allocation of supplies during times of extreme shortage (Stage 7 in MWD's WSDM Plan). During a shortage, Suburban's imported water supplies will be allocated based on the methodology documented in the Allocation Plans of CBMWD, USGVMWD, and TVMWD, which typically mirror the MWD allocation plan.

MWD's WSDM and WSAP Plans help guide drought management for many agencies throughout the region.

The following description of shortage stages is from MWD's 2020 UWMP, page 2-29:

> *"**Shortage**: Metropolitan can meet full-service demands and partially meet or fully meet interruptible demands, using stored water or water transfers as necessary.*
>
> ***Severe Shortage**: Metropolitan can meet full-service demands only by using stored water, transfers, and possibly calling for extraordinary conservation.*
>
> ***Extreme Shortage**: Metropolitan allocates available supply to full-service customers.*
>
> *The WSDM Plan also defines six shortage management stages to guide resource management activities. These stages are not defined merely by shortfalls in*

imported water supply, but also by the water balances in Metropolitan's storage programs. Thus, a 10 percent shortfall in imported supplies could be a stage one shortage if storage levels are high. If storage levels are already depleted, the same shortfall in imported supplies could potentially be defined as a more severe shortage.

When Metropolitan must make net withdrawals from storage to meet demands, it is considered to be in a shortage condition. Under most of these stages, Metropolitan is still able to meet all end-use demands for water. For shortage stages 1 through 3, Metropolitan will meet demands by withdrawing water from storage. At shortage stages 4 and 5, Metropolitan may undertake additional shortage management steps, including issuing public calls for extraordinary conservation and exercising water transfer options, or purchasing water on the open market."

MWD WATER SUPPLY ALLOCATION PLAN (FOR WSDM SHORTAGE STAGE 7)

When a WSDM Shortage Stage 7 is triggered, MWD's WSAP helps to assess resources in the most equitable way possible.

In February 2008, MWD's Board of Directors adopted a WSAP, which includes a methodology for calculating supply allocations in the event that MWD enters a Shortage Stage 7 and is unable to meet the demands of its member agencies. MWD revised its WSAP in 2014 to include the following updates: new FY 12-13 to FY 13-14 baseline, implement a Conservation Demand Hardening Adjustment, create a separate Groundwater Replenishment Allocation for applicable agencies, and replace WSAP Penalty Rates with Allocation Surcharges based on the marginal costs of turf removal. It should be noted that the WSAP is not a rationing plan. Rather, it is a pricing plan where water is allocated at regular prices and agencies that choose to take more than the allocated water pay surcharges. The surcharge pricing mechanism acts to discourage the use of water above the allocation. The WSAP uses a combination of estimated total retail demands and historical local supply production within the member agency service area to estimate the demands on MWD from each member agency in a given year. Based on a number of factors, including storage and supply conditions, MWD then determines whether it has the ability to meet these demands or will need to allocate its limited supplies among its member agencies. Thus, implicit in MWD's decision not to implement an allocation of

its supplies is that, at a minimum, MWD will be able to meet the demands identified for each of the member agencies.

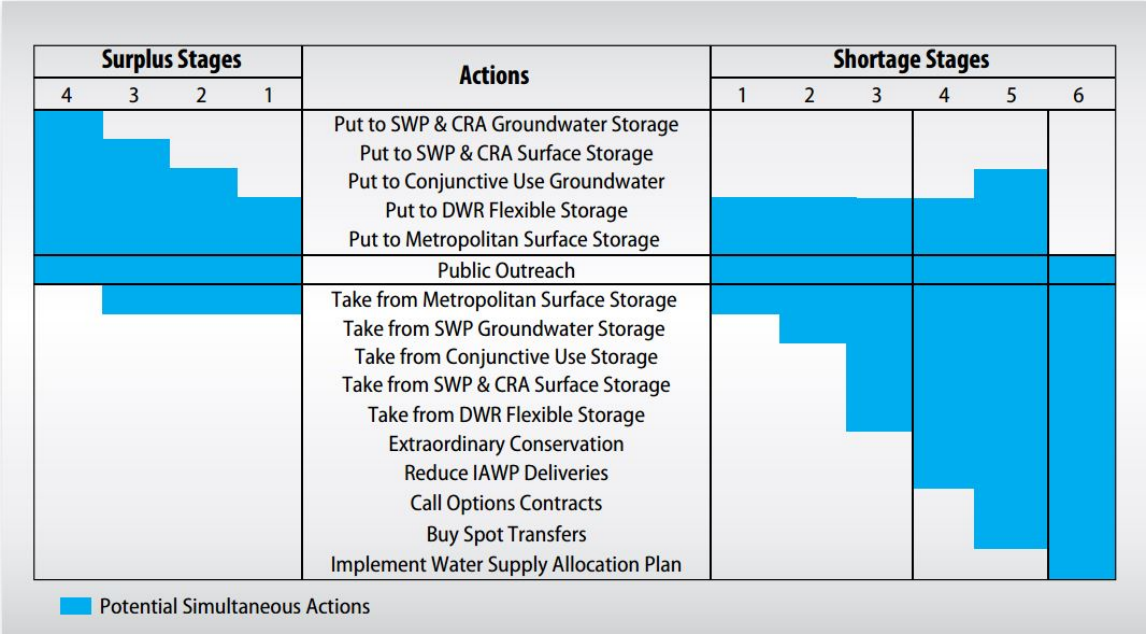

Figure 5.3: MWD WSDM Surplus & Drought Stages

According to MWD's 2015 IRP, the approach seeks to balance the impacts of a shortage at the retail level while maintaining equity on the wholesale level and takes into account growth, local investments, changes in supply conditions and the demand hardening aspects of non-potable recycled water use and the implementation of conservation savings programs. The methodology attempts to allocate supplies based on an estimate of an agency's relative need for imported water using the following process:

1. Establish a baseline for total retail demands (and adjust for growth) to determine the allocation year total retail demands. ("*What are your total water demands?*")

2. Estimate the amount of local supplies to be utilized in the allocation year and subtract from total retail demands. This is the allocation year baseline demand on MWD. ("*How much imported water do you need from MWD?*")

3. Apply the minimum allocation percentage (per the regional shortage level) to the allocation year baseline demand and provide minor adjustments based on various criteria. ("*Restrict normal supply deliveries and provide allocation.*")

BASE PERIOD CALCULATIONS (USED TO DETERMINE WSAP REDUCTIONS)

The Base Period is calculated using data from FY 2012-13 and FY 2013-14. Base Period wholesale demands are based on the two-year average of demands on MWD during the Base Period, including full-service, seawater barrier, seasonal shift, and surface storage operating agreement demands.

Local supplies for the base period are calculated using a two-year average of groundwater production, groundwater recovery, Los Angeles Aqueduct supply, surface water production, and other imported supplies. Non-potable recycling production is not included in this calculation, which, according to MWD, is intended to address the impact of demand hardening due to recycled water use.

Total potable retail demands for the Base Period are then calculated by adding the Base Period wholesale demands on MWD and the Base Period local supplies.

WSAP ALLOCATION YEAR CALCULATIONS

The next step is to estimate water needs in an allocation year by (1) adjusting the Base Period total retail demands for population or economic growth, and (2) accounting for changes in local supplies.

The Base Period retail demands are adjusted for growth using the average annual rate of population growth occurring since the two-year base period based on county-level data generated by the California Department of Finance.

Next, these growth-adjusted demands are adjusted again to account for (1) gains and losses of local supply, and (2) extraordinary increases in production over the base year. According to MWD, these adjustments are made to give a more accurate estimate of actual supplies in the allocation year, and, in turn, more accurately reflect an agency's demand for MWD supplies.

The adjustment for gains in local supplies is intended to account for planned or scheduled gains in local supply production above the Base Period, which are not due to extraordinary actions to increase water supply in the allocation year. These previously scheduled increases in supply programs (i.e., San Diego County Water Authority/Imperial Irrigation District) or local production are added to the base period local supplies. Again, new supplies from non-potable

Figure 5.4: MWD's Diamond Valley Lake (Potential Reserves for WSAP Allocations)

recycling projects are not counted as local supplies.

While the local agency does become more reliable with the addition of the new supplies, assuming that the new supplies are available during an allocation, the benefits of these programs are partially offset because the impact of adding the new supplies to the Base Period local supplies is to reduce an agency's dependence on MWD and thus their allocation under the WSAP.

Alternatively, only a portion of the additional supplies from what are termed "extraordinary increases in production" are added back to Allocation Year local supplies depending on the retail shortage level. Extraordinary increases in production include such efforts as purchasing transfers or mining of groundwater basins. By adding only a percentage of the yield from these supplies to Allocation Year local supplies, it has the effect of "setting aside" the majority of yield for the agency who procured the supply.

Table 5.19 reflects the set of percentages used in the WSAP to establish water allocations for each agency.

Table 5.19: Water Allocation Percentages

Regional Shortage Level	Regional Shortage Percentage	Wholesale Minimum Percentage	Maximum Retail Impact Adjustment Maximum
1	5%	92.5%	2.5%
2	10%	85.0%	5.0%
3	15%	77.5%	7.5%
4	20%	70.0%	10.0%
5	25%	62.5%	12.5%
6	30%	55.0%	15.0%
7	35%	47.5%	17.5%
8	40%	40.0%	20.0%
9	45%	32.5%	22.5%
10	50%	25.0%	25.0%

5.4.2 SUBURBAN SHORTAGE STAGES OF ACTION

SUBURBAN RESPONSE PLAN

Suburban's WSCP for the San Jose Hills and Whittier/La Mirada service areas is the combination of Tariff Rule No. 14.1 and Tariff Schedule No. 14.1, which are both included as **Appendix J**. The purpose of the WSCP is to detail actions and restrictions to be followed during the various stages of a water shortage. Suburban has established diverse approaches to meeting future water demands including: facility improvements and increased deliveries of local groundwater; increased deliveries of imported water; implementing a recycled water program; and supporting water demand management programs. This has allowed Suburban to meet most demands in spite of drought conditions; however, water shortages can be triggered by a hydrologic limitation in supply, limitations or failure of supply and treatment infrastructure, or both. Hydrologic or drought limitations tend to develop and abate more slowly, whereas infrastructure failure tends to happen quickly and relatively unpredictably. Suburban's WSCP ensures that water demands are met promptly and equitably.

As a regulated utility, Suburban's rates are determined by the CPUC, including drought surcharge rates and penalties. Since the mid-1980s, the CPUC allows all classes of water utilities to file a water conservation and rationing plan consisting of two distinct tariffs: Rule No. 14.1 (the voluntary conservation program) and Schedule No. 14.1 (the mandatory rationing with drought surcharge rates and penalties).

The CPUC has jurisdiction over Suburban because Suburban is an Investor-owned Water Utility. The CWC requires suppliers who are subject to regulation by the CPUC secure its approval before imposing water consumption regulations and restrictions required by water supply shortage emergencies. Therefore, all retail private water utilities are bound by Tariff Rule No. 14.1, which provides three levels of water conservation actions: 1) voluntary rationing, 2) mandatory rationing, and 3) service connection moratorium.

When the state implemented mandatory water conservation measures in 2014, the CPUC required water utilities within its jurisdiction to activate Tariff Rule No. 14.1. Suburban's compliance put Stage 1 into effect. In June 2015, Suburban activated Tariff Schedule and Tariff Rule No. 14.1 at Stage 2 and began implementing the drought surcharge. The WSCP provides the actions implemented by Suburban during the various stages of a water shortage and includes the water conservation requirements for customers during each stage.

Suburban's WSCP includes actions to undertake in response to water supply shortages and is divided into four stages. The actions to be undertaken during each stage include, but are not limited to, the following:

- **Stage 1** - Stage 1 prohibits the non-essential or unauthorized use of water. It restricts irrigation/commercial use and requires repairs completed in five days. Prior to implementing Stage 1, Suburban must obtain approval from the CPUC to activate Tariff Rule No. 14.1.

- **Stage 2** - While including Stage 1 restrictions, Stage 2 further requires repairs completed in three days. Prior to implementing Stage 2, Suburban must obtain approval from the CPUC to activate Tariff Schedule No. 14.1.

- **Stage 3** - While including Stages 1 and 2 restrictions, Stage 3 further restricts irrigation. Once Tariff Schedule No. 14.1 is activated in Stage 2, Suburban is authorized to implement Stage 3 by filing a Tier 2 advice letter with the CPUC.

- **Stage 4** - While including Stages 1, 2, and 3, Stage 4 implements flow restrictors and requires immediate repair irrigation. Once Stage 3 is implemented, Suburban is authorized to implement Stage 4 by filing a Tier 2 advice letter with the CPUC.

The water supply condition required for each stage is not defined, such as a specific reservoir level or groundwater level or a percent of supply reduction, due to the differing

sources of Suburban's water supply. Instead, each stage is implemented when the previous stage becomes insufficient in complying with the necessary reduction, as shown in **Table 5.20**. Each stage can be implemented when it is determined conditions exist requiring a further consumer demand reduction for more efficient use of water or when a government agency requests implementation of this stage to meet physical supply limitations.

Per CWC Section 10632(a)(3)(B), a supplier may continue using their own water shortage levels that were previously used. In accordance with this allowance, Suburban has chosen to continue to use its current water shortage levels in its WSCP and has included a graphic (**Table 5.20**) to correlate its water shortage levels to the six standard water shortage levels defined in CWC Section 10632(a)(3)(A).

Table 5.20: Water Supply Shortage Stages and Conditions – Rationing Stages

Suburban Shortage Levels			Mandated Standard Shortage Levels	
Stage No.	**Water Supply Conditions**	**% Shortage**	**Shortage Level**	**% Shortage**
1	Stage 1 shall be in effect at all times. Non-essential or prohibited water uses apply.	Up to 10%	1	Up to 10%
2	When Stage 1 becomes insufficient in complying with the necessary reduction.	Up to 20%	2	Up to 20%
3	When Stage 2 becomes insufficient in complying with the necessary reduction.	Up to 40%	3	Up to 30%
			4	Up to 40%
4	Emergency. When a critical water shortage emergency exists or that Stage 3 becomes insufficient in complying with the necessary reduction.	Up to 50% or greater	5	Up to 50%
			6	>50%

As reflected in **Table 5.20**, the mandatory prohibitions applied by Stage 4 will curtail water use more than 50 percent below the projected water consumption level. Correspondingly, Suburban's shortage stages depicted in **Table 5.20** are bundled in such a way that if a conservation stage to reduce water consumption by 50 percent were mandated (CWC standard shortage level 5), the prohibitions and additional conservation measures activated by Suburban's Stage 4 will provide more than enough shortage responses to exceed the conservation goal.

Suburban plans to submit to the CPUC an update to Schedule 14.1 to align with the WSCP including, but not limited to, consistency with the new six stage shortage level structure.

5.4.3 PROHIBITIONS

Suburban's WSCP details the various prohibitions and sets forth water use violation fines, charges for removal of flow restrictors, and establishes the period during which mandatory conservation and rationing measures will be in effect. The prohibitions on various wasteful water uses are summarized in **Table 5.21**.

Table 5.21: Restrictions and Prohibitions

Stage No.	Restrictions and Prohibitions on End Users	Additional Explanation
1-4	Landscape - Restrict or prohibit runoff from landscape irrigation	
1-4	Landscape - Limit landscape irrigation to specific times	
1-4	Landscape - Limit landscape irrigation to specific days	
1-4	CII - Lodging establishment must offer opt out of linen service	
1-4	CII - Restaurants may only serve water upon request	
1-4	CII - Other CII restriction or prohibition	Hydrants only for fire suppression or system maintenance.
1-4	Water Features - Restrict water use for decorative water features, such as fountains	
1-4	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner	
1-4	Other - Require automatic shut-off hoses	
1-4	Other - Prohibit use of potable water for construction and dust control	Prohibits excessive use.
1-4	Other - Prohibit use of potable water for washing hard surfaces	
1-4	Other - Prohibit vehicle washing except at facilities using recycled or recirculating water	Commercial transportation only, residential vehicles okay with auto shut off hose.
1-4	Other	Any other wasteful practice.
4	Other	Suburban allowed to install flow restrictor.

A complete listing can be found in Tariff Rule No. 14.1 in **Appendix J**.

5.4.4 CONSUMPTION REDUCTION METHODS

Most actions within Suburban's WSCP leaves the responsibility to restrict water use to the customer; however, installation of flow restrictors on customers' service lines automatically reduces consumption. Suburban may install flow restrictors during Stage 4, or for excessive violations or for egregious violation. In addition to the physical consumption reduction by flow restrictors, Suburban uses other methods to reduce consumption. These methods include expanding public information campaigns, offering water use surveys, providing rebates on plumbing fixtures and devices, and providing rebates for landscape irrigation efficiency. Consumption reduction methods are shown in **Table 5.22**. Note that the rebates are offered through MWD to Suburban's customers on the SoCal Water$mart website.

Table 5.22: Consumption Reduction Methods

Stage No.	Consumption Reduction Methods by Water Supplier
1-4	Expand Public Information Campaign
1-4	Offer Water Use Surveys
1-4	Provide Rebates on Plumbing Fixtures and Devices
1-4	Provide Rebates for Landscape Irrigation Efficiency

5.4.5 CATASTROPHIC SUPPLY INTERRUPTION

Given the great distances imported water supplies travel to reach the Suburban service areas, the region is vulnerable to interruptions along hundreds of miles of pipelines and other facilities associated with delivering the supplies to the region. Additionally, this water is distributed to customers through an intricate network of pipes and water mains that are susceptible to damage from earthquakes and other disasters, natural or otherwise.

MWD

MWD has comprehensive plans for stages of actions it would undertake to address a catastrophic interruption in water supplies through its WSDM and WSAP Plans. MWD also developed an Emergency Storage Objective to mitigate potential interruption in water supplies resulting from catastrophic occurrences within the Southern California region,

including seismic events along the San Andreas Fault. In addition, MWD is working with the state to implement a comprehensive improvement plan to address catastrophic occurrences that could occur outside of the Southern California region, such as a probable maximum seismic event in the Delta that would cause levee failure and disruption of SWP deliveries.

In July 2019, MWD's Board adopted amendments to their Administrative Code allowing deliveries of member agency water supplies in MWD's system during an emergency. With these enabled deliveries, MWD's member agencies will be able to deliver their water through MWD's system under specific emergency conditions. Emergency deliveries using a portion of MWD's system can only be made if MWD is unable to make deliveries to a member agency due to physical damage to its system resulting from a natural disaster or other emergency, and there are no alternatives.

SUBURBAN

Suburban's Catastrophic Supply Interruption Plan (CSIP) details the actions that Suburban will implement during a catastrophic interruption of water supply. A catastrophic interruption could be any event (either natural or man-made) such as regional power outage, earthquake, malevolent acts, and civil unrest that causes a water shortage severe enough to classify as either a Stage 3 or Stage 4 water supply shortage condition. A catastrophic supply interruption differs from a staged drought response discussed above in that catastrophic interruptions occur suddenly and can jeopardize Suburban's water supply.

The actions that Suburban will implement during a catastrophic interruption of water supply are outlined below:

Regional Power Outage

- Isolate areas that will take the longest to repair and/or present a public health threat. Arrange to provide emergency water.
- Establish water distribution points and ration water if necessary.
- If water service is restricted, attempt to provide potable water tankers or bottled water to the area.
- Make arrangements to conduct bacteriological tests, in order to determine possible contamination.
- Utilize backup power supply to operate pumps in conjunction with elevated storage.

Earthquake

- Assess the condition of the water supply system.
- Complete the damage assessment checklist for reservoirs, water treatment plants, wells and boosters, system transmission and distribution.
- Coordinate with California Governor's Office of Emergency Services (OES) utilities group or fire district to identify immediate firefighting needs.
- Isolate areas that will take the longest to repair and/or present a public health threat. Arrange to provide emergency water.
- Prepare report of findings, report assessed damages, advise as to materials of immediate need and identify priorities including hospitals, schools and other emergency operation centers.
- Take actions to preserve storage.
- Determine any health hazard of the water supply and issue any "Boil Water Order" or "Unsafe Water Alert" notification to the customers, if necessary.
- Cancel the order or alert information after completing comprehensive water quality testing.
- Make arrangements to conduct bacteriological tests, in order to determine possible contamination.

Malevolent Acts

- Assess threat or actual intentional contamination of the water system.
- Notify local law enforcement to investigate the validity of the threat.
- Receive notification from public health officials if there is a potential water contamination.
- Determine any health hazard of the water supply and issue any "Boil Water Order" or "Unsafe Water Alert" notification to the customers, if necessary.
- Assess any structural damage from an intentional act.
- Isolate areas that will take the longest to repair and or present a public health threat. Arrange to provide emergency water.

Civil Unrest

- Provide for the safety and welfare of employees.
- Increased awareness shall be maintained by all personnel in all service areas during times of elevated potential for civil unrest.
- A clear delineation of the troubled area(s) shall be determined by the Incident Commander.

- Routine work duties will be suspended in service areas deemed at risk.
- No service personnel shall enter the delineated trouble area on company business without proper authorization or law enforcement escort.
- If at any time during the course of work within a delineated trouble area or any of the service area; a situation appears threatening you must leave the area immediately. Avoid any risk of confrontation.
- Protect company assets.
- Repair of catastrophic main leaks.
- Shut down sheared fire hydrants.
- Periodic visits to critical water facilities.
- Repair critical pumping units and/or system components.
- Provide for maintenance or rapid restoration of water service.
- Provide an implementation of business resumption/remediation plans.

5.4.6 SEISMIC RISK ASSESSMENT AND MITIGATION PLAN

INTRODUCTION

Earthquakes can vary significantly in magnitude and the amount of damage caused. Major earthquakes can cause loss of electrical power, damage to Suburban's structures and equipment, disruption of service, and injuries to staff. This section provides a description of Suburban's procedures (i.e., response and mitigation) after an earthquake event.

As mandated in CWC Section 10632.5, beginning January 1, 2020, water suppliers are required to include a seismic risk assessment and mitigation plan as part of their WSCP to assess the vulnerability of each of the various facilities of their water system and mitigate those vulnerabilities. If an urban water supplier does not have a seismic risk assessment and mitigation plan, the urban water supplier may instead, per CWC Section 10632.5(c), include a local hazard mitigation plan (LHMP) or a multi-hazard mitigation plan. This requirement is satisfied by the incorporation of elements and analyses from Suburban's Risk and Resilience Assessment (RRA) and Emergency Response Plan (ERP) for the San Jose Hills and Whittier/La Mirada service areas as well as the inclusion of the 2019 County of Los Angeles All-Hazards Mitigation Plan (attached as **Appendix K**) and elements from the 2015 Whittier LHMP. The complete RRA and ERP documents are not presented within this plan due to the highly confidential nature of the reports. Although Suburban does not currently have a Seismic Risk Assessment and Mitigation Plan or a schedule to prepare such a plan, Suburban refers to the 2019 County Los Angeles All-Hazard Mitigation Plan

SEISMOLOGY OF WATER FACILITIES & VULNERABILITY

According to the maps provided on the California Office of Emergency Services' online planning tool (My Plan) and the California Geological Survey's online earthquake hazards zone application (EQ Zapp) no portion of the systems within the San Jose Hills and Whittier/La Mirada service areas is crossed by a known fault line as shown in **Figure 5.5**. Therefore, there are no Suburban potable water structures with an extremely high risk of earthquake damage. There are, however, areas indicated in Suburban's RRAs with increased risk due to landslides, liquefaction, and some Suburban facilities that are more susceptible to earthquake damage than other facilities.

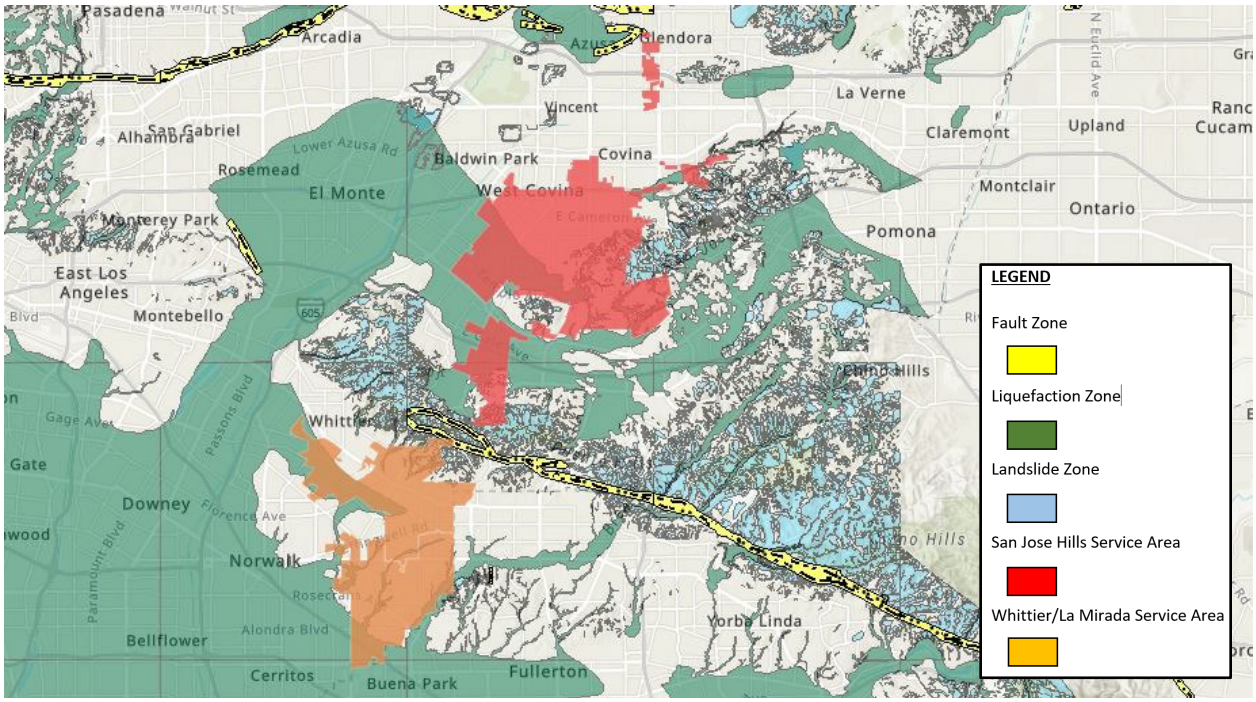

Figure 5.5: Seismic Hazards within Suburban's Service Area (California Geological Survey)

An earthquake is caused by the shifting of tectonic plates beneath the Earth's surface. Ground shaking from moving geologic plates collapses buildings and bridges, and sometimes triggers landslides, avalanches, flash floods, fires and tsunamis. The strong ground motion of earthquakes has the potential to cause a great deal of damage to drinking water and wastewater utilities, particularly since most utility components are constructed from inflexible materials (i.e., concrete, metal pipes). Earthquakes create many cascading and secondary impacts that may include, but are not limited to:

- Structural damage to facility infrastructure and equipment
- Water tank damage or collapse

- Water source transmission line realignment or damage
- Damage to distribution lines due to shifting ground and soil liquefaction, resulting in potential water loss, water service interruptions, low pressure, contamination and sinkholes and/or large pools of water throughout the service area
- Loss of power and communication infrastructure
- Restricted access to facilities due to debris and damage to roadways

ERP – EARTHQUAKE EMERGENCY RESPONSE

Suburban recently prepared a new ERP to replace its existing ERP on September 23, 2020 in order to meet the requirements of America's Water Infrastructure Act of 2018 (AWIA). The ERP provides Suburban staff with the necessary information, strategies, procedures, and mitigation actions to address earthquake emergencies. Per the ERP, after a major earthquake, Suburban staff will notify the Incident Commander (IC) or designated alternate IC. The IC or alternate IC will then make the decision to activate the Emergency Operations Center (EOC) or escalate the event based on the event level. Once the decision to activate the EOC has been made, subsequent notification to the appropriate local government agencies will be made to notify the agency of the threat and the activation of the Suburban EOC.

Once the appropriate local government agencies have been notified of the threat and the Suburban EOC activation, the Suburban EOC designee will provide immediate, specific information to the relevant agencies by pre-designated communication method(s) and be prepared to describe the magnitude and potential impact of the event on public health and safety.

MITIGATION ACTIONS

Hazard mitigation may occur during any phase of a threat, emergency, or disaster. Mitigation can and may take place during the preparedness (before), response (during), and recovery (after) phases. The process of hazard mitigation involves evaluating a hazard's impact and identifying and implementing actions to minimize or eliminate the impact.

The following mitigation actions goals established by the County of Los Angeles, the City of Whittier, and Suburban to mitigate seismic risks and vulnerabilities are further described within their respective hazard mitigation plans and ERP.

County of Los Angeles

The goals of the County of Los Angeles All-Hazard Mitigation Plan are based on a risk assessment, representing a long-term vision for hazard reduction or enhanced mitigation capabilities.

The five mitigation goals and descriptions are listed below:

1. ***Protect Life and Property*** – Implement activities that assist in protecting lives by making homes, businesses, infrastructure, critical facilities, and other property more resistant to losses from natural, human-caused, and technological hazards. Improve hazard assessment information to make recommendations for avoiding new development in high-hazard areas and encouraging preventive measures for existing development in areas vulnerable to natural, human-caused, and technological hazards.

2. ***Enhance Public Awareness*** – Develop and implement education and outreach programs to increase public awareness of the risks associated with natural, human-caused, and technological hazards. Provide information on tools, partnership opportunities, and funding resources to assist in implementing mitigation activities.

3. ***Preserve Natural Systems*** – Support management and land use planning practices with hazard mitigation to protect life. Preserve, rehabilitate, and enhance natural systems to serve hazard mitigation functions.

4. ***Encourage Partnerships and Implementation*** – Strengthen communication and coordinate participation with public agencies, citizens, nonprofit organizations, business, and industry to support implementation. Encourage leadership within the County and public organizations to prioritize and implement local and regional hazard mitigation activities.

5. ***Strengthen Emergency Services*** – Establish policy to ensure mitigation projects are considered for critical facilities, services, and infrastructure.

City of Whittier

The mitigation actions for earthquake related hazards described in the City of Whittier's 2015 LHMP include, but are not limited to, the following:

- Develop, enhance, and implement education programs aimed at mitigating natural hazards, and reducing the risk to citizens, public agencies and private property
- Utilize existing public safety announcements on mitigation steps and strategies (i.e., residential earthquake retrofitting).
- Review seismic strength of remodeled structures in the City of Whittier as deemed appropriate by the building official.
- Ensure post-disaster rebuilding is in conformance with applicable codes, specifications, and standards.
- Encourage construction and subdivision design that can be applied to steep slopes to reduce the potential adverse impacts from ground failure, mudslides, etc.
- Encourage private property owners to conduct seismic strength evaluations of facilities classified as critical or essential to City of Whittier emergency response activities.

Suburban

After a major earthquake event, Suburban staff will follow the emergency management phases described in the ERP. After the Response Phase and Recovery Phase, Suburban staff will begin review actions to repair damaged water facilities and prepare for future earthquake emergencies.

Figure 5.6: The Five Phases of Emergency Management

Termination and review actions include the following:

- Initiate permanent reconstruction of damaged water utility facilities and systems.
- Obtain inspections and/or certifications that may be required before facilities can be returned to service.
- Restore water utility operations and services to full pre-event levels.
- Determine how emergency equipment and consumable materials should be replenished, decontaminated, repaired or replaced.
- Identify operational changes that have occurred as a result of repair, restoration, or incident investigation.
- Document the recovery phase, and compile applicable records for permanent storage.

- Continue to maintain liaison as needed with external agencies.
- Update training programs, the Suburban ERP, and standard operating procedures, as needed, based upon lessons learned during the emergency response and recovery phases of the event.

Existing and planned countermeasures for a regional earthquake include:

- Transmission Main Condition Assessment will be planned to improve the integrity of the transmission mains.
- Main loop system being replaced with earthquake-resistant piping where possible.
- Spare pipe is stored at maintenance facilities to replace localized breaks on their major transmission lines.

Specific seismic mitigation actions/measures are further described in Suburban's recently updated ERP.

5.5 COMMUNICATION PROTOCOLS

5.5.1 INTRODUCTION

Suburban's communication protocol includes the various channels that Suburban will utilize to convey critical messages regarding water shortage allocations and voluntary and mandatory actions. A strong communication strategy and a common understanding on the water supply situation and necessary actions between Suburban and its customers, the public, elected officials, and other key stakeholders are essential should the WSCP need to be activated. How the water shortage messages are addressed to the public are described in this communication protocol. The communication protocol will be in place prior to a water supply shortage and be initiated in Stage 2 water supply shortage. Activation of the communication protocol will continue through all subsequent water shortage stages. Suburban will ensure outreach efforts are reaching key audiences as needed.

It is important to communicate to its customers the following when urgent conservation is needed:

- Which shortage stage is being implemented;
- What response actions are triggered to save water;
- Why water needs to be saved; and
- What actions Suburban is taking to respond to the water supply situation.

5.5.2 COORDINATION

The goal of Suburban's outreach plans during dry periods and water shortages is to maintain effective coordination with key audiences. In order to maintain reliability in this communication, Suburban will work closely with the Board of Directors. During dry periods or other times of limited supply, the frequency and extent of coordination will increase to ensure outreach tactics are consistent with the changing needs of Suburban and its customers. In addition to collaboration with its wholesalers, CBMWD, USGVMWD, and TVMWD, Suburban will seek opportunities with outside organizations and agencies to complement its own outreach.

5.5.3 COMMUNICATION GOALS

Communication objectives during an existing or anticipated water shortage condition include the following:

- Motivate key audiences (i.e., customers) to increase conservation in following any voluntary or mandatory actions called for at the current stage of the WSCP.
- Raise awareness of the drought, regulations, or other conditions affecting water sources and supplies.
- Educate customers, key stakeholders, elected officials, and the general public about water supply reliability, water quality, and water delivery.
- Prepare customers for any potential escalation of the supply shortage stages.

5.5.4 COMMUNICATION PROTOCOL FOR CURRENT OR PREDICTED SHORTAGE

A current or predicted shortage, as determined by Suburban's Annual Assessment, will be addressed to the public and its customers upon submittal of the Annual Water Shortage Assessment Report to DWR by July 1 of every year. This notice may be conducted by Suburban's website, signage in front of either service area District Office, and coordination with its wholesale agencies.

5.5.5 COMMUNICATION PROTOCOL FOR SHORTAGE RESPONSE ACTIONS TRIGGERED OR ANTICIPATED TO BE TRIGGERED

Suburban's customers and public will be notified about any triggered or anticipated to be triggered shortage response actions. Once a Schedule No. 14.1 is activated, Suburban can file a Tier 2 advice letter to the CPUC in order to designate a particular water supply

shortage stage of the WSCP under the following circumstances:

1. If Suburban is unable to meet the production limitations as set by governmental and/or court orders under the currently implemented plan level, or
2. If the CPUC, or other government agency, declares an emergency requiring mandatory water use restrictions, or
3. If a government agency declares a state of emergency in response to severe drought conditions, earthquake, or other catastrophic event that severely reduces Suburban's water supply, or
4. If conservation levels set by the CPUC, Suburban, or government agency are insufficient.

The appropriate stage of water conservation and the shortage response action triggered by the stage is then declared in a written notice to every customer via first-class mail at least 30 days before the activation of an enforcement stage. Suburban will provide each customer with the requirements of a particular stage by means of bill insert, bill message or direct mailing, and by message on Suburban's website. Notification will take place prior to imposing any penalties associated with the WSCP.

5.5.6 OTHER RELEVANT COMMUNICATION PROTOCOLS

To reduce water use consumption during any water shortage stage, Suburban will increase its public education and outreach efforts to build awareness of needed actions from the public. Moreover, Suburban will regularly revise its outreach campaign to reflect current supply conditions. Key communication strategies and associated water shortage stage implementation are listed below:

- Promote available water assistance resources for vulnerable populations; specialized outreach for impacted industries (Stage 3).
- Keep stakeholders aware of conditions (all Stages).
- Proclaim stage change to key stakeholders and the general public (all Stages).
- Conduct meetings with elected officials and other key civic and business leaders (Stage 2).
- Encourage reduced optional outdoor use through outreach (Stages 3 and 4).

Suburban may implement these communication strategies through its newsletters, website, and social media platforms to reflect supply conditions. In addition, Suburban may conduct news briefings or other media outlets (i.e., TV, radio, newspapers) to announce changes in

supply conditions.

5.5.7 CRISIS COMMUNICATION PROTOCOL

In the event of a catastrophic supply interruption due to a natural disaster or damage to Suburban's facilities, Suburban will implement communication procedures in accordance with local, regional, state, and federal emergency response guidelines as outlined in its ERP. Depending upon the severity of the emergency and potential damage to Suburban's facilities, Suburban may determine that it is necessary to utilize the Standardized Emergency Management System (SEMS) response and the Incident Command System (ICS). Public information and crisis communication are an integral part of the ICS structure.

In general, communications during an emergency response will proceed along the chain of command of the SEMS/ICS. The number of people notified will increase as the incident expands and decrease as the incident contracts toward its conclusion.

The type and extent of the disaster will dictate the normal and/or alternative methods of communication that will be used. The possibility of a coordinated attack that targets the water, power, and communications systems must be considered. In this case, it would be reasonable to assume that some methods of communication will either be unavailable or limited to certain areas during an emergency. It is anticipated that employees will know upon arrival at their duty stations which communication systems are functional, and which are not. This information will be relayed to the Suburban Information Officer upon discovery.

Suburban uses the ICS for its command structure during water emergencies. The ERP describes the ICS command structure positions and shows which individuals will hold the various positions during different emergency situations (recognizing that at different stages of an event or for different severity of events that the person/position responsible in the ICS changes).

Crisis communication efforts will concentrate on providing information to the public and external audiences. Furthermore, outreach messaging will reflect emergency conditions and the need to focus on health and public safety. Suburban will keep the Board of Directors informed of incident status and coordinate with public health officials.

Suburban will maintain communication with its wholesalers and its customers. In addition,

Suburban may also authorize release of public information to news media to announce conditions and explain needed action. Finally, Suburban will ensure ongoing coordination with emergency response services with daily advisories or alerts as needed.

5.6 COMPLIANCE AND ENFORCEMENT

5.6.1 PENALTIES

Suburban ensures compliance with and enforces provisions of the WSCP by education and communication programs as described in **Section 4.2.2** BMP 2 and warnings and citations as described in Tariff Rule No. 14.1. Suburban will first work closely with local law enforcement and public agencies charged with enforcing the mandatory water use restrictions. Usually, violations are reported by neighbors and other customers in the water system. Should the utility find that the local agency is not effectively enforcing the mandatory use restrictions, the utility, after written warnings, such as door hangers and letters, may begin to issue penalties. If a customer is seen violating the water use restrictions, as outlined in Rule No. 14.l and the Special Conditions below, the customer will be subject to the following penalty structure:

a) **First violation** - Written notice, including explanation of penalty for subsequent violation.

b) **Second violation** - If Suburban verifies that the customer has used potable water for non-essential, wasteful uses after having been notified of the first violation, Suburban shall provide the customer with a second written notice of violation. In addition, Suburban is authorized to take the following actions:

   i. Apply the following waste of water penalties, which are in addition to any other charges authorized by this Schedule No. 14.1 or other Suburban tariffs:

      - If Stage 1 is in effect, $25
      - If Stage 2 is in effect, $50
      - If Stage 3 is in effect, $100
      - If Stage 4 is in effect, $200

c) **Third violation** - If Suburban verifies that the customer has used potable water for non-essential, wasteful uses after having been notified of the second violation, Suburban shall provide the customer with a third written notice of violation.

Suburban is authorized to take the following actions:

i. Apply the following waste of water penalties, which are in addition to any other charges authorized by this Schedule No. 14.1 or other Suburban tariffs:

   a. **First violation** - Written notice, including explanation of penalty for subsequent violation.

   b. **Second violation** - If Suburban verifies that the customer has used potable water for non-essential, wasteful uses after having been notified of the first violation, Suburban shall provide the customer with a second written notice of violation. In addition, Suburban is authorized to take the following actions:

      1. Apply the following waste of water penalties, which are in addition to any other charges authorized by this Schedule No. 14.1 or other Suburban tariffs:

         - If Stage 1 is in effect, $25
         - If Stage 2 is in effect, $50
         - If Stage 3 is in effect, $100
         - If Stage 4 is in effect, $200

   c. **Third violation** - If Suburban verifies that the customer has used potable water for non-essential, wasteful uses after having been notified of the second violation, Suburban shall provide the customer with a third written notice of violation. Suburban is authorized to take the following actions:

      2. Apply the following waste of water penalties, which are in addition to any other charges authorized by this Schedule No. 14.1 or other Suburban tariffs:

         - If Stage 1 is in effect, $25
         - If Stage 2 is in effect, $50
         - If Stage 3 is in effect, $100
         - If Stage 4 is in effect, $200

   d. **Fourth violation** - If Suburban verifies that the customer has used potable water for non-essential, wasteful uses after having been notified of the third violation, Suburban shall provide the customer with a fourth written notice of violation. In addition to actions set forth in previous violations prescribed above, Suburban is authorized to install a flow restrictor on the customer's service line. Suburban shall not be held liable for any injuries,

damages, and/or consequences arising from the installation of a flow restrictor.

e. **Egregious violation** - After providing the customer with one notice of egregious violation, either by direct mail or door hanger, which documents the egregious use of potable water for non-essential, wasteful uses and explains that failure to correct the violation may result in the installation of a flow restrictor on the customer's service line, Suburban shall not be held liable for any injuries, damages, and/or consequences arising from the installation of a flow restrictor.

The money collected from penalties will be accounted for in a balancing account for later disposition as ordered by the CPUC, which would typically result in all amounts being refunded to customers. Amounts refunded may be partly offset by Suburban's conservation costs charged to a memorandum account.

5.6.2 DROUGHT RATE STRUCTURES AND SURCHARGES

Suburban provides drought surcharge rates for residential metered service customers as shown on page 6 of Tariff Schedule No. 14.1 in **Appendix J**. The surcharge rates are only applied in Stages 2, 3, and 4. The rates vary by stage, meter size, and non-low-income customer versus low-income customer.

5.6.3 ENFORCEMENT

From second violation of the same restriction within a one-year period and onwards, a violation letter will be posted on the property and mailed to the billing address, if different from the service address. Violations will accrue for the period of one year and be considered corrected and expunged one year after the violation occurs. The purpose of this rule is to prevent discrete violations from accruing in the event of a multi-year enforcement of the WSCP.

5.7 LEGAL AUTHORITIES

Under California law, including CWC Chapter 3 (commencing with Section 350) of Division 1, Parts 2.55 and 2.6 of Division 6, Division 13, and Article X, Section 2 of the California Constitution, Suburban shall implement the water shortage response actions outlined in this section with authorization of the CPUC. In all water shortage cases, shortage response actions to be implemented will be at the discretion of Suburban and will

be based on an assessment of the supply shortage, customer response, and need for demand reductions.

It is noted that upon proclamation by the Governor of a state of emergency under the California Emergency Services Act, Chapter 7 (commencing with Section 8550) of Division 1 of Title 2 of the Government Code, based on drought conditions, the state will defer to implementation of locally adopted water shortage contingency plans to the extent practicable. Suburban will coordinate with any city or county within which it provides water supply services for the possible proclamation of a local emergency, as defined in Section 8558 of the Government Code.

5.8 FINANCIAL CONSEQUENCES OF WSCP IMPLEMENTATION

Because Suburban is an investor-owned water utility and is regulated by the CPUC, the CPUC authorizes it to establish balancing accounts to track differences between billed revenue based on conservation rates, and equivalent revenue based on uniform rates. Different amounts recorded in balancing accounts are subject to future refund or recovery.

5.8.1 USE OF FINANCIAL RESERVES

Non-governmental entities such as Suburban typically do not maintain reserves as is commonly used in governmental utilities.

5.8.2 OTHER FINANCIAL MANAGEMENT MECHANISMS

Like other investor-owned utilities, in downturns such as droughts, Suburban prudently manages its business to reflect revised circumstances. Suburban's commitment to making needed infrastructure improvements typically remains steadfast even in times of drought.

5.9 MONITORING AND REPORTING

5.9.1 REDUCTION MEASURING MECHANISM

When the WSCP is in effect, Suburban determines the actual reduction in water use through metering. Data from production meters and from customer usage meters is used to analyze the water conservation impacts during shortages. Additionally, customers can track their usage as recorded on their monthly water bill.

5.10 SPECIAL WATER FEATURE DISTINCTION

As required under CWC 10632(b), water features that are not pools or spas must be analyzed and defined separately from pools and spas in the WSCP. Non-pool or non-spa water features may use recycled water, whereas, for health and safety considerations, pools and spas must use potable water. Presently, Suburban provides recycled water in the San Jose Hills Service Area, but not within the Whittier/La Mirada Service Area. Although the Whittier/La Mirada Service Area does not currently use and does not have the ability to use recycled water due to a lack of infrastructure, the Whittier/La Mirada Service Area would use non-potable water for non-pool water features if and when recycled water supply ever becomes available. Furthermore, the WSCP requires potable water recirculation for fountains and decorative water features.

5.11 WSCP ADOPTION AND REFINEMENT PROCEDURES

5.11.1 WSCP PUBLIC NOTICE AND ADOPTION

To encourage broad community participation in the WSCP preparation process, Suburban provided 60-day notification letters to agencies within Suburban's service areas. Copies of the draft WSCP were made available for public review at both service area District Offices prior to the public hearing. Shortly before the public hearing, a two-week and a one-week notice was published in the local press alerting the public of the public hearing. At a subsequent board meeting following the public hearing, Suburban's final WSCP was approved and adopted by its Board of Directors on June 17, 2021. **Appendix E** contains the Board resolution adopting the WSCP. The final plan was submitted to DWR within 30 days of Board adoption and includes all information necessary to meet the requirements of CWC Section 10632.

By June 30, 2021, Suburban's approved WSCP was filed with DWR. By July 1, 2021, Suburban's plan was submitted to the California State Library, County of Los Angeles, and cities within its service areas. Suburban will make the plan available for public review no later than 30 days after filing with DWR.

5.11.2 WSCP REFINEMENT PROCEDURES

This section discusses the process for reviewing and updating the WSCP to ensure it remains actively used, relevant and appropriate to the community, and consistent with applicable state and requirements. It is vital that Suburban's WSCP remain up to date so

as to best ensure shortage risk tolerance is adequate, appropriate water shortage mitigation strategies are implemented as needed, proper procedures for water efficient practices are in place for the community, and better alignment with long-term water use goals.

The Suburban Water Management is responsible for maintaining this plan and updating it as needed. The Water Production Manager is the primary Suburban staff member who will carry out this process. In addition, the Water Production Manager, or their designee, will serve as the WSCP project manager and will coordinate maintenance of the plan, conduct the formal review process, and direct the plan updates with the assistance of the Water Conservation Manager. The project manager will assign tasks, which may include collecting data, developing new or updated water shortage mitigation measures, updating sections of the plan, and presenting the plan to others.

Wastewater is neither treated nor disposed within Suburban's service area; however, Suburban provides recycled water within one of its two service areas: the San Jose Hills Service Area.

SECTION 6: RECYCLED WATER

2020 URBAN WATER MANAGEMENT PLAN

SECTION 6 RECYCLED WATER

6.1 OVERVIEW

Recycled water is defined as domestic wastewater purified through primary, secondary and tertiary treatment. The Southern California region, from Ventura to San Diego, discharges over 1 billion gallons of treated wastewater to the ocean each day. Since recycled water is acceptable for a variety of non-potable water purposes such as irrigation, groundwater recharge, and commercial/industrial processes, it is considered a reliable and drought-proof water source and could greatly reduce the region's reliance on imported water. As technological improvements continue to reduce treatment costs, and as public perception and acceptance continue to improve, more reuse opportunities should develop, which will increase demands for recycled water. Recycled water is a critical part of the California water picture because of the area's high likelihood of drought. As part of its overall water resources planning, Suburban continues to investigate the feasibility and cost-effectiveness of using recycled water.

Cost-effective opportunities for using recycled water are limited due to the lack of large users or large irrigated areas within Suburban's service area. In addition, there is presently a possible source from LACSD, but no infrastructure is available to all of Suburban's service areas. This potential use of recycled water is continually assessed by Suburban, USGVMWD, and CBMWD.

6.2 WASTEWATER DESCRIPTION & DISPOSAL

6.2.1 WASTEWATER COLLECTION

Municipal wastewater is generated in Suburban's service areas from a combination of residential, commercial, and industrial sources. The quantities of wastewater generated are generally proportional to the population and the water used in the service area. It is estimated that customers within Suburban's service area generate wastewater based on 80 percent of potable water demand, although that is not a strict figure.

6.2.2 WASTEWATER TREATMENT

Wastewater Collected Within Service Area

Suburban neither owns nor operates any wastewater facilities. The wastewater collection system for Suburban's service areas directs sewer flows via sewer systems owned by various cites/utilities to the LACSD trunk line collection system. The collection system conveys wastewater to the San Jose Creek WRP, Whittier Narrows WRP, and Los Coyotes WRP, which provide coagulated, filtered, and disinfected tertiary treatment. These three LACSD WRPs have current capacities of 15 million gallons per day (mgd), 100 mgd, and 37.5 mgd, respectively, and are located outside of Suburban's service area. For each of the WRPs, wastewater collection volumes are listed in **Table 6.1** in units of AF. It is estimated that customers within Suburban's service area generate wastewater based on 80 percent of potable water demand. This estimate is the total wastewater volume for the combined Suburban service area.

Table 6.1: Suburban Wastewater Collected Within Service Area (AF) (DWR Table 6-2 Retail)

Wastewater Collection			Recipient of Collected Wastewater			
Name of Wastewater Collection Agency	Wastewater Volume	Volume of Wastewater Collected from UWMP Service Area 2020	Wastewater Treatment Agency Receiving Collected Wastewater	Treatment Plant Name	Is WWTP Located Within UWMP Area?	Is WWTP Operation Contracted to a Third Party?
LACSD	Estimated	2,697	LACSD	San Jose	No	No
LACSD	Estimated	24,567	LACSD	Whittier Narrow	No	No
LACSD	Estimated	9,047	LACSD	Los Coyotes	No	No
Total Wastewater Collected from Service Area in 2020:		36,311				

The WRPs produce recycled water and secondary effluent and sludge. The recycled water is used beneficially; the unused portion is discharged to the San Gabriel River. The solids and backwash produced continue through the trunk line system to the Joint Water Pollution Control Plant (JWPCP) for treatment and disposal. At the JWPCP, the WRP effluent is treated and discharged to the ocean 1.5 miles offshore, while the biosolids are removed for recycling.

Wastewater is neither treated nor disposed within Suburban's service area.

6.3 CURRENT RECYCLED WATER USES

Suburban provides recycled water in the San Jose Hills Service Area, but not within the Whittier/La Mirada Service Area. The recycled water used in San Jose Hills Service Area is produced by LACSD and distributed by USGVMWD to Suburban's customers. The Whittier/La Mirada Service Area plans to utilize recycled water in the near future provided by CBMWD.

Figure 6.1: Los Coyotes Water Reclamation Plant

6.3.1 RECYCLED WATER COORDINATION

Recycled water has been used since 1972 in the region and has been extensively reviewed by agencies in both local and regional studies. Many water agencies throughout Southern

California use or plan to use recycled water for non-potable demands. These uses include groundwater recharge, industrial water for cooling towers and non-food manufacturing, and the irrigation of golf courses, cemeteries, freeway landscaping, parks, playgrounds, and schoolyards. Recycled water supplied to Suburban's San Jose Hills Service Area is produced by LACSD and conveyed by Upper District.

LACSD - Operates 11 wastewater treatment facilities, 10 of which are classified as WRPs. These facilities serve approximately 5.5 million people in 78 cities and unincorporated areas within Los Angeles County. The WRPs produce treated and disinfected recycled water, most of which meets drinking water standards. The recycled water is used at more than 720 sites for a variety of purposes, including indirect potable groundwater supply augmentation. LACSD is the sole agency responsible for treatment of wastewater produced by Suburban's San Jose Hills and Whittier/La Mirada Service Areas.

USGVMWD - Currently pursuing two options for recycled water supply: indirect potable

reuse and direct non-potable reuse. Indirect potable reuse involves treatment and/or blending for groundwater recharge. USGVMWD is investigating the possibility of a recycled water project to provide up to 10,000 AF of treated recycled water for groundwater replenishment by 2030. Direct non-potable reuse is the delivery of tertiary treated effluent for landscape irrigation. USGVMWD's Direct Use Recycled Water Program provides recycled water via contract with its retail agencies, including Suburban, and is divided into phases. Current phases include Rose Hills Memorial Park, Whittier Narrows, South El Monte High School, City of Industry, and Rosemead Extension.

CBMWD - Provides recycled water to irrigation and industrial customers. CBMWD's recycling system is comprised of two separate projects: the E. Thorton Ibbetson Century Water Recycling Project and the Esteban E. Torres Rio Hondo Water Recycling Project. Additionally, CBMWD is expanding its recycled water infrastructure with the Southeast Water Reliability Project and plans to expand to the La Mirada area.

WRD - Purchases recycled water from LACSD to provide replenishment water for the Central Basin at the Montebello Forebay Spreading Grounds. WRD has embarked on the Groundwater Replenishment Improvement Program (GRIP) to decrease reliance on imported SWP water as a replenishment water source and intends to be independent from imported water by 2020.

6.4 POTENTIAL RECYCLED WATER USES

The 2007 Whittier/La Mirada Service Area Water System Master Plan included a study to determine the potential for recycled water use within the Service Area and surrounding areas. The study identified 2,070 AFY of potential recycled water use within the Service Area, but included only large turf areas. The study concluded a more detailed analysis of potential recycled water customers, including industrial reuse customers, could identify more than 5,000 AFY of potential recycled water use in and around the Service Area. Suburban has provided customer usage information and meter locations to CBMWD to assist in preparing a more detailed study of potential recycled water projects in the Service Area.

Recycled Water Beneficial Uses

Many water agencies throughout Southern California participate in the planning and use of recycled water for non- potable demands. These uses include groundwater recharge, industrial water for cooling towers and non-food manufacturing, and the irrigation of golf courses, cemeteries, freeway landscaping, parks, playgrounds, and schoolyards.

Current & Planned Uses for Recycled Water

Suburban's recycled water customers utilize the recycled water supply for irrigation. At 20 locations, the 26 metered connections serve 15 users. With 11 meters, the Paseos of West Covina has the most metered connections. The Paseos are strips of recreational land maintained by the City of West Covina. Other users include four parks in the City of West Covina, one Los Angeles County park, medians in the City of Industry, and several schools. Two schools in Rowland Unified School District and six schools in West Covina Unified School District irrigate with recycled water.

Currently, Suburban has no plans to expand recycled water use in San Jose Hills; however, CBMWD is planning to expand its recycled water system into the City of La Mirada to serve large landscape users, including La Mirada Park, La Mirada Golf Course, La Mirada High School, Olive View Cemetery, Biola University, La Mirada City buildings, and several other parks and schools. Approximately 930 AFY of potential recycled water demand has been identified for landscape irrigation, of which 251 AFY is for golf course irrigation. **Table 6.2**, **6.3**, and **6.4** shows the current and future projected recycled water usages for combined Suburban, San Jose Hills, and La Mirada/Whittier service areas. Planned and actual recycled water use for the various service areas is summarized in **Table 6.5**, **6.6**, and **6.7**.

On a regional basis, MWD intends to implement a pilot project at LACSD's JWPCP in Carson to explore the feasibility of a water purification plant to recharge regional groundwater basins, including the Main Basin.

Table 6.2: Combined Suburban Current & Projected Recycled Water Usage (AF) (DWR Table 6-4 Retail)

Beneficial Use Type	Level of Treatment	2020	2025	2030	2035	2040	2045
Landscape irrigation (exc golf courses)	Tertiary	710	1,379	1,379	1,379	1,379	1,379
Golf course irrigation	Tertiary	0	251	251	251	251	251
Total:		710	1,630	1,630	1,630	1,630	1,630

Table 6.3: San Jose Hills Current & Projected Recycled Water Usage (AF) (DWR Table 6-4 Retail)

Beneficial Use Type	Level of Treatment	2020	2025	2030	2035	2040	2045
Landscape irrigation (exc golf courses)	Tertiary	710	700	700	700	700	700
Total:		710	700	700	700	700	700

Table 6.4: Whittier/La Mirada's Current & Projected Recycled Water Usage (AF) (DWR Table 6-4 Retail)

Beneficial Use Type	Level of Treatment	2020	2025	2030	2035	2040	2045
Landscape irrigation (exc golf courses)	Tertiary	0	679	679	679	679	679
Golf course irrigation	Tertiary	0	251	251	251	251	251
Total:		0	930	930	930	930	930

Table 6.5: Combined Suburban Projected Recycled Water Demands vs. Actual Recycled Water Demands (DWR Table 6-5 Retail)

Beneficial Use Type	2015 Projection for 2020	2020 Actual Use
Landscape irrigation (exc golf courses)	1,112	710
Golf course irrigation	518	0
Total	1,630	710

Table 6.6: San Jose Hills Projected Recycled Water Demands vs. Actual Recycled Water Demands (DWR Table 6-5 Retail)

Beneficial Use Type	2015 Projection for 2020	2020 Actual Use
Landscape irrigation (exc golf courses)	700	710
Total	700	710

Table 6.7: Whittier/La Mirada Projected Recycled Water Demands vs. Actual Recycled Water Demands (DWR Table 6-5 Retail)

Beneficial Use Type	2015 Projection for 2020	2020 Actual Use
Landscape irrigation (exc golf courses)	679	0
Golf course irrigation	251	0
Total	930	0

6.4.1 DIRECT NON-POTABLE REUSE

At the moment Suburban does not have the potential for direct non-potable reuse within their service area; however, USGVMWD is currently pursuing a plan to establish a direct non-potable reuse delivery system by 2030.

6.4.2 INDIRECT POTABLE REUSE

At the moment Suburban does not have the potential for indirect potable reuse within their

service area; however, USGVMWD is currently pursuing a plan to establish an indirect potable reuse delivery system by 2030.

6.5 OPTIMIZATION PLAN

Because Suburban is using recycled water at this time, it is practicable to provide a recycled water optimization plan.

To determine if a recycled water project is cost-effective, cost/benefit analyses must be conducted for each potential project. This raises the issue of technical and economic feasibility of a recycled water project requiring a relative comparison to alternative water supply options. Analyses indicate that capital costs of water recycling in Suburban's service area exceed the cost of purchasing additional imported water from MWD.

Suburban encourages the use of USGVMWD recycled water supplies within its own service area by offering recycled water at a 15 percent discount from potable water supply. Suburban is restricted from supplying additional recycled water to its customers due to the limits of recycled water delivery by USGVMWD and CBMWD. USGVMWD and CBMWD continue to develop programs to encourage regional recycled water use, along with WRD.

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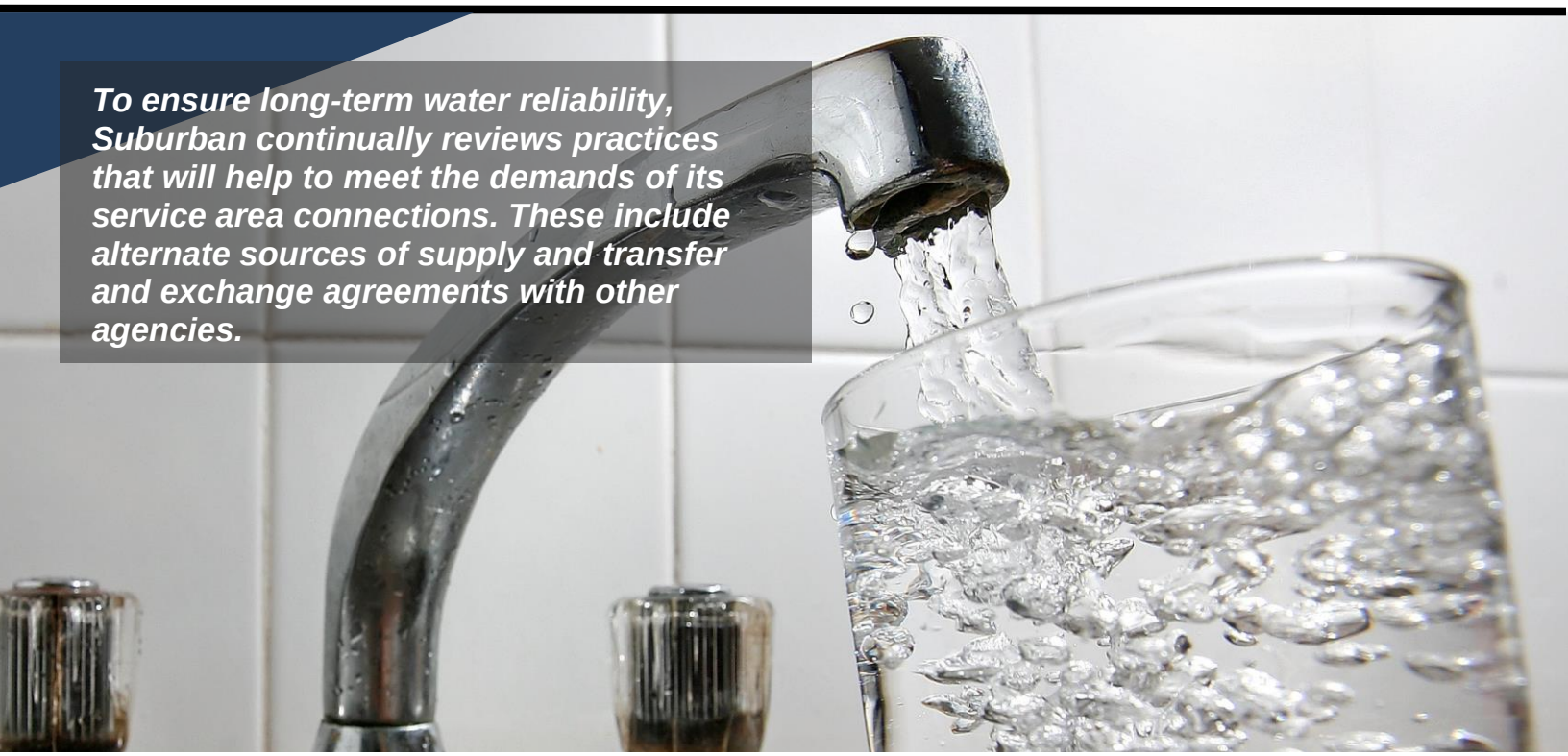


To ensure long-term water reliability, Suburban continually reviews practices that will help to meet the demands of its service area connections. These include alternate sources of supply and transfer and exchange agreements with other agencies.

SECTION 7: FUTURE WATER SUPPLY PROJECTS & PROGRAMS

2020 URBAN WATER MANAGEMENT PLAN

SECTION 7 FUTURE WATER SUPPLY PROJECTS & PROGRAMS

7.1 OVERVIEW

In general, Suburban continually reviews practices that will provide its customers with adequate and reliable supplies. As discussed in previous sections, Suburban is dedicated to maximizing its supply sources while reducing its dependency on imported supplies. Suburban considers plans for alternate sources such as recycled, greywater, and rainwater harvesting. This section discusses planned and potential future water supply projects and programs, while updating existing plans from 2015 as well as presenting new plans.

7.2 MWD REGIONAL SUPPLY PROJECTS & PROGRAMS

MWD is implementing water supply alternative strategies for the region and on behalf of member agencies to ensure available water in the future, including:

- Conservation
- Water recycling & groundwater recovery
- Storage and groundwater management programs within the region
- Storage related to SWP & CRA
- Other water supply management programs outside of the region

MWD has made investments in conservation and supply augmentation as part of its long-term water management strategy. MWD's approach to a long-term water management strategy was to develop an Integrated Resource Plan (IRP) to include diversified supply sources.

MWD is currently updating its IRP; however, that process will not be completed until after submittal of this UWMP. The IRP projects demands and identifies a mix of supplies to meet those demands. These supplies include desalination, recycling, conservation, brackish groundwater recovery and conjunctive use. MWD has financial incentive programs in place for local agencies to develop these supplies. CBMWD, USGVMWD, and TVMWD, as member agencies of MWD, support these incentive programs and contributes to these financial incentives through its payments for water from MWD.

7.3 WATER MANAGEMENT TOOLS

Resource optimization, such as local groundwater, storm water recharge, and recycled feasibility studies to minimize the needs for imported water, is key for Suburban to meet future water demands. Suburban can meet projected demands with existing facilities and distribution systems.

7.4 TRANSFER OR EXCHANGE OPPORTUNITIES

The Main Basin Judgment and Central Basin Judgment allow parties to enter into temporary transfers (leases) of water rights to acquire additional water rights on an annual basis. The Central Basin Judgment also allows water-right transfers and exchanges between parties within the Central Basin.

Suburban has many interties with surrounding water agencies. Supplies from these connections can be taken either on a regular basis or on an emergency basis. In the San Jose Hills District, Suburban has inter-agency connections with 12 water suppliers:

1. San Gabriel Valley Water Company
2. Rowland Water District
3. La Puente Valley County Water District
4. City of Azusa
5. Covina Irrigating Company
6. Valley County Water District
7. City of Covina
8. Valencia Heights Water Company
9. Walnut Valley Water District
10. Golden State Water Company
11. City of Glendora
12. USGVMWD

In the Whittier/La Mirada District, Suburban has inter-agency connections with nine water suppliers:

1. City of Whittier
2. Orchard Dale Water District
3. CBMWD
4. La Habra Heights County Water District
5. California Domestic Water Company
6. City of La Habra
7. Golden State Water Company
8. City of Fullerton
9. San Gabriel Valley Water Company

7.5 PLANNED WATER SUPPLY PROJECTS & PROGRAMS

GROUNDWATER RECHARGE

There have been a number of major supply initiatives in the Main San Gabriel Basin that have helped to increase the amount of cyclic groundwater storage. This, in turn, translates to more water in the basin for pumping and higher groundwater levels for pumpers. According to the 2019-20 Annual Main San Gabriel Basin Watermaster Report:

- Low operating safe yield promotes increased replenishment RDA assessment and water purchases continue to grow, improving the water supply
- Developing a new recycled water supply to permanently balance the basin

Hence, over the past five years, the amount of groundwater storage in the basin has seen an upward trend. That is, groundwater account has risen from a dismal 62,000 AF point to about 200,00 AF. A healthy amount of groundwater in the basin will ensure that Suburban can continue to pump in the area and not rely as much on imported supplies.

RECYCLED WATER

Suburban and CBMWD have developed a plan to serve the City of La Mirada 900 AF of recycled water. CBMWD is a water wholesaler that provides imported water to 40 retail water providers and one wholesaler including: cities, mutual water companies, investor-owned utilities and private companies in the Southeast Los Angeles County. CBMWD purchases imported water from MWD. Suburban currently has a potable connection within the District to use when additional water in the Whittier - La Mirada System is needed. As a MWD Member Agency, CBMWD delivers imported water from the SWP and the Colorado River Aqueduct to its service area. The District also serves recycled water. CBMWD delivers approximately 5,000 AF of recycled water throughout the Southeast Los Angeles County.

In 2016, CBMWD continued its planning to expand its recycled water system. CBMWD identified Suburban as the next phase of its expansion plan. Several large irrigation customers within Suburban's service are in the City of la Mirada, including the City of La Mirada Golf Course, La Mirada Park, and Behringer Park. CBMWD worked with Suburban to obtain consumption information to develop a plan to serve a total on 41 sites. The plan demonstrated that the City of La Mirada Expansion Project was prudent and would offset potable water supply and replace it with a more resilient water source.

LACSD supplies recycled water to CBMWD's distribution system from the San Jose Creek WRP, located in the City of Whittier and from Los Coyotes WRP in the City of Cerritos. CBMWD delivers recycled water to the recycled water purveyors. Recent conservation efforts and constraints limiting discharges to surface water have resulted in reduced recycled water production at the wastewater plants. CBMWD could not guarantee recycled water to new recycled customers. As a result, efforts to expand the recycled water system have stalled.

7.6 DESALINATION OPPORTUNITIES

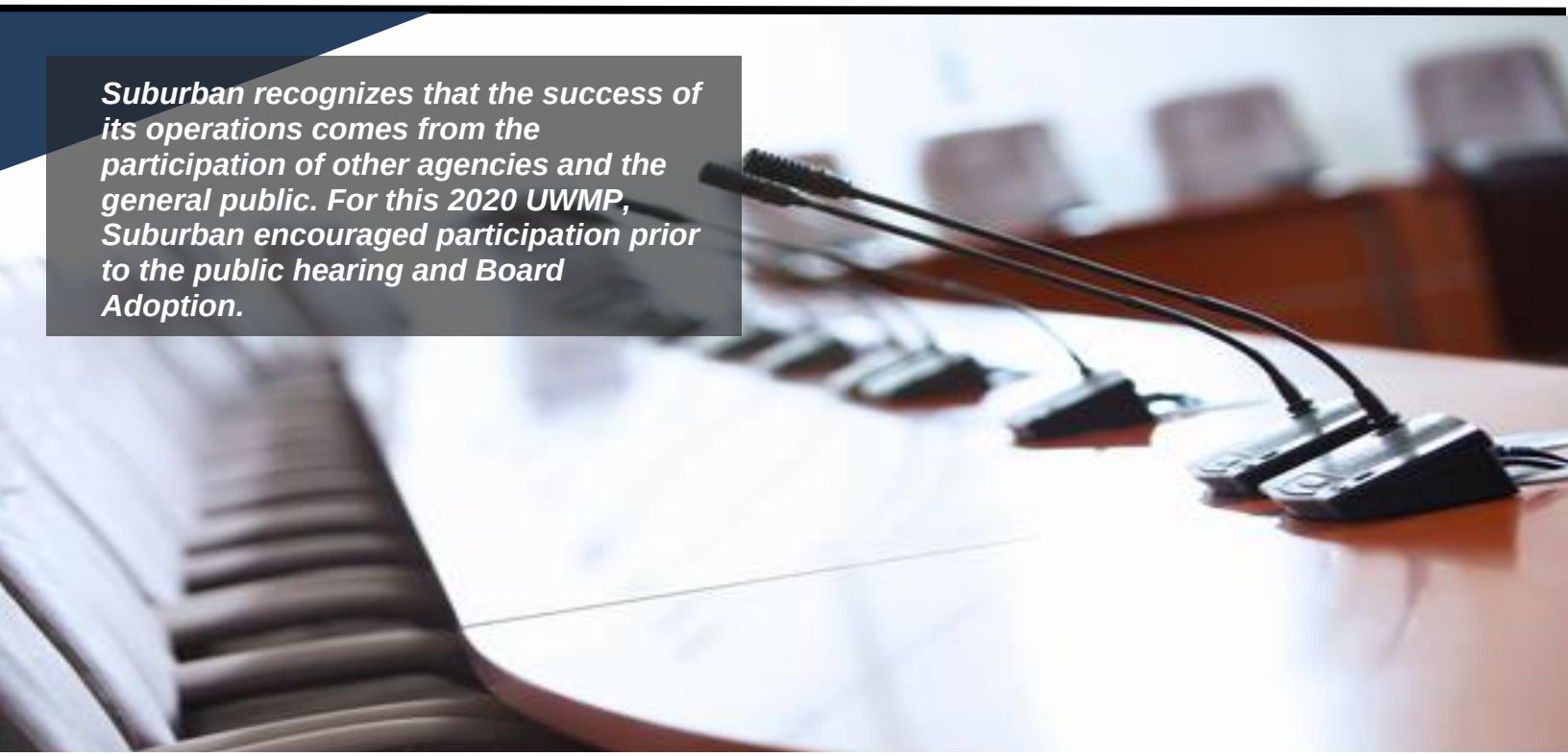
Because Suburban is not in a coastal area, it is neither practical nor economically feasible for Suburban to implement a seawater desalination program. It is more likely that one of the regional water agencies, such as USGVMWD or CBMWD, would partner with coastal agencies to develop financial arrangements to construct seawater desalination facilities in exchange for imported supplies. MWD's 2020 UWMP has a comprehensive list of current and planned seawater desalination programs in the region. Additionally, monitoring both the Main Basin and Central Basin indicates the Total Dissolved Solids (TDS), or salt concentration in groundwater, is within acceptable ranges. Therefore, there is no need for brackish groundwater recovery desalination as within other basins. Suburban supports these projects through MWD's programs where MWD provides incentives to other agencies for treatment.

7.6.1 DESALINATION OF GROUNDWATER

There are currently no brackish groundwater opportunities within Suburban's service areas.

7.6.2 DESALINATION OF OCEAN WATER

Suburban does not have opportunities to directly develop desalinated supplies. It does not border the ocean and cannot participate directly in ocean desalination.



Suburban recognizes that the success of its operations comes from the participation of other agencies and the general public. For this 2020 UWMP, Suburban encouraged participation prior to the public hearing and Board Adoption.

SECTION 8: PLAN ADOPTION PROCESS

2020 URBAN WATER MANAGEMENT PLAN

SECTION 8 PLAN ADOPTION PROCESS

8.1 OVERVIEW

Recognizing that close coordination among other relevant public agencies is the key to the success of its 2020 UWMP, Suburban worked closely with other agencies to develop and update this planning document. Suburban provided 60-day notification letters to encourage agencies to participate in the UWMP preparation process. Copies of the draft UWMP and draft WSCP were made available for public review at the Suburban office prior to the public hearing. Shortly before the public hearing, a two-week and a one-week notice was published in the local press alerting the public of the public hearing. At a subsequent Board meeting following the public hearing, Suburban adopted the 2020 UWMP and WSCP on June 17, 2021. Finally, as required by the UWMP Act, this 2020 UWMP and the WSCP are being provided by Suburban to DWR, the California State Library, and the public within 30 days of Board adoption. Details of coordination efforts are provided in **Sections 8.1.1** and **8.2**.

Suburban's 2020 UWMP is a collaborative effort involving its own staff, outside agencies, and the general public.

8.1.1 WATER CODE REQUIREMENTS

Article 3 of the CWC requires that Suburban provide a minimum level of agency and public participation during the UWMP preparation process, as well as the adoption and implementation process of the UWMP. **Table 8.1** on the following page summarizes external coordination and outreach activities carried out by Suburban during the preparation of its 2020 UWMP, along with corresponding dates.

Also in accordance with Article 3 of the CWC, Suburban is required to distribute its official (adopted) UWMP and WSCP and make it publicly available. After the adoption of the 2020 UWMP and WSCP by Board Resolution (attached as **Appendix E**) on June 17, 2021,

Suburban provided copies of its adopted UWMP in accordance with **Table 8.2**.

Table 8.1: Coordination & Outreach during UWMP Preparation

Effort	Description	Date
"60-Day Notification"	Letters sent to Cities, County, & other Agencies	April 6, 2021
Public Hearing	Public Hearing Held at Suburban Headquarters (two-week and one-week notices published)	June 17, 2021
Board Adoption	Board Adoption of UWMP by Resolution	June 17, 2021

Table 8.2: UWMP & WSCP Distribution Following Adoption of Plans

Effort	Description	Date
DWR Submittal	Submitted UWMP and WSCP to DWR (within 30 days of adoption)	June 30, 2021
Agency Submittal	Submitted UWMP and WSCP to the California State Library and County of Los Angeles (within 30 days of adoption)	June 30, 2021
Public Access	Made UWMP and WSCP available to public (within 30 days of submittal to DWR)	June 30, 2021

8.2 DETAILS OF COORDINATION EFFORTS

8.2.1 GENERAL PUBLIC COORDINATION

To meet the CWC and to provide for its own benefit, Suburban has actively solicited community participation during the UWMP preparation and adoption process by performing the following activities:

- Soliciting comments on the UWMP while providing copies of its Draft 2020 UWMP at the Suburban office and on its website
- Holding a public hearing for the express purpose of inviting UWMP comments and opening the floor for public comments to be received

On June 8, 2021, Suburban held a Public Hearing to receive comments on the 2020 UWMP, including the WSCP as part of the UWMP. Notification of the public meeting for consideration of adoption of Suburban's draft UWMP was printed in a local newspaper, a copy of which is provided in **Appendix D**. All comments received prior to and during the Public Hearing were taken into consideration in the preparation of the final report. No comments were received during the public hearing.

8.2.2 OUTSIDE AGENCY COORDINATION

Suburban coordinated the development of this UWMP with several outside agencies and the cities which reside in Suburban's service area.

All of Suburban's water supply planning relates to the policies, rules, and regulations of its regional and local providers. Suburban is dependent on imported water from MWD via CBMWD, USGVMWD, and local groundwater from the Main Basin and Central Basin. As such, Suburban involved these entities in the development of its 2020 Draft UWMP at various levels of contribution as summarized in **Table 8.3**.

8.3 UWMP SUBMITTAL

Suburban's final 2020 UWMP and WSCP were approved by its President on June 17, 2021. The final plans were submitted to DWR within 30 days of Board approval and includes all information necessary to meet the requirements of California Water Code Division 6, Part 2.6 (Urban Water Management Planning).

By June 30, 2021, Suburban's approved 2020 UWMP and WSCP was filed with DWR. By July 1, 2021, Suburban's plans were submitted to the California State Library, County of Los Angeles, and cities within its service area. Suburban will make both plans available for public review no later than 30 days after filing with DWR.

Table 8.3: UWMP Coordination Efforts

Agency	Helped Plan Prep.	Contacted for Assistance	Comments on Draft	Notified of Public Hearing	Attended Public Hearing
City of Buena Park		✓		✓	
City of Covina		✓		✓	
City of Glendora		✓		✓	
City of Industry		✓		✓	
City of La Habra		✓		✓	
City of La Mirada		✓		✓	
City of La Puente		✓		✓	
Los Angeles County		✓		✓	
Orange County		✓		✓	
City of Walnut		✓		✓	
City of West Covina		✓		✓	
City of Whittier		✓		✓	

APPENDICES A - K

SUBURBAN WATER SYSTEMS | 2020 URBAN WATER MANAGEMENT PLAN

Suburban
Water Systems
A SouthWest Water Company

Appendix A: UWMP Checklist

Suburban Water Systems | 2020 Urban Water Management Plan

Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location (Optional Column for Agency Review Use)
x	x	Chapter 1	10615	A plan shall describe and evaluate sources of supply, reasonable and practical efficient uses, reclamation and demand management activities.	Introduction and Overview	Section 1.4
x	x	Chapter 1	10630.5	Each plan shall include a simple description of the supplier's plan including water availability, future requirements, a strategy for meeting needs, and other pertinent information. Additionally, a supplier may also choose to include a simple description at the beginning of each chapter.	Summary	Section 1.4
x	x	Section 2.2	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	N/A
x	x	Section 2.6	10620(d)(2)	Coordinate the preparation of its plan with other appropriate agencies in the area, including other water suppliers that share a common source, water management agencies, and relevant public agencies, to the extent practicable.	Plan Preparation	Section 8.1 Section 8.2 Appendix C Appendix D
x	x	Section 2.6.2	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 and contingency plan.	Plan Preparation	Section 8.2 Appendix C Appendix D
x		Section 2.6, Section 6.1	10631(h)	Retail suppliers will include documentation that they have provided their wholesale supplier(s) - if any - with water use projections from that source.	System Supplies	N/A
	x	Section 2.6	10631(h)	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	N/A
x	x	Section 3.1	10631(a)	Describe the water supplier service area.	System Description	Section 1.6
x	x	Section 3.3	10631(a)	Describe the climate of the service area of the supplier.	System Description	Section 2.2
x	x	Section 3.4	10631(a)	Provide population projections for 2025, 2030, 2035, 2040 and optionally 2045.	System Description	Section 2.2
x	x	Section 3.4.2	10631(a)	Describe other social, economic, and demographic factors affecting the supplier's water management planning.	System Description	Section 2.2
x	x	Sections 3.4 and 5.4	10631(a)	Indicate the current population of the service area.	System Description and Baselines and Targets	Section 2.2
x	x	Section 3.5	10631(a)	Describe the land uses within the service area.	System Description	Section 2.2
x	x	Section 4.2	10631(d)(1)	Quantify past, current, and projected water use, identifying the uses among water use sectors.	System Water Use	Section 2.3 Section 2.6
x	x	Section 4.2.4	10631(d)(3)(C)	Retail suppliers shall provide data to show the distribution loss standards were met.	System Water Use	Section 2.3
x	x	Section 4.2.6	10631(d)(4)(A)	In projected water use, include estimates of water savings from adopted codes, plans and other policies or laws.	System Water Use	Section 2.6
x	x	Section 4.2.6	10631(d)(4)(B)	Provide citations of codes, standards, ordinances, or plans used to make water use projections.	System Water Use	Section 2.6
x	optional	Section 4.3.2.4	10631(d)(3)(A)	Report the distribution system water loss for each of the 5 years preceding the plan update.	System Water Use	Section 2.3
x	optional	Section 4.4	10631.1(a)	Include projected water use needed for lower income housing projected in the service area of the supplier.	System Water Use	Section 2.6
x	x	Section 4.5	10635(b)	Demands under climate change considerations must be included as part of the drought risk assessment.	System Water Use	Section 3.7
x		Chapter 5	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	Section 2.4
x		Chapter 5	10608.24(a)	Retail suppliers shall meet their water use target by December 31, 2020.	Baselines and Targets	Section 2.4
	x	Section 5.1	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	N/A
x		Section 5.2	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 2.4
x		Section 5.5	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 2.4
x		Section 5.5 and Appendix E	10608.4	Retail suppliers shall report on their compliance in meeting their water use targets. The data shall be reported using a standardized form in the SBX7-7 2020 Compliance Form.	Baselines and Targets	Section 2.4 Appendix B
x	x	Sections 6.1 and 6.2	10631(b)(1)	Provide a discussion of anticipated supply availability under a normal, single dry year, and a drought lasting five years, as well as more frequent and severe periods of drought.	System Supplies	Section 3.8 Section 3.10
x	x	Sections 6.1	10631(b)(1)	Provide a discussion of anticipated supply availability under a normal, single dry year, and a drought lasting five years, as well as more frequent and severe periods of drought, *including changes in supply due to climate change.*	System Supplies	Section 3.8 Section 3.10
x	x	Section 6.1	10631(b)(2)	When multiple sources of water supply are identified, describe the management of each supply in relationship to other identified supplies.	System Supplies	Section 3.2 Section 3.3 Section 3.4
x	x	Section 6.1.1	10631(b)(3)	Describe measures taken to acquire and develop planned sources of water.	System Supplies	Section 3.2 Section 3.3 Section 3.4
x	x	Section 6.2.8	10631(b)	Identify and quantify the existing and planned sources of water available for 2020, 2025, 2030, 2035, 2040 and optionally 2045.	System Supplies	Section 3.8 Section 3.10
x	x	Section 6.2	10631(b)	Indicate whether groundwater is an existing or planned source of water available to the supplier.	System Supplies	Section 3.3
x	x	Section 6.2.2	10631(b)(4)(A)	Indicate whether a groundwater sustainability plan or 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 3.3 Appendix F Appendix G Appendix I
x	x	Section 6.2.2	10631(b)(4)(B)	Describe the groundwater basin.	System Supplies	Section 3.3
x	x	Section 6.2.2	10631(b)(4)(B)	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 3.3 Appendix F Appendix G Appendix I
x	x	Section 6.2.2.1	10631(b)(4)(B)	For unadjudicated basins, indicate whether or not the department has identified the basin as a high or medium priority. Describe efforts by the supplier to coordinate with sustainability or groundwater agencies to achieve sustainable groundwater conditions.	System Supplies	N/A
x	x	Section 6.2.2.4	10631(b)(4)(C)	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 3.3 Section 3.6
x	x	Section 6.2.2	10631(b)(4)(D)	Provide a detailed description and analysis of the amount and location of groundwater that is projected to be pumped.	System Supplies	Section 3.8
x	x	Section 6.2.7	10631(c)	Describe the opportunities for exchanges or transfers of water on a short-term or long- term basis.	System Supplies	Section 7.4
x	x	Section 6.2.5	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 6.2
x	x	Section 6.2.5	10633(c)	Describe the recycled water currently being used in the supplier's service area.	System Supplies (Recycled Water)	Section 6.3
x	x	Section 6.2.5	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 6.4
x	x	Section 6.2.5	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 6.4
x	x	Section 6.2.5	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 6.4
x	x	Section 6.2.5	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
x	x	Section 6.2.6	10631(g)	Describe desalinated water project opportunities for long-term supply.	System Supplies	Section 7.6
x	x	Section 6.2.5	10633(a)	Describe the wastewater collection and treatment systems in the supplier's service area with quantified amount of collection and treatment and the disposal methods.	System Supplies (Recycled Water)	Section 6.2
x	x	Section 6.2.8, Section 6.3.7	10631(f)	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 for a period of drought lasting 5 consecutive water years.	System Supplies	Section 7
x	x	Section 6.4 and Appendix O	10631.2(a)	The UWMP must include energy information, as stated in the code, that a supplier can readily obtain.	System Suppliers, Energy Intensity	Section 3.12
x	x	Section 7.2	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 3.5
x	x	Section 7.2.4	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 5.4 Section 7.2
x	x	Section 7.3	10635(a)	Service Reliability Assessment: Assess the water supply reliability during normal, dry, and a drought lasting five consecutive 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 3.8 Section 3.10 Section 5.2
x	x	Section 7.3	10635(b)	Provide a drought risk assessment as part of information considered in developing the demand management measures and water supply projects.	Water Supply Reliability Assessment	Section 5.2

Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location (Optional Column for Agency Review Use)
x	x	Section 7.3	10635(b)(1)	Include a description of the data, methodology, and basis for one or more supply shortage conditions that are necessary to conduct a drought risk assessment for a drought period that lasts 5 consecutive years.	Water Supply Reliability Assessment	Section 5.2
x	x	Section 7.3	10635(b)(2)	Include a determination of the reliability of each source of supply under a variety of water shortage conditions.	Water Supply Reliability Assessment	Section 5.2
x	x	Section 7.3	10635(b)(3)	Include a comparison of the total water supply sources available to the water supplier with the total projected water use for the drought period.	Water Supply Reliability Assessment	Section 3.8 Section 3.10 Section 5.2
x	x	Section 7.3	10635(b)(4)	Include considerations of the historical drought hydrology, plausible changes on projected supplies and demands under climate change conditions, anticipated regulatory changes, and other locally applicable criteria.	Water Supply Reliability Assessment	Section 3.8 Section 3.10 Section 5.2
x	x	Chapter 8	10632(a)	Provide a water shortage contingency plan (WSCP) with specified elements below.	Water Shortage Contingency Planning	Section 5
x	x	Chapter 8	10632(a)(1)	Provide the analysis of water supply reliability (from Chapter 7 of Guidebook) in the WSCP	Water Shortage Contingency Planning	Section 5.2
x	x	Section 8.10	10632(a)(10)	Describe reevaluation and improvement procedures for monitoring and evaluation the water shortage contingency plan to ensure risk tolerance is adequate and appropriate water shortage mitigation strategies are implemented.	Water Shortage Contingency Planning	Section 5.3
x	x	Section 8.2	10632(a)(2)(A)	Provide the written decision-making process and other methods that the supplier will use each year to determine its water reliability.	Water Shortage Contingency Planning	Section 5.3
x	x	Section 8.2	10632(a)(2)(B)	Provide data and methodology to evaluate the supplier's water reliability for the current year and one dry year pursuant to factors in the code.	Water Shortage Contingency Planning	Section 5.3
x	x	Section 8.3	10632(a)(3)(A)	Define six standard water shortage levels of 10, 20, 30, 40, 50 percent shortage and greater than 50 percent shortage. These levels shall be based on supply conditions, including percent reductions in supply, changes in groundwater levels, changes in surface elevation, or other conditions. The shortage levels shall also apply to a catastrophic interruption of supply.	Water Shortage Contingency Planning	Section 5.4
x	x	Section 8.3	10632(a)(3)(B)	Suppliers with an existing water shortage contingency plan that uses different water shortage levels must cross reference their categories with the six standard categories.	Water Shortage Contingency Planning	Section 5.4
x	x	Section 8.4	10632(a)(4)(A)	Suppliers with water shortage contingency plans that align with the defined shortage levels must specify locally appropriate supply augmentation actions.	Water Shortage Contingency Planning	Section 5.4
x	x	Section 8.4	10632(a)(4)(B)	Specify locally appropriate demand reduction actions to adequately respond to shortages.	Water Shortage Contingency Planning	Section 5.4
x	x	Section 8.4	10632(a)(4)(C)	Specify locally appropriate operational changes.	Water Shortage Contingency Planning	Section 5.4
x	x	Section 8.4	10632(a)(4)(D)	Specify additional mandatory prohibitions against specific water use practices that are in addition to state-mandated prohibitions are appropriate to local conditions.	Water Shortage Contingency Planning	Section 5.4 Appendix I
x	x	Section 8.4	10632(a)(4)(E)	Estimate the extent to which the gap between supplies and demand will be reduced by implementation of the action.	Water Shortage Contingency Planning	Section 5.4
x	x	Section 8.4.6	10632.5	The plan shall include a seismic risk assessment and mitigation plan.	Water Shortage Contingency Plan	Section 5.4
x	x	Section 8.5	10632(a)(5)(A)	Suppliers must describe that they will inform customers, the public and others regarding any current or predicted water shortages.	Water Shortage Contingency Planning	Section 5.5
x	x	Section 8.5 and 8.6	10632(a)(5)(B) 10632(a)(5)(C)	Suppliers must describe that they will inform customers, the public and others regarding any shortage response actions triggered or anticipated to be triggered and other relevant communications.	Water Shortage Contingency Planning	Section 5.5
x		Section 8.6	10632(a)(6)	Retail supplier must describe how it will ensure compliance with and enforce provisions of the WSCP.	Water Shortage Contingency Planning	Section 5.6
x		Section 8.7	10632(a)(7)(A)	Describe the legal authority that empowers the supplier to enforce shortage response actions.	Water Shortage Contingency Planning	Section 5.7
x	x	Section 8.7	10632(a)(7)(B)	Provide a statement that the supplier will declare a water shortage emergency Water Code Chapter 3.	Water Shortage Contingency Planning	Section 5.7
x	x	Section 8.7	10632(a)(7)(C)	Provide a statement that the supplier will coordinate with any city or county within which it provides water for the possible proclamation of a local emergency.	Water Shortage Contingency Planning	Section 5.7
x	x	Section 8.8	10632(a)(8)(A)	Describe the potential revenue reductions and expense increases associated with activated shortage response actions.	Water Shortage Contingency Planning	Section 5.8
x	x	Section 8.8	10632(a)(8)(B)	Provide a description of mitigation actions needed to address revenue reductions and expense increases associated with activated shortage response actions.	Water Shortage Contingency Planning	Section 5.8
x		Section 8.8	10632(a)(8)(C)	Retail suppliers must describe the cost of compliance with Water Code Chapter 3.3: Excessive Residential Water Use During Drought	Water Shortage Contingency Planning	Section 5.8
x		Section 8.9	10632(a)(9)	Retail suppliers must describe the monitoring and reporting requirements and procedures that ensure appropriate data is collected, tracked, and analyzed for purposes of monitoring customer compliance.	Water Shortage Contingency Planning	Section 5.9
x		Section 8.11	10632(b)	Analyze and define water features that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, separately from swimming pools and spas.	Water Shortage Contingency Planning	Section 5.10
x	x	Sections 8.12 and 10.4	10635(c)	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 30 days after the submission of the plan to DWR.	Plan Adoption, Submittal, and Implementation	Section 5.11
x	x	Section 8.12	10632(c)	Make available the Water Shortage Contingency Plan to customers and any city or county where it provides water within 30 after adopted the plan.	Water Shortage Contingency Planning	Section 5.11
	x	Sections 9.1 and 9.3	10631(e)(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	N/A
x		Sections 9.2 and 9.3	10631(e)(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	Section 4
x		Chapter 10	10608.26(a)	Retail suppliers shall conduct a public hearing to discuss adoption, implementation, and economic impact of water use targets (recommended to discuss compliance).	Plan Adoption, Submittal, and Implementation	Section 8.1
x	x	Section 10.2.1	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. Reported in Table 10-1.	Plan Adoption, Submittal, and Implementation	Appendix C
x	x	Section 10.4	10621(f)	Each urban water supplier shall update and submit its 2020 plan to the department by July 1, 2021.	Plan Adoption, Submittal, and Implementation	Section 8.1
x	x	Sections 10.2.2, 10.3, and 10.5	10642	Provide supporting documentation that the urban water supplier made the plan and contingency plan available for public inspection, published notice of the public hearing, and held a public hearing about the plan and contingency plan.	Plan Adoption, Submittal, and Implementation	Appendix C Appendix D
x	x	Section 10.2.2	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	Section 8.1 Appendix C Appendix D
x	x	Section 10.3.2	10642	Provide supporting documentation that the plan and contingency plan has been adopted as prepared or modified.	Plan Adoption, Submittal, and Implementation	Appendix E
x	x	Section 10.4	10644(a)	Provide supporting documentation that the urban water supplier has submitted this UWMP to the California State Library.	Plan Adoption, Submittal, and Implementation	Appendix E
x	x	Section 10.4	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 8.3
x	x	Sections 10.4.1 and 10.4.2	10644(a)(2)	The plan, or amendments to the plan, submitted to the department shall be submitted electronically.	Plan Adoption, Submittal, and Implementation	Section 8.3
x	x	Section 10.5	10645(a)	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 8.1 Section 8.3
x	x	Section 10.5	10645(b)	Provide supporting documentation that, not later than 30 days after filing a copy of its water shortage contingency 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 8.1 Section 8.3
x	x	Section 10.6	10621(c)	If supplier is regulated by the Public Utilities Commission, include its plan and contingency plan as part of its general rate case filings.	Plan Adoption, Submittal, and Implementation	Section 8.3
x	x	Section 10.7.2	10644(b)	If revised, submit a copy of the water shortage contingency plan to DWR within 30 days of adoption.	Plan Adoption, Submittal, and Implementation	Section 8.3

Suburban
Water Systems
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Appendix B: DWR Submittal Tables

Suburban Water Systems | 2020 Urban Water Management Plan

DWR Submittal Tables – 2020 UWMP

Suburban's San Jose Hills Service Area

Submittal Table 2-1 Retail Only: Public Water Systems			
Public Water System Number	Public Water System Name	Number of Municipal Connections 2020	Volume of Water Supplied 2020 *
Add additional rows as needed			
CA1910046	Suburban Water Systems-Glendora	1,559	912
CA1910205	Suburban Water Systems-San Jose Hills	40,454	23,588
CA1910200	Suburban Water Systems-Covina Knolls	499	439
	TOTAL	42,512	24,939
**** Units of measure (AF, CCF, MG)*** *must remain consistent throughout the UWMP as reported in Table 2-3.*			
NOTES:			

Submittal Table 2-2: Plan Identification			
Select Only One	**Type of Plan**		**Name of RUWMP or Regional Alliance** *if applicable* (select from 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:			

Submittal Table 2-3: Supplier Identification	
Type of Supplier (select one or both)	
☐	Supplier is a wholesaler
☑	Supplier 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
**** Units of measure (AF, CCF, MG)*** *must remain consistent throughout the UWMP as reported in Table 2-3.*	
NOTES:	

Submittal 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 Water Code Section 10631.
Wholesale Water Supplier Name
Add additional rows as needed
Upper San Gabriel Valley Municipal Water District
Covina Irrigating Company
NOTES: Suburban (San Jose Hills service area) also receives imported supplies from City of Glendora and Walnut Valley Water District. See Section 3.6.

Submittal Table 3-1 Retail: Population - Current and Projected						
Population Served	2020	2025	2030	2035	2040	2045*(opt)*
	175,529	177,276	179,040	180,822	182,622	184,440
NOTES: See Section 2.2.2 for population breakdown.						

Submittal Table 4-1 Retail: Demands for Potable and Non-Potable[1] Water - Actual			
Use Type	2020 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[2]
Add additional rows as needed			
Single Family		Drinking Water	16,627
Commercial		Drinking Water	4,213
Institutional/Governmental		Drinking Water	775
Industrial		Drinking Water	901
Landscape		Drinking Water	912
Other	Street Sweeping & Const. Water	Drinking Water	12
Losses		Drinking Water	1,500
		TOTAL	24,939
[1] *Recycled water demands are NOT reported in this table. Recycled water demands are reported in Table 6-4.* [2] *Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.*			
NOTES:			

Submittal Table 4-2 Retail: Use for Potable and Non-Potable[1] Water - Projected						
Use Type	Additional Description (as needed)	Projected Water Use[2] *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		2025	2030	2035	2040	2045 (opt)
Add additional rows as needed						
Single Family		16,033	16,192	16,353	16,516	16,681
Commercial		4,395	4,439	4,483	4,528	4,573
Institutional/Governmental		924	933	943	952	962
Industrial		814	823	831	839	847
Landscape		603	609	615	621	627
Other	Street Sweeping & Const. Water	16	17	17	17	17
Losses		1,302	1,315	1,329	1,342	1,355
	TOTAL	24,089	24,328	24,570	24,815	25,062

[1] *Recycled water demands are NOT reported in this table. Recycled water demands are reported in Table 6-4.* [2] *Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.*

NOTES:

Submittal Table 4-3 Retail: Total Water Use (Potable and Non-Potable)						
	2020	2025	2030	2035	2040	2045 (opt)
Potable Water, Raw, Other Non-potable *From Tables 4-1R and 4-2 R*	24,939	24,089	24,328	24,570	24,815	25,062
Recycled Water Demand[1] *From Table 6-4*	710	700	700	700	700	700
Optional Deduction of Recycled Water Put Into Long-Term Storage[2]	0	0	0	0	0	0
TOTAL WATER USE	25,649	24,789	25,028	25,270	25,515	25,762

[1] *Recycled water demand fields will be blank until Table 6-4 is complete*

[2] *Long term storage means water placed into groundwater or surface storage that is not removed from storage in the same year. Supplier **may** deduct recycled water placed in long-term storage from their reported demand. This value is manually entered into Table 4-3.*

NOTES:

Submittal Table 4-4 Retail: Last Five Years of Water Loss Audit Reporting	
Reporting Period Start Date (mm/yyyy)	Volume of Water Loss [1,2]
01/2016	1,426.69
01/2017	1,553.73
01/2018	1,152.57
01/2019	1,015.50
01/2020	1,500.00
[1] *Taken from the field "Water Losses" (a combination of apparent losses and real losses) from the AWWA worksheet.* [2] ***Units of measure (AF, CCF, MG)*** *must remain consistent throughout the UWMP as reported in Table 2-3.*	
NOTES:	

Submittal 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, or otherwise are utilized in demand projections are found.	
Are Lower Income Residential Demands Included In Projections? *Drop down list (y/n)*	Yes
NOTES:	

Submittal Table 5-1 Baselines and Targets Summary
From SB X7-7 Verification Form
Retail Supplier or Regional Alliance Only

Baseline Period	Start Year *	End Year *	Average Baseline GPCD*	Confirmed 2020 Target*
10-15 year	*1999*	*2008*	*169*	*142*
5 Year	*2003*	*2007*	*169*	

**All cells in this table should be populated manually from the supplier's SBX7-7 Verification Form and reported in Gallons per Capita per Day (GPCD)*

NOTES:

Submittal Table 5-2: 2020 Compliance
From SB X7-7 2020 Compliance Form
Retail Supplier or Regional Alliance Only

2020 GPCD				
Actual 2020 GPCD*	2020 TOTAL Adjustments*	Adjusted 2020 GPCD* *(Adjusted if applicable)*	2020 Confirmed Target GPCD*	Did Supplier Achieve Targeted Reduction for 2020? Y/N
121	*0*	*121*	*142*	*Yes*

**All cells in this table should be populated manually from the supplier's SBX7-7 2020 Compliance Form and reported in Gallons per Capita per Day (GPCD)*

NOTES:

Submittal Table 6-1 Retail: Groundwater Volume Pumped						
☐	Supplier does not pump groundwater. The supplier will not complete the table below.					
☐	All or part of the groundwater described below is desalinated.					
Groundwater Type ***Drop Down List*** *May use each category multiple times*	Location or Basin Name	2016*	2017*	2018*	2019*	2020*
Add additional rows as needed						
Alluvial Basin	Main San Gabriel Basin	17,619	18,722	16,136	9,878	16,852
	TOTAL	17,619	18,722	16,136	9,878	16,852
**** Units of measure (AF, CCF, MG)*** *must remain consistent throughout the UWMP as reported in Table 2-3.*						
NOTES:						

Submittal Table 6-2 Retail: Wastewater Collected Within Service Area in 2020						
☐	There is no wastewater collection system. The supplier will not complete the table below.					
	Percentage of 2020 service area covered by wastewater collection system *(optional)*					
	Percentage of 2020 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 2020 *	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*
LACSD	Estimated	2,697	LACSD	San Jose	No	No
LACSD	Estimated	24,567	LACSD	Whittier Narrow	No	No
LACSD	Estimated	9,047	LACSD	Los Coyotes	No	No
Total Wastewater Collected from Service Area in 2020:		36,311				
**** Units of measure (AF, CCF, MG)*** *must remain consistent throughout the UWMP as reported in Table 2-3* **.**						
NOTES: Combined - both Suburban's San Jose Hills and Whittier/La Mirada service area.						

Submittal Table 6-3 Retail: Wastewater Treatment and Discharge Within Service Area in 2020

☑ **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)* [2]	Method of Disposal *Drop down list*	Does This Plant Treat Wastewater Generated Outside the Service Area? *Drop down list*	Treatment Level *Drop down list*	2020 volumes [1]				
							Wastewater Treated	Discharged Treated Wastewater	Recycled Within Service Area	Recycled Outside of Service Area	Instream Flow Permit Requirement
						Total	0	0	0	0	0

[1] **Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.

[2] If the **Wastewater Discharge ID Number** is not available to the UWMP preparer, access the SWRCB CIWQS regulated facility website at https://ciwqs.waterboards.ca.gov/ciwqs/readOnly/CiwqsReportServlet?inCommand=reset&reportName=RegulatedFacility

NOTES:

Submittal Table 6-4 Retail: 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 Supplier Producing (Treating) the Recycled Water:	Los Angeles County Sanitation District
Name of Supplier Operating the Recycled Water Distribution System:	Upper San Gabriel Valley Water District
Supplemental Water Added in 2020 (volume) *Include units*	
Source of 2020 Supplemental Water	

Beneficial Use Type *Insert additional rows if needed.*	**Potential** Beneficial Uses of Recycled Water (Describe)	Amount of **Potential** Uses of Recycled Water (Quantity) *Include volume units* [1]	General Description of 2020 Uses	Level of Treatment *Drop down list*	2020 [1]	2025 [1]	2030 [1]	2035 [1]	2040 [1]	2045 [1] (opt)
Agricultural irrigation										
Landscape irrigation (exc golf courses)				Tertiary	710	700	700	700	700	700
Golf course irrigation										
Commercial use										
Industrial use										
Geothermal and other energy production										
Seawater intrusion barrier										
Recreational impoundment										
Wetlands or wildlife habitat										
Groundwater recharge (IPR)										
Reservoir water augmentation (IPR)										
Direct potable reuse										
Other (Description Required)										
				Total:	710	700	700	700	700	700
				2020 Internal Reuse						

[1] ***Units of measure (AF, CCF, MG)*** *must remain consistent throughout the UWMP as reported in Table 2-3.*

NOTES:

Submittal Table 6-5 Retail: 2015 UWMP Recycled Water Use Projection Compared to 2020 Actual		
☐	Recycled water was not used in 2015 nor projected for use in 2020. The supplier will not complete the table below. If recycled water was not used in 2020, and was not predicted to be in 2015, then check the box and do not complete the table.	
Beneficial Use Type	**2015 Projection for 2020 [1]**	**2020 Actual Use [1]**
Insert additional rows as needed.		
Agricultural irrigation		
Landscape irrigation (exc golf courses)	700	710
Golf course irrigation		
Commercial use		
Industrial use		
Geothermal and other energy production		
Seawater intrusion barrier		
Recreational impoundment		
Wetlands or wildlife habitat		
Groundwater recharge (IPR)		
Reservoir water augmentation (IPR)		
Direct potable reuse		
Other (Description Required)		
Total	700	710
[1] **Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.		
NOTE:		

Submittal 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 6-4	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			
		Total	0
***Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*			
NOTES:			

Submittal 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.					
See Section 7	Provide page location of narrative in the UWMP					
Name of Future Projects or Programs	Joint Project with other suppliers?		Description (if needed)	Planned Implementation Year	Planned for Use in Year Type *Drop Down List*	Expected Increase in Water Supply to Supplier* *This may be a range*
	Drop Down List (y/n)	*If Yes, Supplier Name*				
Add additional rows as needed						
***Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*						
NOTES:						

Submittal Table 6-8 Retail: Water Supplies — Actual				
Water Supply	Additional Detail on Water Supply	2020		
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 (not desalinated)	San Jose Hills Region - Main San Gabriel Basin	16,852	Drinking Water	
Purchased or Imported Water	San Jose Hills Region - All Imports	8,087	Drinking Water	
Recycled Water	San Jose Hills Region - Recycled Water	710	Recycled Water	
	Total	25,649		0
***Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*				
NOTES:				

Submittal 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		**2025**		**2030**		**2035**		**2040**		**2045** (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 (not desalinated)	San Jose Hills Region - Main San Gabriel Basin	16,715		16,715		16,715		16,715		16,715	
Recycled Water	San Jose Hills Region - All Imports	700		700		700		700		700	
Purchased or Imported	San Jose Hills Region -	18,200		18,200		18,200		18,200		18,200	
Total		35,615	0	35,615	0	35,615	0	35,615	0	35,615	0

***Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*

NOTES

Submittal Table 7-1 Retail: Basis of Water Year Data (Reliability Assessment)

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 2019-2020, use 2020	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	2011-2020	16,715	100%
Single-Dry Year	2015	11,003	66%
Consecutive Dry Years 1st Year	2012	15,249	91%
Consecutive Dry Years 2nd Year	2013	14,189	85%
Consecutive Dry Years 3rd Year	2014	13,777	82%
Consecutive Dry Years 4th Year	2015	11,003	66%
Consecutive Dry Years 5th Year	2016	17,952	107%

Supplier 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 a Supplier 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.

***Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*

NOTES: GROUNDWATER SUPPLIES ONLY

Submittal Table 7-1 Retail: Basis of Water Year Data (Reliability Assessment)			
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 2019-2020, use 2020	**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	2010	18,200	100%
Single-Dry Year	2015	18,000	99%
Consecutive Dry Years 1st Year	2015	18,000	99%
Consecutive Dry Years 2nd Year	2015	18,000	99%
Consecutive Dry Years 3rd Year	2015	18,000	99%
Consecutive Dry Years 4th Year	2015	18,000	99%
Consecutive Dry Years 5th Year	2015	18,000	99%
Supplier 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 a Supplier 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.			
***Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*			
NOTES: ALL IMPORTS ONLY			

Submittal Table 7-1 Retail: Basis of Water Year Data (Reliability Assessment)			
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 2019-2020, use 2020	**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	2015-2020	800	100%
Single-Dry Year	2019	576	72%
Consecutive Dry Years 1st Year	2016	696	87%
Consecutive Dry Years 2nd Year	2017	704	88%
Consecutive Dry Years 3rd Year	2018	665	83%
Consecutive Dry Years 4th Year	2019	576	72%
Consecutive Dry Years 5th Year	2020	710	89%
Supplier 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 a Supplier 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.			
***Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*			
NOTES: RECYCLED WATER ONLY			

Submittal Table 7-2 Retail: Normal Year Supply and Demand Comparison					
	2025	2030	2035	2040	2045 *(Opt)*
Supply totals *(autofill from Table 6-9)*	35,615	35,615	35,615	35,615	35,615
Demand totals *(autofill from Table 4-3)*	24,789	25,028	25,270	25,515	25,762
Difference	10,826	10,587	10,345	10,100	9,853
NOTES:					

Submittal Table 7-3 Retail: Single Dry Year Supply and Demand Comparison					
	2025	2030	2035	2040	2045 (Opt)
Supply totals*	29,579	29,579	29,579	29,579	29,579
Demand totals*	25,535	25,782	26,032	26,283	26,538
Difference	4,044	3,797	3,547	3,295	3,041
***Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*					
NOTES:					

Submittal Table 7-4 Retail: Multiple Dry Years Supply and Demand Comparison						
		2025*	2030*	2035*	2040*	2045* (Opt)
First year	Supply totals	33,945	33,945	33,945	33,945	33,945
	Demand totals	24,374	24,610	24,848	25,088	25,331
	Difference	9,571	9,336	9,098	8,857	8,614
Second year	Supply totals	32,893	32,893	32,893	32,893	32,893
	Demand totals	24,374	24,610	24,848	25,088	25,331
	Difference	8,519	8,284	8,046	7,805	7,562
Third year	Supply totals	32,481	32,481	32,481	32,481	32,481
	Demand totals	24,374	24,610	24,848	25,088	25,331
	Difference	8,107	7,872	7,634	7,393	7,150
Fourth year	Supply totals	29,579	29,579	29,579	29,579	29,579
	Demand totals	24,374	24,610	24,848	25,088	25,331
	Difference	5,205	4,969	4,731	4,491	4,248
Fifth year	Supply totals	36,662	36,662	36,662	36,662	36,662
	Demand totals	24,374	24,610	24,848	25,088	25,331
	Difference	12,289	12,053	11,815	11,574	11,331
Sixth year *(optional)*	Supply totals					
	Demand totals					
	Difference	0	0	0	0	0
***Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*						
NOTES:						

Submittal Table 7-5: Five-Year Drought Risk Assessment Tables to address Water Code Section 10635(b)	
2021	**Total**
Total Water Use	23,898
Total Supplies	33,945
Surplus/Shortfall w/o WSCP Action	10,047
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	0
WSCP - use reduction savings benefit	0
Revised Surplus/(shortfall)	10,047
Resulting % Use Reduction from WSCP action	0%

2022	Total
Total Water Use	23,946
Total Supplies	32,893
Surplus/Shortfall w/o WSCP Action	8,947
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	0
WSCP - use reduction savings benefit	0
Revised Surplus/(shortfall)	8,947
Resulting % Use Reduction from WSCP action	0%

2023	Total
Total Water Use	23,993
Total Supplies	32,481
Surplus/Shortfall w/o WSCP Action	8,488
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	0
WSCP - use reduction savings benefit	0
Revised Surplus/(shortfall)	8,488
Resulting % Use Reduction from WSCP action	0%

2024	Total
Total Water Use	24,041
Total Supplies	29,579
Surplus/Shortfall w/o WSCP Action	5,538
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	0
WSCP - use reduction savings benefit	0
Revised Surplus/(shortfall)	5,538
Resulting % Use Reduction from WSCP action	0%

2025	Total
Total Water Use	24,089
Total Supplies	36,662
Surplus/Shortfall w/o WSCP Action	12,574
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	0
WSCP - use reduction savings benefit	0
Revised Surplus/(shortfall)	12,574
Resulting % Use Reduction from WSCP action	0%

Submittal Table 8-1 Water Shortage Contingency Plan Levels		
Shortage Level	**Percent Shortage Range**	**Shortage Response Actions** (*Narrative description*)
1	Up to 10%	Suburban Stage 1: Stage 1 shall be in effect at all times. Non-essential or prohibited water uses apply. Stage 1 comprises up to 10%.
2	Up to 20%	Suburban Stage 2: When Stage 1 becomes insufficient in complying with the necessary reduction. Stage 2 comprises up to 20%
3	Up to 30%	Suburban Stage 3: When Stage 2 becomes insufficient in complying with the necessary reduction. Stage 3 comprises up to 40%.
4	Up to 40%	Suburban Stage 3: When Stage 2 becomes insufficient in complying with the necessary reduction. Stage 3 comprises up to 40%.
5	Up to 50%	Suburban Stage 4: Emergency. When a critical water shortage emergency exists or that Stage 3 becomes insufficient in complying with the necessary reduction. Stage 4 comprises up to 50% or greater.
6	>50%	Suburban Stage 4: Emergency. When a critical water shortage emergency exists or that Stage 3 becomes insufficient in complying with the necessary reduction. Stage 4 comprises up to 50% or greater.
NOTES: See Section 5.4.2 of the UWMP.		

Submittal Table 8-2: Demand Reduction Actions

Shortage Level	Demand Reduction Actions ***Drop down list*** *These are the only categories that will be accepted by the WUEdata online submittal tool. Select those that apply.*	How much is this going to reduce the shortage gap? *Include units used (volume type or percentage)*	Additional Explanation or Reference *(optional)*	Penalty, Charge, or Other Enforcement? ***For Retail Suppliers Only*** *Drop Down List*
Add additional rows as needed				
Shortage Level 1	Landscape - Limit landscape irrigation to specific days	Reduction of 10% to over 50% depending on Shortage Phase	Irrigating ornamental landscapes with potable water is limited to no more than three (3) days per week, on a schedule established and posted by Suburban on its website or otherwise provided to customer by bill message, bill insert, direct mail, or email.	Yes
Shortage Level 1	Landscape - Limit landscape irrigation to specific times	Reduction of 10% to over 50% depending on Shortage Phase	Irrigating ornamental landscapes with potable water is prohibited during the hours between 8:00 am and 6:00 pm.	Yes
Shortage Level 1	Landscape - Other landscape restriction or prohibition	Reduction of 10% to over 50% depending on Shortage Phase	Watering or irrigating of any lawn, landscape, or other vegetated area with potable water during and for 48 hours following measurable rainfall is prohibited. Exclusions are mentioned in Tariff Rule No. 14.1.	Yes
Shortage Level 1	Landscape - Restrict or prohibit runoff from landscape irrigation	Reduction of 10% to over 50% depending on Shortage Phase	Watering or irrigating of any lawn, landscape, or other vegetated area in a manner that causes or allows excessive water flow or runoff such that water flows onto adjacent property, non-irrigated areas, private and public walkways, roadways, parking lots, or structures is prohibited.	Yes
Shortage Level 1	Other	Reduction of 10% to over 50% depending on Shortage Phase	The use of a hose that dispenses potable water to wash a motor vehicle, except where the hose is fitted with a shut-off nozxle or device attached to it is prohibited. Use of water for watching commerical aircraft, cars, buses, boats, trailers, or other commercial vehicles at any time is prohibited, except at commercial or fleet vehicle or boat washing facilities operated at a fixed location where equipment using water is properly maintained to avoid wasteful use.	Yes
Shortage Level 1	Other - Prohibit use of potable water for washing hard surfaces	Reduction of 10% to over 50% depending on Shortage Phase	Use of potable water for washing buildings, structures, driveways, patios, parking lots, tennis courts, or other hard surfaced areas is prohibited, except in cases where health and safety are at risk.	Yes
Shortage Level 1	Water Features - Restrict water use for decorative water features, such as fountains	Reduction of 10% to over 50% depending on Shortage Phase	Operating a water fountain or other decorative feature that does not use recirculated water is prohibited.	Yes
Shortage Level 1	CII - Restaurants may only serve water upon request	Reduction of 10% to over 50% depending on Shortage Phase	Commercial businesses, including restaurants and other food services providers can only serve drinking water to customers on request.	Yes
Shortage Level 1	CII - Lodging establishment must offer opt out of linen service	Reduction of 10% to over 50% depending on Shortage Phase	Hotel/motel operators must provide guests with the option of choosing not to have towels and linens laundered daily. Information about this option must be prominently displayed.	Yes
Shortage Level 1	Other	Reduction of 10% to over 50% depending on Shortage Phase	Unmetered water from fire hydrants cannot be used for any reason other than fire suppression or Suburban's system maintenance purposes.	Yes
Shortage Level 1	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner	Reduction of 10% to over 50% depending on Shortage Phase	This loss of potable water may be cited for water waste after a five-day period has passed in which the leak or malfunction could have been corrected.	Yes
Shortage Level 1	Other - Prohibit use of potable water for construction and dust control	Reduction of 10% to over 50% depending on Shortage Phase	There cannot be unreasonable or excessive use of potable water for dust control or earth compaction.	Yes
Shortage Level 1	Other - Prohibit vehicle washing except at facilities using recycled or recirculating water	Reduction of 10% to over 50% depending on Shortage Phase	Operation of commercial car washes that do not recycled the potable water used as required by CWC Sections 10950-10953 is prohibited.	Yes
Shortage Level 2	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner	Reduction of up to 20%	All leaks, breaks, or other malfunctions in the water users' plumbing or distribution system must be repaired within seventy-two (72) hours of notifcaiton from Suburban.	Yes
Shortage Level 3	Landscape - Limit landscape irrigation to specific days	Reduction of up to 40%	Watering or irrigating of lawn, landscape or other vegetated area with potable water is limited to two (2) days per week.	Yes
Shortage Level 3	Landscape - Other landscape restriction or prohibition	Reduction of up to 40%	Maintenance of vegetation, including trees and shrubs, watered by use of a hand-held bucket or similar containeer, hand-held hose equipped with a positive self-closing water shut-off nozzle or device is permitted.	Yes
Shortage Level 4	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner	Reduction of up to 50% and greater	All leaks, breaks, or other malfunctions in the water users' plumbing or distribution system must be repaired immediately upon notification from Suburban unless other arrangements are made with Suburban.	Yes

NOTES: Demand reductions for Shortage Level 1 is applicable to all stages unless a more restrictive mandate is in place.

Submittal Table 8-3: Supply Augmentation and Other Actions			
Shortage Level	Supply Augmentation Methods and Other Actions by Water Supplier **Drop down list** *These are the only categories that will be accepted by the WUEdata online submittal tool*	How much is this going to reduce the shortage gap? *Include units used (volume type or percentage)*	Additional Explanation or Reference *(optional)*
Add additional rows as needed			
Shortage Level 1	Expand Public Information Campaign	Reduction of 10% to over 50%	
Shortage Level 1	Other Actions (describe)	Reduction of 10% to over 50%	Rebate Programs for plumbing fixtures/devices, and landscape irrigation
NOTES: Above actions are applicable to all of Suburbans shortage levels (1-4).			

Submittal Table 10-1 Retail: Notification to Cities and Counties		
City Name	60 Day Notice	Notice of Public Hearing
Add additional rows as needed		
Buena Park	Yes	Yes
Covina	Yes	Yes
Glendora	Yes	Yes
Industry	Yes	Yes
La Habra	Yes	Yes
La Mirada	Yes	Yes
La Puente	Yes	Yes
West Covina	Yes	Yes
Whittier	Yes	Yes
County Name *Drop Down List*	60 Day Notice	Notice of Public Hearing
Add additional rows as needed		
Los Angeles County	Yes	Yes
Orange County	Yes	Yes
NOTES:		

Energy Intensity Tables – 2020 UWMP

Suburban's San Jose Hills Service Area

Urban Water Supplier: *Suburban Water Systems (San Jose Hills)*

Water Delivery Product (If delivering more than one type of product use Table O-1C)

Retail Potable Deliveries

Table O-1B: Recommended Energy Reporting - Total Utility Approach

Enter Start Date for Reporting Period	1/1/2020	**Urban Water Supplier Operational Control**		
End Date	12/31/2020			
☐ Is upstream embedded in the values reported?		**Sum of All Water Management Processes**	**Non-Consequential Hydropower**	
Water Volume Units Used	*AF*	Total Utility	Hydropower	Net Utility
Volume of Water Entering Process (volume unit)		*25649*	*0*	*25649*
Energy Consumed (kWh)		*11347409*	*0*	*11347409*
Energy Intensity (kWh/vol. converted to MG)		*1357.7*	*#DIV/0!*	*1357.7*

Quantity of Self-Generated Renewable Energy

0 kWh

Data Quality *(Estimate, Metered Data, Combination of Estimates and Metered Data)*

Metered Data

Data Quality Narrative:

Volume shown is based on total water volume delivered. All water volumes are metered. Total Water in process is 25,649 AF. Energy consumption is based on wall water related facilities within Suburban's San Jose Hill's system. Energy data is metered and obtained from SCE. Total energy usage is 11,347,409 kWh.

Narrative:

Energy Intensity is based on the total energy consumption and total water volume. Per Energy Use Excel, Energy Intensity is converted to units of kWh/MG. Suburban's San Jose Hill's energy intensity is 1,357.7 kWh/MG.

SBx7-7 Compliance Tables – 2020 UWMP

Suburban's San Jose Hills Service Area

SB X7-7 Table 0: Units of Measure Used in 2020 UWMP* *(select one from the drop down list)*
Acre Feet
**The unit of measure must be consistent throughout the UWMP, as reported in Submittal Table 2-3.*
NOTES:

SB X7-7 Table 2: Method for 2020 Population Estimate	
Method Used to Determine 2020 Population (may check more than one)	
☐	**1. Department of Finance** (DOF) or **American Community Survey** (ACS)
☐	**2. Persons-per-Connection Method**
☑	**3. DWR Population Tool**
☐	**4. Other** DWR recommends pre-review
NOTES:	

SB X7-7 Table 3: 2020 Service Area Population	
2020 Compliance Year Population	
2020	175,529
NOTES:	

SB X7-7 Table 4: 2020 Gross Water Use							
Compliance Year 2020	2020 Volume Into Distribution System *This column will remain blank until SB X7-7 Table 4-A is completed.*	2020 Deductions					2020 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.*	
	24,939			-		-	**24,939**

*** Units of measure (AF, MG , or CCF)** must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3.

NOTES:

SB X7-7 Table 4-A: 2020 Volume Entering the Distribution System(s), Meter Error Adjustment

Complete one table for each source.

Name of Source	Groundwater - Main San Gabriel Basin
This water source is *(check one)* **:**	
☑	The supplier's own water source
☐	A purchased or imported source

Compliance Year 2020	Volume Entering Distribution System [1]	Meter Error Adjustment [2] *Optional (+/-)*	Corrected Volume Entering Distribution System
	16,852	-	16,852

[1] ***Units of measure (AF, MG , or CCF)*** *must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3.*

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

NOTES

SB X7-7 Table 4-A: 2020 Volume Entering the Distribution System(s) Meter Error Adjustment

Complete one table for each source.

Name of Source	All Imported Supplies
This water source is *(check one)* **:**	
☐	The supplier's own water source
☑	A purchased or imported source

Compliance Year 2020	Volume Entering Distribution System [1]	Meter Error Adjustment [2] *Optional (+/-)*	Corrected Volume Entering Distribution System
	8,087		8,087

[1] ***Units of measure (AF, MG , or CCF)*** *must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3.*

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

NOTES:

SB X7-7 Table 5: 2020 Gallons Per Capita Per Day (GPCD)

2020 Gross Water *Fm SB X7-7 Table 4*	**2020 Population** *Fm SB X7-7 Table 3*	**2020 GPCD**
24,939	175,529	**127**

NOTES:

SB X7-7 Table 9: 2020 Compliance

Actual 2020 GPCD[1]	Optional Adjustments to 2020 GPCD (Enter "0" if Adjustment Not Used)			TOTAL Adjustments[1]	Adjusted 2020 GPCD [1] *(Adjusted if applicable)*	2020 Confirmed Target GPCD [1, 2]	**Did Supplier Achieve Targeted Reduction for 2020?**
	Extraordinary Events[1]	Weather Normalization[1]	Economic Adjustment[1]				
127	-	-	-	-	127	142	**YES**

[1] *All values are reported in GPCD*

[2] ***2020 Confirmed Target GPCD*** *is taken from the Supplier's SB X7-7 Verification Form Table SB X7-7, 7-F.*

NOTES:

DWR Submittal Tables – 2020 UWMP

Suburban's Whittier/La Mirada Service Area

Submittal Table 2-1 Retail Only: Public Water Systems			
Public Water System Number	Public Water System Name	Number of Municipal Connections 2020	Volume of Water Supplied 2020 *
Add additional rows as needed			
CA1910174	Suburban Water Systems-Whittier	18,190	10,664
CA1910059	Suburban Water Systems-La Mirada	15,479	9,787
	TOTAL	33,669	20,451
**** Units of measure (AF, CCF, MG)*** *must remain consistent throughout the UWMP as reported in Table 2-3.*			
NOTES:			

Submittal Table 2-2: Plan Identification			
Select Only One	**Type of Plan**		**Name of RUWMP or Regional Alliance** *if applicable* (select from 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:			

Submittal Table 2-3: Supplier Identification	
Type of Supplier (select one or both)	
☐	Supplier is a wholesaler
☑	Supplier 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
**** Units of measure (AF, CCF, MG)*** *must remain consistent throughout the UWMP as reported in Table 2-3.*	
NOTES:	

Submittal 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 Water Code Section 10631.
Wholesale Water Supplier Name
Add additional rows as needed
California Domestic Water Company
Central Basin Municipal Water District
NOTES:

Submittal Table 3-1 Retail: Population - Current and Projected						
Population Served	2020	2025	2030	2035	2040	2045*(opt)*
	122,838	123,805	124,780	125,763	126,753	127,751
NOTES: See Section 2.2.2 for population breakdown.						

Submittal Table 4-1 Retail: Demands for Potable and Non-Potable[1] Water - Actual			
Use Type	2020 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[2]
Add additional rows as needed			
Single Family		Drinking Water	12,673
Commercial		Drinking Water	3,219
Institutional/Governmental		Drinking Water	1,008
Industrial		Drinking Water	344
Landscape		Drinking Water	1,126
Other	Street Sweeping & Const. Water	Drinking Water	50
Losses		Drinking Water	2,031
		TOTAL	20,451

[1] *Recycled water demands are NOT reported in this table. Recycled water demands are reported in Table 6-4.*

[2] *Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.*

NOTES:

Submittal Table 4-2 Retail: Use for Potable and Non-Potable[1] Water - Projected						
Use Type	Additional Description (as needed)	Projected Water Use[2] *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		2025	2030	2035	2040	2045 (opt)
Add additional rows as needed						
Single Family		12,366	12,463	12,561	12,660	12,760
Commercial		3,604	3,633	3,661	3,690	3,719
Institutional/Governmental		1,133	1,142	1,151	1,160	1,169
Industrial		262	264	266	268	270
Landscape		777	783	789	795	802
Other	Street Sweeping & Const. Water	41	41	41	42	42
Losses		1,349	1,360	1,370	1,381	1,392
	TOTAL	19,531	19,685	19,840	19,996	20,153

[1] *Recycled water demands are NOT reported in this table. Recycled water demands are reported in Table 6-4.* [2] *Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.*

NOTES:

Submittal Table 4-3 Retail: Total Water Use (Potable and Non-Potable)						
	2020	2025	2030	2035	2040	2045 (opt)
Potable Water, Raw, Other Non-potable *From Tables 4-1R and 4-2 R*	20,451	19,531	19,685	19,840	19,996	20,153
Recycled Water Demand[1] *From Table 6-4*	0	930	930	930	930	930
Optional Deduction of Recycled Water Put Into Long-Term Storage[2]	0	0	0	0	0	0
TOTAL WATER USE	20,451	20,461	20,615	20,770	20,926	21,083

[1] *Recycled water demand fields will be blank until Table 6-4 is complete*

[2] *Long term storage means water placed into groundwater or surface storage that is not removed from storage in the same year. Supplier **may** deduct recycled water placed in long-term storage from their reported demand. This value is manually entered into Table 4-3.*

NOTES:

Submittal Table 4-4 Retail: Last Five Years of Water Loss Audit Reporting	
Reporting Period Start Date (mm/yyyy)	Volume of Water Loss [1,2]
01/2016	1,449.39
01/2017	1,404.11
01/2018	1,114.33
01/2019	1,175.83
01/2020	2,031.00
[1] Taken from the field "Water Losses" (a combination of apparent losses and real losses) from the AWWA worksheet. *[2] **Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*	
NOTES:	

Submittal 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, or otherwise are utilized in demand projections are found.	
Are Lower Income Residential Demands Included In Projections? *Drop down list (y/n)*	Yes
NOTES:	

Submittal Table 5-1 Baselines and Targets Summary
From SB X7-7 Verification Form
Retail Supplier or Regional Alliance Only

Baseline Period	Start Year *	End Year *	Average Baseline GPCD*	Confirmed 2020 Target*
10-15 year	*1999*	*2008*	*189*	*151*
5 Year	*2003*	*2007*	*188*	

**All cells in this table should be populated manually from the supplier's SBX7-7 Verification Form and reported in Gallons per Capita per Day (GPCD)*

NOTES:

Submittal Table 5-2: 2020 Compliance
From SB X7-7 2020 Compliance Form
Retail Supplier or Regional Alliance Only

2020 GPCD			2020 Confirmed Target GPCD*	Did Supplier Achieve Targeted Reduction for 2020? Y/N
Actual 2020 GPCD*	2020 TOTAL Adjustments*	Adjusted 2020 GPCD* *(Adjusted if applicable)*		
149	*0*	*149*	*151*	*Yes*

**All cells in this table should be populated manually from the supplier's SBX7-7 2020 Compliance Form and reported in Gallons per Capita per Day (GPCD)*

NOTES:

Submittal Table 6-1 Retail: Groundwater Volume Pumped						
☐	Supplier does not pump groundwater. The supplier will not complete the table below.					
☐	All or part of the groundwater described below is desalinated.					
Groundwater Type ***Drop Down List*** *May use each category multiple times*	Location or Basin Name	2016*	2017*	2018*	2019*	2020*
Add additional rows as needed						
Alluvial Basin	Main San Gabriel Basin	9,869	10,074	11,557	11,841	10,527
Alluvial Basin	Central Basin	2,924	2,827	2,297	2,038	1,562
	TOTAL	12,793	12,901	13,854	13,879	12,089
**** Units of measure (AF, CCF, MG)*** *must remain consistent throughout the UWMP as reported in Table 2-3.*						
NOTES:						

Submittal Table 6-2 Retail: Wastewater Collected Within Service Area in 2020						
☐	There is no wastewater collection system. The supplier will not complete the table below.					
	Percentage of 2020 service area covered by wastewater collection system *(optional)*					
	Percentage of 2020 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 2020 *	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*
LACSD	Estimated	2,697	LACSD	San Jose	No	No
LACSD	Estimated	24,567	LACSD	Whittier Narrow	No	No
LACSD	Estimated	9,047	LACSD	Los Coyotes	No	No
Total Wastewater Collected from Service Area in 2020:		36,311				
**** Units of measure (AF, CCF, MG)*** *must remain consistent throughout the UWMP as reported in Table 2-3* **.**						
NOTES: Combined - both Suburban's San Jose Hills and Whittier/La Mirada service area.						

Submittal Table 6-3 Retail: Wastewater Treatment and Discharge Within Service Area in 2020

☑ **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)* [2]	Method of Disposal *Drop down list*	Does This Plant Treat Wastewater Generated Outside the Service Area? *Drop down list*	Treatment Level *Drop down list*	2020 volumes [1] Wastewater Treated	Discharged Treated Wastewater	Recycled Within Service Area	Recycled Outside of Service Area	Instream Flow Permit Requirement
						Total	0	0	0	0	0

[1] **Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.

[2] If the **Wastewater Discharge ID Number** is not available to the UWMP preparer, access the SWRCB CIWQS regulated facility website at https://ciwqs.waterboards.ca.gov/ciwqs/readOnly/CiwqsReportServlet?inCommand=reset&reportName=RegulatedFacility

NOTES:

Submittal Table 6-4 Retail: 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 Supplier Producing (Treating) the Recycled Water:	Los Angeles County Sanitation District
Name of Supplier Operating the Recycled Water Distribution System:	Central Basin Municipal Water District
Supplemental Water Added in 2020 (volume) *Include units*	
Source of 2020 Supplemental Water	

Beneficial Use Type *Insert additional rows if needed.*	**Potential** Beneficial Uses of Recycled Water (Describe)	Amount of **Potential** Uses of Recycled Water (Quantity) *Include volume units* [1]	General Description of 2020 Uses	Level of Treatment *Drop down list*	2020 [1]	2025 [1]	2030 [1]	2035 [1]	2040 [1]	2045 [1] (opt)
Agricultural irrigation										
Landscape irrigation (exc golf courses)				Tertiary	0	679	679	679	679	679
Golf course irrigation				Tertiary	0	251	251	251	251	251
Commercial use										
Industrial use										
Geothermal and other energy production										
Seawater intrusion barrier										
Recreational impoundment										
Wetlands or wildlife habitat										
Groundwater recharge (IPR)										
Reservoir water augmentation (IPR)										
Direct potable reuse										
Other (Description Required)										
				Total:	0	930	930	930	930	930
				2020 Internal Reuse						

[1] ***Units of measure (AF, CCF, MG)*** *must remain consistent throughout the UWMP as reported in Table 2-3.*

NOTES:

Submittal Table 6-5 Retail: 2015 UWMP Recycled Water Use Projection Compared to 2020 Actual		
☐	Recycled water was not used in 2015 nor projected for use in 2020. The supplier will not complete the table below. If recycled water was not used in 2020, and was not predicted to be in 2015, then check the box and do not complete the table.	
Beneficial Use Type	**2015 Projection for 2020 [1]**	**2020 Actual Use [1]**
Insert additional rows as needed.		
Agricultural irrigation		
Landscape irrigation (exc golf courses)	679	0
Golf course irrigation	251	0
Commercial use		
Industrial use		
Geothermal and other energy production		
Seawater intrusion barrier		
Recreational impoundment		
Wetlands or wildlife habitat		
Groundwater recharge (IPR)		
Reservoir water augmentation (IPR)		
Direct potable reuse		
Other (Description Required)		
Total	930	0
[1] **Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.		
NOTE:		

Submittal 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 6-4	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			
		Total	0
***Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*			
NOTES:			

Submittal 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.					
See Section 7	Provide page location of narrative in the UWMP					
Name of Future Projects or Programs	Joint Project with other suppliers?		Description (if needed)	Planned Implementation Year	Planned for Use in Year Type *Drop Down List*	Expected Increase in Water Supply to Supplier* *This may be a range*
	Drop Down List (y/n)	*If Yes, Supplier Name*				
Add additional rows as needed						
***Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*						
NOTES:						

Submittal Table 6-8 Retail: Water Supplies — Actual				
Water Supply	Additional Detail on Water Supply	2020		
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 (not desalinated)	Whittier/La Mirada Region - Main San Gabriel Basin	10,527	Drinking Water	
Groundwater (not desalinated)	Whittier/La Mirada Region - Central Basin	1,562	Drinking Water	
Purchased or Imported Water	Whittier/La Mirada Region - All Imports	8,362	Drinking Water	
	Total	20,451		0
***Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*				
NOTES:				

Submittal 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		2025		2030		2035		2040		2045 (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 (not desalinated)	Whittier/La Mirada Region - Main San Gabriel Basin	12,285		12,285		12,285		12,285		12,285	
Groundwater (not desalinated)	Whittier/La Mirada Region - Central Basin	3,721		3,721		3,721		3,721		3,721	
Purchased or Imported Water	Whittier/La Mirada Region - All Imports	8,200		8,200		8,200		8,200		8,200	
Recycled Water	Whittier/La Mirada Service Area	930		930		930		930		930	
	Total	25,136	0	25,136	0	25,136	0	25,136	0	25,136	0

***Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*

NOTES

Submittal Table 7-1 Retail: Basis of Water Year Data (Reliability Assessment)

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 2019-2020, use 2020	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	2011-2020	16,006	100%
Single-Dry Year	2015	11,586	72%
Consecutive Dry Years 1st Year	2012	15,176	95%
Consecutive Dry Years 2nd Year	2013	15,668	98%
Consecutive Dry Years 3rd Year	2014	13,704	86%
Consecutive Dry Years 4th Year	2015	11,586	72%
Consecutive Dry Years 5th Year	2016	13,776	86%

Supplier 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 a Supplier 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.

***Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*

NOTES: GROUNDWATER ONLY

Submittal Table 7-1 Retail: Basis of Water Year Data (Reliability Assessment)			
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 2019-2020, use 2020	**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	2010	8,200	100%
Single-Dry Year	2015	5,398	66%
Consecutive Dry Years 1st Year	2015	5,398	66%
Consecutive Dry Years 2nd Year	2015	5,398	66%
Consecutive Dry Years 3rd Year	2015	5,398	66%
Consecutive Dry Years 4th Year	2015	5,398	66%
Consecutive Dry Years 5th Year	2015	5,398	66%
Supplier 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 a Supplier 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.			
***Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*			
NOTES: IMPORTED WATER ONLY			

Submittal Table 7-2 Retail: Normal Year Supply and Demand Comparison					
	2025	2030	2035	2040	2045 *(Opt)*
Supply totals *(autofill from Table 6-9)*	25,136	25,136	25,136	25,136	25,136
Demand totals *(autofill from Table 4-3)*	20,461	20,615	20,770	20,926	21,083
Difference	4,675	4,521	4,366	4,210	4,053
NOTES:					

Submittal Table 7-3 Retail: Single Dry Year Supply and Demand Comparison					
	2025	2030	2035	2040	2045 (Opt)
Supply totals*	17,914	17,914	17,914	17,914	17,914
Demand totals*	20,828	20,985	21,143	21,302	21,462
Difference	(2,914)	(3,071)	(3,229)	(3,388)	(3,548)
***Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*					
NOTES:					

Submittal Table 7-4 Retail: Multiple Dry Years Supply and Demand Comparison						
		2025*	2030*	2035*	2040*	2045* (Opt)
First year	Supply totals	21,504	21,504	21,504	21,504	21,504
	Demand totals	19,688	19,836	19,985	20,135	20,287
	Difference	1,816	1,668	1,519	1,368	1,217
Second year	Supply totals	21,996	21,996	21,996	21,996	21,996
	Demand totals	19,688	19,836	19,985	20,135	20,287
	Difference	2,309	2,161	2,012	1,861	1,710
Third year	Supply totals	20,032	20,032	20,032	20,032	20,032
	Demand totals	19,688	19,836	19,985	20,135	20,287
	Difference	344	196	47	-103	-255
Fourth year	Supply totals	17,914	17,914	17,914	17,914	17,914
	Demand totals	19,688	19,836	19,985	20,135	20,287
	Difference	-1,774	-1,921	-2,071	-2,221	-2,372
Fifth year	Supply totals	20,104	20,104	20,104	20,104	20,104
	Demand totals	19,688	19,836	19,985	20,135	20,287
	Difference	416	268	119	-31	-183
Sixth year *(optional)*	Supply totals					
	Demand totals					
	Difference	0	0	0	0	0
***Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*						
NOTES:						

Submittal Table 7-5: Five-Year Drought Risk Assessment Tables to address Water Code Section 10635(b)	
2021	**Total**
Total Water Use	16,718
Total Supplies	21,504
Surplus/Shortfall w/o WSCP Action	4,786
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	
Revised Surplus/(shortfall)	4,786
Resulting % Use Reduction from WSCP action	0%

2022	Total
Total Water Use	16,744
Total Supplies	21,996
Surplus/Shortfall w/o WSCP Action	5,252
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	0
WSCP - use reduction savings benefit	0
Revised Surplus/(shortfall)	5,252
Resulting % Use Reduction from WSCP action	0%

2023	Total
Total Water Use	16,770
Total Supplies	20,032
Surplus/Shortfall w/o WSCP Action	3,262
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	0
WSCP - use reduction savings benefit	0
Revised Surplus/(shortfall)	3,262
Resulting % Use Reduction from WSCP action	0%

2024	Total
Total Water Use	16,796
Total Supplies	17,914
Surplus/Shortfall w/o WSCP Action	1,118
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	0
WSCP - use reduction savings benefit	0
Revised Surplus/(shortfall)	1,118
Resulting % Use Reduction from WSCP action	0%

2025	Total
Total Water Use	16,823
Total Supplies	20,104
Surplus/Shortfall w/o WSCP Action	3,281
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	0
WSCP - use reduction savings benefit	0
Revised Surplus/(shortfall)	3,281
Resulting % Use Reduction from WSCP action	0%

Submittal Table 8-1
Water Shortage Contingency Plan Levels

Shortage Level	Percent Shortage Range	Shortage Response Actions (*Narrative description*)
1	Up to 10%	Suburban Stage 1: Stage 1 shall be in effect at all times. Non-essential or prohibited water uses apply. Stage 1 comprises up to 10%.
2	Up to 20%	Suburban Stage 2: When Stage 1 becomes insufficient in complying with the necessary reduction. Stage 2 comprises up to 20%
3	Up to 30%	Suburban Stage 3: When Stage 2 becomes insufficient in complying with the necessary reduction. Stage 3 comprises up to 40%.
4	Up to 40%	Suburban Stage 3: When Stage 2 becomes insufficient in complying with the necessary reduction. Stage 3 comprises up to 40%.
5	Up to 50%	Suburban Stage 4: Emergency. When a critical water shortage emergency exists or that Stage 3 becomes insufficient in complying with the necessary reduction. Stage 4 comprises up to 50% or greater.
6	>50%	Suburban Stage 4: Emergency. When a critical water shortage emergency exists or that Stage 3 becomes insufficient in complying with the necessary reduction. Stage 4 comprises up to 50% or greater.

NOTES: See Section 5.4.2 of the UWMP.

Submittal Table 8-2: Demand Reduction Actions

Shortage Level	Demand Reduction Actions *Drop down list* *These are the only categories that will be accepted by the WUEdata online submittal tool. Select those that apply.*	How much is this going to reduce the shortage gap? *Include units used (volume type or percentage)*	Additional Explanation or Reference *(optional)*	Penalty, Charge, or Other Enforcement? *For Retail Suppliers Only* *Drop Down List*
Add additional rows as needed				
Shortage Level 1	Landscape - Limit landscape irrigation to specific days	Reduction of 10% to over 50% depending on Shortage Phase	Irrigating ornamental landscapes with potable water is limited to no more than three (3) days per week, on a schedule established and posted by Suburban on its website or otherwise provided to customer by bill message, bill insert, direct mail, or email.	Yes
Shortage Level 1	Landscape - Limit landscape irrigation to specific times	Reduction of 10% to over 50% depending on Shortage Phase	Irrigating ornamental landscapes with potable water is prohibited during the hours between 8:00 am and 6:00 pm.	Yes
Shortage Level 1	Landscape - Other landscape restriction or prohibition	Reduction of 10% to over 50% depending on Shortage Phase	Watering or irrigating of any lawn, landscape, or other vegetated area with potable water during and for 48 hours following measurable rainfall is prohibited. Exclusions are mentioned in Tariff Rule No. 14.1.	Yes
Shortage Level 1	Landscape - Restrict or prohibit runoff from landscape irrigation	Reduction of 10% to over 50% depending on Shortage Phase	Watering or irrigating of any lawn, landscape, or other vegetated area in a manner that causes or allows excessive water flow or runoff such that water flows onto adjacent property, non-irrigated areas, private and public walkways, roadways, parking lots, or structures is prohibited.	Yes
Shortage Level 1	Other	Reduction of 10% to over 50% depending on Shortage Phase	The use of a hose that dispenses potable water to wash a motor vehicle, except where the hose is fitted with a shut-off nozzle or device attached to it is prohibited. Use of water for watching commerical aircraft, cars, buses, boats, trailers, or other commercial vehicles at any time is prohibited, except at commercial or fleet vehicle or boat washing facilities operated at a fixed location where equipment using water is properly maintained to avoid wasteful use.	Yes
Shortage Level 1	Other - Prohibit use of potable water for washing hard surfaces	Reduction of 10% to over 50% depending on Shortage Phase	Use of potable water for washing buildings, structures, driveways, patios, parking lots, tennis courts, or other hard surfaced areas is prohibited, except in cases where health and safety are at risk.	Yes
Shortage Level 1	Water Features - Restrict water use for decorative water features, such as fountains	Reduction of 10% to over 50% depending on Shortage Phase	Operating a water fountain or other decorative feature that does not use recirculated water is prohibited.	Yes
Shortage Level 1	CII - Restaurants may only serve water upon request	Reduction of 10% to over 50% depending on Shortage Phase	Commercial businesses, including restaurants and other food services providers can only serve drinking water to customers on request.	Yes
Shortage Level 1	CII - Lodging establishment must offer opt out of linen service	Reduction of 10% to over 50% depending on Shortage Phase	Hotel/motel operators must provide guests with the option of choosing not to have towels and linens laundered daily. Information about this option must be prominently displayed.	Yes
Shortage Level 1	Other	Reduction of 10% to over 50% depending on Shortage Phase	Unmetered water from fire hydrants cannot be used for any reason other than fire suppression or Suburban's system maintenance purposes.	Yes
Shortage Level 1	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner	Reduction of 10% to over 50% depending on Shortage Phase	This loss of potable water may be cited for water waste after a five-day period has passed in which the leak or malfunction could have been corrected.	Yes
Shortage Level 1	Other - Prohibit use of potable water for construction and dust control	Reduction of 10% to over 50% depending on Shortage Phase	There cannot be unreasonable or excessive use of potable water for dust control or earth compaction.	Yes
Shortage Level 1	Other - Prohibit vehicle washing except at facilities using recycled or recirculating water	Reduction of 10% to over 50% depending on Shortage Phase	Operation of commercial car washes that do not recycled the potable water used as required by CWC Sections 10950-10953 is prohibited.	Yes
Shortage Level 2	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner	Reduction of up to 20%	All leaks, breaks, or other malfunctions in the water users' plumbing or distribution system must be repaired within seventy-two (72) hours of notifcaiton from Suburban.	Yes
Shortage Level 3	Landscape - Limit landscape irrigation to specific days	Reduction of up to 40%	Watering or irrigating of lawn, landscape or other vegetated area with potable water is limited to two (2) days per week.	Yes
Shortage Level 3	Landscape - Other landscape restriction or prohibition	Reduction of up to 40%	Maintenance of vegetation, including trees and shrubs, watered by use of a hand-held bucket or similar containeer, hand-held hose equipped with a positive self-closing water shut-off nozzle or device is permitted.	Yes
Shortage Level 4	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner	Reduction of up to 50% and greater	All leaks, breaks, or other malfunctions in the water users' plumbing or distribution system must be repaired immediately upon notification from Suburban unless other arrangements are made with Suburban.	Yes

NOTES: Demand reductions for Shortage Level 1 is applicable to all stages unless a more restrictive mandate is in place.

Submittal Table 8-3: Supply Augmentation and Other Actions			
Shortage Level	Supply Augmentation Methods and Other Actions by Water Supplier ***Drop down list*** *These are the only categories that will be accepted by the WUEdata online submittal tool*	How much is this going to reduce the shortage gap? *Include units used (volume type or percentage)*	Additional Explanation or Reference *(optional)*
Add additional rows as needed			
Shortage Level 1	Expand Public Information Campaign	Reduction of 10% to over 50%	
Shortage Level 1	Other Actions (describe)	Reduction of 10% to over 50%	Rebate Programs for plumbing fixtures/devices, and landscape irrigation
NOTES: Above actions are applicable to all of Suburbans shortage levels (1-4).			

Submittal Table 10-1 Retail: Notification to Cities and		
City Name	60 Day Notice	Notice of Public Hearing
Add additional rows as needed		
Buena Park	Yes	Yes
Covina	Yes	Yes
Glendora	Yes	Yes
Industry	Yes	Yes
La Habra	Yes	Yes
La Mirada	Yes	Yes
La Puente	Yes	Yes
West Covina	Yes	Yes
Whittier	Yes	Yes
County Name *Drop Down List*	60 Day Notice	Notice of Public Hearing
Add additional rows as needed		
Los Angeles County	Yes	Yes
Orange County	Yes	Yes
NOTES:		

Energy Intensity Tables – 2020 UWMP

Suburban's Whittier/La Mirada Service Area

Urban Water Supplier: *Suburban Water Systems (Whittier/La Mirada)*

Water Delivery Product (If delivering more than one type of product use Table O-1C)

Retail Potable Deliveries

Table O-1B: Recommended Energy Reporting - Total Utility Approach

Enter Start Date for Reporting Period	1/1/2020	**Urban Water Supplier Operational Control**		
End Date	12/31/2020			
☐ Is upstream embedded in the values reported?		**Sum of All Water Management Processes**	**Non-Consequential Hydropower**	
Water Volume Units Used	*AF*	Total Utility	Hydropower	Net Utility
Volume of Water Entering Process (volume unit)		*20451*	*0*	*20451*
Energy Consumed (kWh)		*11772042*	*0*	*11772042*
Energy Intensity (kWh/vol. converted to MG)		*1766.5*	*#DIV/0!*	*1766.5*

Quantity of Self-Generated Renewable Energy

0 kWh

Data Quality *(Estimate, Metered Data, Combination of Estimates and Metered Data)*

Metered Data

Data Quality Narrative:

Volume shown is based on total water volume delivered. All water volumes are metered. Total Water in process is 20,451 AF. Energy consumption is based on wall water related facilities within Suburban's Whittier/La Mirada's system. Energy data is metered and obtained from SCE. Total energy usage is 11,772,042 kWh.

Narrative:

Energy Intensity is based on the total energy consumption and total water volume. Per Energy Use Excel, Energy Intensity is converted to units of kWh/MG. Suburban's Whittier/La Mirada's energy intensity is 1,766.5 kWh/MG.

SBx7-7 Compliance Tables – 2020 UWMP

Suburban's Whittier/La Mirada Service Area

SB X7-7 Table 0: Units of Measure Used in 2020 UWMP* *(select one from the drop down list)*
Acre Feet
**The unit of measure must be consistent throughout the UWMP, as reported in Submittal Table 2-3.*
NOTES:

SB X7-7 Table 2: Method for 2020 Population Estimate	
Method Used to Determine 2020 Population (may check more than one)	
☐	**1. Department of Finance** (DOF) or **American Community Survey** (ACS)
☐	**2. Persons-per-Connection Method**
☑	**3. DWR Population Tool**
☐	**4. Other** DWR recommends pre-review
NOTES:	

SB X7-7 Table 3: 2020 Service Area Population	
2020 Compliance Year Population	
2020	122,838
NOTES:	

SB X7-7 Table 4: 2020 Gross Water Use							
Compliance Year 2020	2020 Volume Into Distribution System *This column will remain blank until SB X7-7 Table 4-A is completed.*	2020 Deductions					2020 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.*	
	20,451			-		-	**20,451**

*** Units of measure (AF, MG , or CCF)** must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3.

NOTES:

SB X7-7 Table 4-A: 2020 Volume Entering the Distribution System(s), Meter Error Adjustment

Complete one table for each source.

Name of Source	Groundwater - Main Basin
This water source is *(check one)* **:**	
☑	The supplier's own water source
☐	A purchased or imported source

Compliance Year 2020	Volume Entering Distribution System [1]	Meter Error Adjustment [2] *Optional (+/-)*	Corrected Volume Entering Distribution System
	10,527	-	10,527

[1] ***Units of measure (AF, MG , or CCF)*** *must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3.*

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

NOTES

SB X7-7 Table 4-A: 2020 Volume Entering the Distribution System(s) Meter Error Adjustment

Complete one table for each source.

Name of Source	Groundwater - Central Basin
This water source is *(check one)* **:**	
☑	The supplier's own water source
☐	A purchased or imported source

Compliance Year 2020	Volume Entering Distribution System [1]	Meter Error Adjustment [2] *Optional (+/-)*	Corrected Volume Entering Distribution System
	1,562		1,562

[1] ***Units of measure (AF, MG , or CCF)*** *must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3.*

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

NOTES:

SB X7-7 Table 4-A: 2020 Volume Entering the Distribution System(s), Meter Error Adjustment

Complete one table for each source.

Name of Source	Imported - All
This water source is *(check one)* **:**	
☐	The supplier's own water source
☑	A purchased or imported source

Compliance Year 2020	Volume Entering Distribution System [1]	Meter Error Adjustment [2] *Optional (+/-)*	Corrected Volume Entering Distribution System
	8,362		8,362

[1] ***Units of measure (AF, MG , or CCF)*** *must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3.*

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

NOTES:

SB X7-7 Table 5: 2020 Gallons Per Capita Per Day (GPCD)		
2020 Gross Water *Fm SB X7-7 Table 4*	**2020 Population** *Fm SB X7-7 Table 3*	**2020 GPCD**
20,451	122,838	**149**
NOTES:		

SB X7-7 Table 9: 2020 Compliance							
Actual 2020 GPCD[1]	Optional Adjustments to 2020 GPCD (Enter "0" if Adjustment Not Used)			TOTAL Adjustments[1]	Adjusted 2020 GPCD [1] *(Adjusted if applicable)*	2020 Confirmed Target GPCD [1, 2]	**Did Supplier Achieve Targeted Reduction for 2020?**
	Extraordinary Events[1]	Weather Normalization[1]	Economic Adjustment[1]				
149	-	-	-	-	149	151	**YES**
[1] *All values are reported in GPCD*							
[2] ***2020 Confirmed Target GPCD*** *is taken from the Supplier's SB X7-7 Verification Form Table SB X7-7, 7-F.*							
NOTES:							

DWR Submittal Tables – 2020 UWMP

Combined Suburban's (San Jose Hills &Whittier/La Mirada) Service Area

Submittal Table 2-1 Retail Only: Public Water Systems			
Public Water System Number	Public Water System Name	Number of Municipal Connections 2020	Volume of Water Supplied 2020 *
Add additional rows as needed			
CA1910046	Suburban Water Systems-Glendora	1,559	912
CA1910205	Suburban Water Systems-San Jose Hills	40,454	23,588
CA1910200	Suburban Water Systems-Covina Knolls	499	439
CA1910174	Suburban Water Systems-Whittier	18,190	10,664
CA1910059	Suburban Water Systems-La Mirada	15,479	9,787
	TOTAL	76,181	45,389
**** Units of measure (AF, CCF, MG)*** *must remain consistent throughout the UWMP as reported*			
NOTES:			

Submittal Table 2-2: Plan Identification			
Select Only One	**Type of Plan**		**Name of RUWMP or Regional Alliance** *if applicable* (select from 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:			

Submittal Table 2-3: Supplier Identification	
Type of Supplier (select one or both)	
☐	Supplier is a wholesaler
☑	Supplier 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
**** Units of measure (AF, CCF, MG)*** *must remain consistent throughout the UWMP as reported in Table 2-3.*	
NOTES:	

Submittal 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 Water Code Section 10631.
Wholesale Water Supplier Name
Add additional rows as needed
Upper San Gabriel Valley Municipal Water District
Covina Irrigating Company
City of Glendora
Walnut Valley Water District
California Domestic Water Company
Central Basin Municipal Water District
NOTES:

Submittal Table 3-1 Retail: Population - Current and Projected						
Population Served	2020	2025	2030	2035	2040	2045*(opt)*
	298,367	301,081	303,820	306,585	309,375	312,191
NOTES: See Section 2.2.2 for population breakdown.						

Submittal Table 4-1 Retail: Demands for Potable and Non-Potable[1] Water - Actual			
Use Type	2020 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[2]
Add additional rows as needed			
Single Family		Drinking Water	29,299
Institutional/Governmental		Drinking Water	7,432
Institutional		Drinking Water	1,783
Industrial		Drinking Water	1,245
Landscape		Drinking Water	2,038
Other	Street Sweeping & Const. Water	Drinking Water	62
Losses		Drinking Water	3,531
		TOTAL	45,389
[1] *Recycled water demands are NOT reported in this table. Recycled water demands are reported in Table 6-4.* [2] *Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.*			
NOTES:			

Submittal Table 4-2 Retail: Use for Potable and Non-Potable[1] Water - Projected						
Use Type	Additional Description (as needed)	Projected Water Use[2] *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		2025	2030	2035	2040	2045 (opt)
Add additional rows as needed						
Single Family		28,399	28,656	28,915	29,176	29,441
Institutional/Governmental		7,999	8,072	8,144	8,218	8,292
Institutional		2,057	2,075	2,093	2,112	2,130
Industrial		1,076	1,086	1,096	1,107	1,117
Landscape		1,380	1,392	1,404	1,417	1,429
Other	Street Sweeping & Const. Water	57	58	58	59	59
Losses		2,651	2,675	2,699	2,723	2,747
	TOTAL	43,620	44,013	44,410	44,811	45,215

[1] *Recycled water demands are NOT reported in this table. Recycled water demands are reported in Table 6-4.* [2] *Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.*

NOTES:

Submittal Table 4-3 Retail: Total Water Use (Potable and Non-Potable)						
	2020	2025	2030	2035	2040	2045 (opt)
Potable Water, Raw, Other Non-potable *From Tables 4-1R and 4-2 R*	45,389	43,620	44,013	44,410	44,811	45,215
Recycled Water Demand[1] *From Table 6-4*	710	1,630	1,630	1,630	1,630	1,630
Optional Deduction of Recycled Water Put Into Long-Term Storage[2]	0	0	0	0	0	0
TOTAL WATER USE	46,100	45,250	45,643	46,040	46,441	46,845

[1] *Recycled water demand fields will be blank until Table 6-4 is complete*

[2] *Long term storage means water placed into groundwater or surface storage that is not removed from storage in the same year. Supplier **may** deduct recycled water placed in long-term storage from their reported demand. This value is manually entered into Table 4-3.*

NOTES:

Submittal Table 4-4 Retail: Last Five Years of Water Loss Audit Reporting	
Reporting Period Start Date (mm/yyyy)	Volume of Water Loss [1,2]
01/2016	2,876.08
01/2017	2,957.84
01/2018	2,266.90
01/2019	2,191.32
01/2020	3,531.00
[1] Taken from the field "Water Losses" (a combination of apparent losses and real losses) from the AWWA worksheet. *[2] **Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*	
NOTES:	

Submittal 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, or otherwise are utilized in demand projections are found.	
Are Lower Income Residential Demands Included In Projections? *Drop down list (y/n)*	Yes
NOTES:	

Submittal Table 5-1 Baselines and Targets Summary
From SB X7-7 Verification Form
Retail Supplier or Regional Alliance Only

Baseline Period	Start Year *	End Year *	Average Baseline GPCD*	Confirmed 2020 Target*
10-15 year	*1999*	*2008*	*177*	*142*
5 Year	*2003*	*2007*	*176*	

**All cells in this table should be populated manually from the supplier's SBX7-7 Verification Form and reported in Gallons per Capita per Day (GPCD)*

NOTES:

Submittal Table 5-2: 2020 Compliance
From SB X7-7 2020 Compliance Form
Retail Supplier or Regional Alliance Only

2020 GPCD			2020 Confirmed Target GPCD*	Did Supplier Achieve Targeted Reduction for 2020? Y/N
Actual 2020 GPCD*	2020 TOTAL Adjustments*	Adjusted 2020 GPCD* *(Adjusted if applicable)*		
136	*0*	*136*	*142*	*Yes*

**All cells in this table should be populated manually from the supplier's SBX7-7 2020 Compliance Form and reported in Gallons per Capita per Day (GPCD)*

NOTES:

Submittal Table 6-1 Retail: Groundwater Volume Pumped						
☐	Supplier does not pump groundwater. The supplier will not complete the table below.					
☐	All or part of the groundwater described below is desalinated.					
Groundwater Type ***Drop Down List*** *May use each category multiple times*	Location or Basin Name	2016*	2017*	2018*	2019*	2020*
Add additional rows as needed						
Alluvial Basin	Main San Gabriel Basin (SJH)	17,619	18,722	16,136	9,878	16,852
Alluvial Basin	Main San Gabriel Basin (W&LM)	9,869	10,074	11,557	11,841	10,527
Alluvial Basin	Central Basin (W&LM)	2,924	2,827	2,297	2,038	1,562
	TOTAL	30,412	31,622	29,990	23,757	28,941
**** Units of measure (AF, CCF, MG)*** *must remain consistent throughout the UWMP as reported in Table 2-3.*						
NOTES:						

Submittal Table 6-2 Retail: Wastewater Collected Within Service Area in 2020						
☐	There is no wastewater collection system. The supplier will not complete the table below.					
	Percentage of 2020 service area covered by wastewater collection system *(optional)*					
	Percentage of 2020 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 2020 *	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*
LACSD	Estimated	2,697	LACSD	San Jose	No	No
LACSD	Estimated	24,567	LACSD	Whittier Narrow	No	No
LACSD	Estimated	9,047	LACSD	Los Coyotes	No	No
Total Wastewater Collected from Service Area in 2020:		36,311				
**** Units of measure (AF, CCF, MG)*** *must remain consistent throughout the UWMP as reported in Table 2-3* **.**						
NOTES: Combined - both Suburban's San Jose Hills and Whittier/La Mirada service area.						

Submittal Table 6-3 Retail: Wastewater Treatment and Discharge Within Service Area in 2020

☑ **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)* [2]	Method of Disposal *Drop down list*	Does This Plant Treat Wastewater Generated Outside the Service Area? *Drop down list*	Treatment Level *Drop down list*	2020 volumes [1] Wastewater Treated	Discharged Treated Wastewater	Recycled Within Service Area	Recycled Outside of Service Area	Instream Flow Permit Requirement
						Total	0	0	0	0	0

[1] **Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.
[2] If the **Wastewater Discharge ID Number** is not available to the UWMP preparer, access the SWRCB CIWQS regulated facility website at https://ciwqs.waterboards.ca.gov/ciwqs/readOnly/CiwqsReportServlet?inCommand=reset&reportName=RegulatedFacility

NOTES:

Submittal Table 6-4 Retail: 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 Supplier Producing (Treating) the Recycled Water:	Los Angeles County Sanitation District
Name of Supplier Operating the Recycled Water Distribution System:	Upper San Gabriel Valley Water District and Central Basin Municipal Water District
Supplemental Water Added in 2020 (volume) *Include units*	
Source of 2020 Supplemental Water	

Beneficial Use Type *Insert additional rows if needed.*	**Potential** Beneficial Uses of Recycled Water (Describe)	Amount of **Potential** Uses of Recycled Water (Quantity) *Include volume units* [1]	General Description of 2020 Uses	Level of Treatment *Drop down list*	2020 [1]	2025 [1]	2030 [1]	2035 [1]	2040 [1]	2045 [1] (opt)
Agricultural irrigation										
Landscape irrigation (exc golf courses)				Tertiary	710	1,379	1,379	1,379	1,379	1,379
Golf course irrigation				Tertiary	0	251	251	251	251	251
Commercial use										
Industrial use										
Geothermal and other energy production										
Seawater intrusion barrier										
Recreational impoundment										
Wetlands or wildlife habitat										
Groundwater recharge (IPR)										
Reservoir water augmentation (IPR)										
Direct potable reuse										
Other (Description Required)										
				Total:	710	1,630	1,630	1,630	1,630	1,630
				2020 Internal Reuse						

[1] ***Units of measure (AF, CCF, MG)*** *must remain consistent throughout the UWMP as reported in Table 2-3.*

NOTES:

Submittal Table 6-5 Retail: 2015 UWMP Recycled Water Use Projection Compared to 2020 Actual		
☐	Recycled water was not used in 2015 nor projected for use in 2020. The supplier will not complete the table below. If recycled water was not used in 2020, and was not predicted to be in 2015, then check the box and do not complete the table.	
Beneficial Use Type	**2015 Projection for 2020 [1]**	**2020 Actual Use [1]**
Insert additional rows as needed.		
Agricultural irrigation		
Landscape irrigation (exc golf courses)	1,112	710
Golf course irrigation	518	0
Commercial use		
Industrial use		
Geothermal and other energy production		
Seawater intrusion barrier		
Recreational impoundment		
Wetlands or wildlife habitat		
Groundwater recharge (IPR)		
Reservoir water augmentation (IPR)		
Direct potable reuse		
Other (Description Required)		
Total	1,630	710
[1] **Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.		
NOTE:		

Submittal 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 6-4	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			
		Total	0
***Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*			
NOTES:			

Submittal 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.					
See Section 7	Provide page location of narrative in the UWMP					
Name of Future Projects or Programs	Joint Project with other suppliers?		Description (if needed)	Planned Implementation Year	Planned for Use in Year Type *Drop Down List*	Expected Increase in Water Supply to Supplier* *This may be a range*
	Drop Down List (y/n)	*If Yes, Supplier Name*				
Add additional rows as needed						
***Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*						
NOTES:						

Submittal Table 6-8 Retail: Water Supplies — Actual				
Water Supply	Additional Detail on Water Supply	2020		
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 (not desalinated)	Main San Gabriel Basin	27,379	Drinking Water	
Groundwater (not desalinated)	Central Basin	1,562	Drinking Water	
Purchased or Imported Water	All Imports	16,449	Drinking Water	
Recycled Water	CBMWD	710	Recycled Water	
	Total	46,100		0
***Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*				
NOTES:				

Submittal 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		2025		2030		2035		2040		2045 (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 (not desalinated)	All Regions - Main Basin	29,000		29,000		29,000		29,000		29,000	
Groundwater (not desalinated)	Central Basin	3,721		3,721		3,721		3,721		3,721	
Purchased or Imported Water	Whittier/La Mirada Region - All Imports	8,200		8,200		8,200		8,200		8,200	
Purchased or Imported Water	San Jose Hills Region - All Imports	18,200		18,200		18,200		18,200		18,200	
Recycled Water	San Jose Hills Region (Upper District)	800		800		800		800		800	
Recycled Water	Whittier/La Mirada Region (CBMWD)	930		930		930		930		930	
	Total	60,851	0	60,851	0	60,851	0	60,851	0	60,851	0

***Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*

NOTES

Submittal Table 7-1 Retail: Basis of Water Year Data (Reliability Assessment)

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 2019-2020, use 2020	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	2011-2020	32,721	100%
Single-Dry Year	2015	22,589	69%
Consecutive Dry Years 1st Year	2012	30,425	93%
Consecutive Dry Years 2nd Year	2013	29,858	91%
Consecutive Dry Years 3rd Year	2014	27,481	84%
Consecutive Dry Years 4th Year	2015	22,589	69%
Consecutive Dry Years 5th Year	2016	31,728	97%

Supplier 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 a Supplier 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.

***Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*

NOTES: GROUNDWATER SUPPLIES ONLY (Combined both service areas)

Submittal Table 7-1 Retail: Basis of Water Year Data (Reliability Assessment)

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 2019-2020, use 2020	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	2010	26,400	100%
Single-Dry Year	2015	23,398	89%
Consecutive Dry Years 1st Year	2015	23,398	89%
Consecutive Dry Years 2nd Year	2015	23,398	89%
Consecutive Dry Years 3rd Year	2015	23,398	89%
Consecutive Dry Years 4th Year	2015	23,398	89%
Consecutive Dry Years 5th Year	2015	23,398	89%

Supplier 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 a Supplier 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.

***Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*

NOTES: IMPORTED SUPPLIES ONLY (Combined both service areas)

Submittal Table 7-1 Retail: Basis of Water Year Data (Reliability Assessment)

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 2019-2020, use 2020	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	2015-2020	1,730	100%
Single-Dry Year	2019	1,506	87%
Consecutive Dry Years 1st Year	2016	1,626	94%
Consecutive Dry Years 2nd Year	2017	1,634	94%
Consecutive Dry Years 3rd Year	2018	1,595	92%
Consecutive Dry Years 4th Year	2019	1,506	87%
Consecutive Dry Years 5th Year	2020	1,640	95%

Supplier 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 a Supplier 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.

***Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*

NOTES: RECYCLED WATER ONLY (Combined both service areas)

Submittal Table 7-2 Retail: Normal Year Supply and Demand Comparison					
	2025	2030	2035	2040	2045 *(Opt)*
Supply totals *(autofill from Table 6-9)*	60,851	60,851	60,851	60,851	60,851
Demand totals *(autofill from Table 4-3)*	45,250	45,643	46,040	46,441	46,845
Difference	15,601	15,208	14,811	14,410	14,006
NOTES:					

Submittal Table 7-3 Retail: Single Dry Year Supply and Demand Comparison					
	2025	2030	2035	2040	2045 (Opt)
Supply totals*	47,493	47,493	47,493	47,493	47,493
Demand totals*	46,364	46,767	47,174	47,585	48,000
Difference	1,129	726	319	(92)	(507)
***Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*					
NOTES:					

Submittal Table 7-4 Retail: Multiple Dry Years Supply and Demand Comparison						
		2025*	2030*	2035*	2040*	2045* (Opt)
First year	Supply totals	55,449	55,449	55,449	55,449	55,449
	Demand totals	44,062	44,445	44,832	45,223	45,618
	Difference	11,387	11,003	10,616	10,226	9,831
Second year	Supply totals	54,890	54,890	54,890	54,890	54,890
	Demand totals	44,062	44,445	44,832	45,223	45,618
	Difference	10,828	10,444	10,057	9,666	9,272
Third year	Supply totals	52,513	52,513	52,513	52,513	52,513
	Demand totals	44,062	44,445	44,832	45,223	45,618
	Difference	8,451	8,068	7,681	7,290	6,895
Fourth year	Supply totals	47,493	47,493	47,493	47,493	47,493
	Demand totals	44,062	44,445	44,832	45,223	45,618
	Difference	3,431	3,048	2,661	2,270	1,875
Fifth year	Supply totals	56,766	56,766	56,766	56,766	56,766
	Demand totals	44,062	44,445	44,832	45,223	45,618
	Difference	12,705	12,321	11,934	11,543	11,149
Sixth year *(optional)*	Supply totals					
	Demand totals					
	Difference	0	0	0	0	0
***Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*						
NOTES:						

Submittal Table 7-5: Five-Year Drought Risk Assessment Tables to address Water Code Section 10635(b)

2021	Total
Total Water Use	40,616
Total Supplies	55,449
Surplus/Shortfall w/o WSCP Action	14,833
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	0
WSCP - use reduction savings benefit	0
Revised Surplus/(shortfall)	14,833
Resulting % Use Reduction from WSCP action	0%

2022	Total
Total Water Use	40,690
Total Supplies	54,890
Surplus/Shortfall w/o WSCP Action	14,200
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	0
WSCP - use reduction savings benefit	0
Revised Surplus/(shortfall)	14,200
Resulting % Use Reduction from WSCP action	0%

2023	Total
Total Water Use	40,763
Total Supplies	52,513
Surplus/Shortfall w/o WSCP Action	11,750
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	0
WSCP - use reduction savings benefit	0
Revised Surplus/(shortfall)	11,750
Resulting % Use Reduction from WSCP action	0%

2024	Total
Total Water Use	40,837
Total Supplies	47,493
Surplus/Shortfall w/o WSCP Action	6,656
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	0
WSCP - use reduction savings benefit	0
Revised Surplus/(shortfall)	6,656
Resulting % Use Reduction from WSCP action	0%

2025	Total
Total Water Use	40,911
Total Supplies	56,766
Surplus/Shortfall w/o WSCP Action	15,855
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	0
WSCP - use reduction savings benefit	0
Revised Surplus/(shortfall)	15,855
Resulting % Use Reduction from WSCP action	0%

Submittal Table 8-1 **Water Shortage Contingency Plan Levels**		
Shortage Level	**Percent Shortage Range**	**Shortage Response Actions** (***Narrative description***)
1	Up to 10%	Suburban Stage 1: Stage 1 shall be in effect at all times. Non-essential or prohibited water uses apply. Stage 1 comprises up to 10%.
2	Up to 20%	Suburban Stage 2: When Stage 1 becomes insufficient in complying with the necessary reduction. Stage 2 comprises up to 20%
3	Up to 30%	Suburban Stage 3: When Stage 2 becomes insufficient in complying with the necessary reduction. Stage 3 comprises up to 40%.
4	Up to 40%	Suburban Stage 3: When Stage 2 becomes insufficient in complying with the necessary reduction. Stage 3 comprises up to 40%.
5	Up to 50%	Suburban Stage 4: Emergency. When a critical water shortage emergency exists or that Stage 3 becomes insufficient in complying with the necessary reduction. Stage 4 comprises up to 50% or greater.
6	>50%	Suburban Stage 4: Emergency. When a critical water shortage emergency exists or that Stage 3 becomes insufficient in complying with the necessary reduction. Stage 4 comprises up to 50% or greater.
NOTES: See Section 5.4.2 of the UWMP.		

Submittal Table 8-2: Demand Reduction Actions

Shortage Level	Demand Reduction Actions *Drop down list* *These are the only categories that will be accepted by the WUEdata online submittal tool. Select those that apply.*	How much is this going to reduce the shortage gap? *Include units used (volume type or percentage)*	Additional Explanation or Reference *(optional)*	Penalty, Charge, or Other Enforcement? *For Retail Suppliers Only* *Drop Down List*
Add additional rows as needed				
Shortage Level 1	Landscape - Limit landscape irrigation to specific days	Reduction of 10% to over 50% depending on Shortage Phase	Irrigating ornamental landscapes with potable water is limited to no more than three (3) days per week, on a schedule established and posted by Suburban on its website or otherwise provided to customer by bill message, bill insert, direct mail, or email.	Yes
Shortage Level 1	Landscape - Limit landscape irrigation to specific times	Reduction of 10% to over 50% depending on Shortage Phase	Irrigating ornamental landscapes with potable water is prohibited during the hours between 8:00 am and 6:00 pm.	Yes
Shortage Level 1	Landscape - Other landscape restriction or prohibition	Reduction of 10% to over 50% depending on Shortage Phase	Watering or irrigating of any lawn, landscape, or other vegetated area with potable water during and for 48 hours following measurable rainfall is prohibited. Exclusions are mentioned in Tariff Rule No. 14.1.	Yes
Shortage Level 1	Landscape - Restrict or prohibit runoff from landscape irrigation	Reduction of 10% to over 50% depending on Shortage Phase	Watering or irrigating of any lawn, landscape, or other vegetated area in a manner that causes or allows excessive water flow or runoff such that water flows onto adjacent property, non-irrigated areas, private and public walkways, roadways, parking lots, or structures is prohibited.	Yes
Shortage Level 1	Other	Reduction of 10% to over 50% depending on Shortage Phase	The use of a hose that dispenses potable water to wash a motor vehicle, except where the hose is fitted with a shut-off nozzle or device attached to it is prohibited. Use of water for watching commerical aircraft, cars, buses, boats, trailers, or other commercial vehicles at any time is prohibited, except at commercial or fleet vehicle or boat washing facilities operated at a fixed location where equipment using water is properly maintained to avoid wasteful use.	Yes
Shortage Level 1	Other - Prohibit use of potable water for washing hard surfaces	Reduction of 10% to over 50% depending on Shortage Phase	Use of potable water for washing buildings, structures, driveways, patios, parking lots, tennis courts, or other hard surfaced areas is prohibited, except in cases where health and safety are at risk.	Yes
Shortage Level 1	Water Features - Restrict water use for decorative water features, such as fountains	Reduction of 10% to over 50% depending on Shortage Phase	Operating a water fountain or other decorative feature that does not use recirculated water is prohibited.	Yes
Shortage Level 1	CII - Restaurants may only serve water upon request	Reduction of 10% to over 50% depending on Shortage Phase	Commercial businesses, including restaurants and other food services providers can only serve drinking water to customers on request.	Yes
Shortage Level 1	CII - Lodging establishment must offer opt out of linen service	Reduction of 10% to over 50% depending on Shortage Phase	Hotel/motel operators must provide guests with the option of choosing not to have towels and linens laundered daily. Information about this option must be prominently displayed.	Yes
Shortage Level 1	Other	Reduction of 10% to over 50% depending on Shortage Phase	Unmetered water from fire hydrants cannot be used for any reason other than fire suppression or Suburban's system maintenance purposes.	Yes
Shortage Level 1	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner	Reduction of 10% to over 50% depending on Shortage Phase	This loss of potable water may be cited for water waste after a five-day period has passed in which the leak or malfunction could have been corrected.	Yes
Shortage Level 1	Other - Prohibit use of potable water for construction and dust control	Reduction of 10% to over 50% depending on Shortage Phase	There cannot be unreasonable or excessive use of potable water for dust control or earth compaction.	Yes
Shortage Level 1	Other - Prohibit vehicle washing except at facilities using recycled or recirculating water	Reduction of 10% to over 50% depending on Shortage Phase	Operation of commercial car washes that do not recycled the potable water used as required by CWC Sections 10950-10953 is prohibited.	Yes
Shortage Level 2	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner	Reduction of up to 20%	All leaks, breaks, or other malfunctions in the water users' plumbing or distribution system must be repaired within seventy-two (72) hours of notifcaiton from Suburban.	Yes
Shortage Level 3	Landscape - Limit landscape irrigation to specific days	Reduction of up to 40%	Watering or irrigating of lawn, landscape or other vegetated area with potable water is limited to two (2) days per week.	Yes
Shortage Level 3	Landscape - Other landscape restriction or prohibition	Reduction of up to 40%	Maintenance of vegetation, including trees and shrubs, watered by use of a hand-held bucket or similar containeer, hand-held hose equipped with a positive self-closing water shut-off nozzle or device is permitted.	Yes
Shortage Level 4	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner	Reduction of up to 50% and greater	All leaks, breaks, or other malfunctions in the water users' plumbing or distribution system must be repaired immediately upon notification from Suburban unless other arrangements are made with Suburban.	Yes

NOTES: Demand reductions for Shortage Level 1 is applicable to all stages unless a more restrictive mandate is in place.

Submittal Table 8-3: Supply Augmentation and Other Actions			
Shortage Level	Supply Augmentation Methods and Other Actions by Water Supplier ***Drop down list*** *These are the only categories that will be accepted by the WUEdata online submittal tool*	How much is this going to reduce the shortage gap? *Include units used (volume type or percentage)*	Additional Explanation or Reference *(optional)*
Add additional rows as needed			
Shortage Level 1	Expand Public Information Campaign	Reduction of 10% to over 50%	
Shortage Level 1	Other Actions (describe)	Reduction of 10% to over 50%	Rebate Programs for plumbing fixtures/devices, and landscape irrigation
NOTES: Above actions are applicable to all of Suburbans shortage levels (1-4).			

Submittal Table 10-1 Retail: Notification to Cities and		
City Name	60 Day Notice	Notice of Public Hearing
Add additional rows as needed		
Buena Park	Yes	Yes
Covina	Yes	Yes
Glendora	Yes	Yes
Industry	Yes	Yes
La Habra	Yes	Yes
La Mirada	Yes	Yes
La Puente	Yes	Yes
West Covina	Yes	Yes
Whittier	Yes	Yes
County Name *Drop Down List*	60 Day Notice	Notice of Public Hearing
Add additional rows as needed		
Los Angeles County	Yes	Yes
Orange County	Yes	Yes
NOTES:		

Energy Intensity Tables – 2020 UWMP

Combined Suburban's (San Jose Hills &Whittier/La Mirada) Service Area

Urban Water Supplier: *Suburban Water Systems*

Water Delivery Product (If delivering more than one type of product use Table O-1C)

Retail Potable Deliveries

Table O-1B: Recommended Energy Reporting - Total Utility Approach

Enter Start Date for Reporting Period	1/1/2020	**Urban Water Supplier Operational Control**		
End Date	12/31/2020			
☐ Is upstream embedded in the values reported?		**Sum of All Water Management Processes**	**Non-Consequential Hydropower**	
Water Volume Units Used	*AF*	Total Utility	Hydropower	Net Utility
Volume of Water Entering Process (volume unit)		*46100*		*46100*
Energy Consumed (kWh)		*23119451*		*23119451*
Energy Intensity (kWh/vol. converted to MG)		*1539.1*	*#DIV/0!*	*1539.1*

Quantity of Self-Generated Renewable Energy

0 kWh

Data Quality *(Estimate, Metered Data, Combination of Estimates and Metered Data)*

Metered Data

Data Quality Narrative:

Volume shown is based on total water volume delivered. All water volumes are metered. Total Water in process is 46,100 AF. Energy consumption is based on wall water related facilities within Suburban's combined system. Energy data is metered and obtained from SCE. Total energy usage is 23,119,451 kWh.

Narrative:

Energy Intensity is based on the total energy consumption and total water volume. Per Energy Use Excel, Energy Intensity is converted to units of kWh/MG. Suburban's combined energy intensity is 1,539.1 kWh/MG.

SBx7-7 Compliance Tables – 2020 UWMP

Combined Suburban's (San Jose Hills &Whittier/La Mirada) Service Area

SB X7-7 Table 0: Units of Measure Used in 2020 UWMP* *(select one from the drop down list)*
Acre Feet
**The unit of measure must be consistent throughout the UWMP, as reported in Submittal Table 2-3.*
NOTES:

SB X7-7 Table 2: Method for 2020 Population Estimate	
Method Used to Determine 2020 Population (may check more than one)	
☐	**1. Department of Finance** (DOF) or **American Community Survey** (ACS)
☐	**2. Persons-per-Connection Method**
☑	**3. DWR Population Tool**
☐	**4. Other** DWR recommends pre-review
NOTES:	

SB X7-7 Table 3: 2020 Service Area Population	
2020 Compliance Year Population	
2020	298,367
NOTES:	

SB X7-7 Table 4: 2020 Gross Water Use							
		2020 Deductions					
Compliance Year 2020	**2020 Volume Into Distribution System** *This column will remain blank until SB X7-7 Table 4-A is completed.*	**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.*	**2020 Gross Water Use**
	45,389			-		-	**45,389**

*** Units of measure (AF, MG , or CCF)** must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3.

NOTES:

SB X7-7 Table 4-A: 2020 Volume Entering the Distribution System(s), Meter Error Adjustment

Complete one table for each source.

Name of Source	Groundwater - Main San Gabriel Basin
This water source is *(check one)* **:**	
☑	The supplier's own water source
☐	A purchased or imported source

Compliance Year 2020	Volume Entering Distribution System [1]	Meter Error Adjustment [2] *Optional* (+/-)	Corrected Volume Entering Distribution System
	27,379	-	27,379

[1] ***Units of measure (AF, MG , or CCF)*** *must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3.*

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

NOTES

SB X7-7 Table 4-A: 2020 Volume Entering the Distribution System(s)
Meter Error Adjustment
Complete one table for each source.

Name of Source	Groundwater - Central Basin
This water source is *(check one)* **:**	
☑	The supplier's own water source
☐	A purchased or imported source

Compliance Year 2020	Volume Entering Distribution System [1]	Meter Error Adjustment [2] *Optional (+/-)*	Corrected Volume Entering Distribution System
	1,562		1,562

[1] ***Units of measure (AF, MG , or CCF)*** *must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3.*

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

NOTES:

SB X7-7 Table 4-A: 2020 Volume Entering the Distribution System(s),
Meter Error Adjustment
Complete one table for each source.

Name of Source	All Imported Supplies
This water source is *(check one)* **:**	
☐	The supplier's own water source
☑	A purchased or imported source

Compliance Year 2020	Volume Entering Distribution System [1]	Meter Error Adjustment [2] *Optional (+/-)*	Corrected Volume Entering Distribution System
	16,449		16,449

[1] ***Units of measure (AF, MG , or CCF)*** *must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3.*

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

NOTES:

SB X7-7 Table 5: 2020 Gallons Per Capita Per Day (GPCD)		
2020 Gross Water *Fm SB X7-7 Table 4*	**2020 Population** *Fm SB X7-7 Table 3*	**2020 GPCD**
45,389	298,367	**136**
NOTES:		

SB X7-7 Table 9: 2020 Compliance							
Actual 2020 GPCD[1]	Optional Adjustments to 2020 GPCD (Enter "0" if Adjustment Not Used)			TOTAL Adjustments[1]	Adjusted 2020 GPCD [1] *(Adjusted if applicable)*	2020 Confirmed Target GPCD [1, 2]	**Did Supplier Achieve Targeted Reduction for 2020?**
	Extraordinary Events[1]	Weather Normalization[1]	Economic Adjustment[1]				
136	-	-	-	-	136	142	**YES**

[1] *All values are reported in GPCD*

[2] ***2020 Confirmed Target GPCD*** *is taken from the Supplier's SB X7-7 Verification Form Table SB X7-7, 7-F.*

NOTES:

Suburban
Water Systems
A SouthWest Water Company

Appendix C: 60-Day Notification of Public Hearing

Suburban Water Systems | 2020 Urban Water Management Plan

Suburban
Water Systems
A SouthWest Water Company

1325 N. Grand Avenue
Suite 100
Covina, CA 91724-4044
Phone 626.543.2500
Fax 626.331.4848
www.swwc.com

April 6, 2021

Aaron France, City Manager
City Manager's Office
City of Buena Park
6650 Beach Boulevard, Second Floor
Buena Park, CA 90622

Re: Notice of Preparation for Suburban Water System's Urban Water Management Plan and Public Hearing

Dear Mr. France,

Suburban Water Systems (Suburban) is currently in the process of reviewing its Urban Water Management Plan (UWMP) for the upcoming 2020 Update. The Urban Water Management Planning Act requires every urban water supplier, which provides water directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually, to prepare and adopt an UWMP and periodically update that plan at least once every five years. The UWMP is a planning document and a source document to direct urban water suppliers to evaluate and compare their water supply and reliability to their existing water conservation efforts. Suburban is currently in the process of preparing the 2020 UWMP Update.

As an urban water supplier, Suburban is required pursuant to Section 10621 of the UWMP Act to notify all cities or counties within our service area that we will be reviewing the UWMP Act and will make amendments and changes, as appropriate. Suburban water will also be updating its Water Shortage Contingency Plan (WSCP)

You are invited to submit comments in anticipation of the development of our 2020 UWMP. Please email any comments you have to Paul DiMaggio at pdimaggio@swwc.com

The 2020 UWMP and WSCP is scheduled for a virtual public hearing and adoption on June 08, 2021. Information about the meeting is below:

> Topic: 2020 UWMP Virtual Public Hearing and Adoption:
> Date: June 08, 2021
> Time: 4:00pm to 5:00pm
> Join via desktop: Click here to join the meeting
> Join via phone**:** +1 682-324-9419,,293115747#

The Draft UWMP, including the WSCP, will be made available on Suburban's website, https://www.swwc.com/suburban/. An electronic copy may also be requested by email to pdimaggio@swwc.com. In accordance with Section 10621, Suburban Water Systems will provide you with a copy of the 2020 UWMP within 30 days after submission to the Department of Water Resources. If you have any questions regarding the update of the UWMP please call me at (626) 221-4500.

Sincerely,

Paul DiMaggio
Production Manager
Suburban Water Systems

Suburban
Water Systems
A SouthWest Water Company

1325 N. Grand Avenue
Suite 100
Covina, CA 91724-4044
Phone 626.543.2500
Fax 626.331.4848
www.swwc.com

April 6, 2021

Chris Marcarello, City Manager
City of Covina
125 E. College Street
Covina, CA 91723-2199

Re: Notice of Preparation for Suburban Water System's Urban Water Management Plan and Public Hearing

Dear Mr. Marcarello,

Suburban Water Systems (Suburban) is currently in the process of reviewing its Urban Water Management Plan (UWMP) for the upcoming 2020 Update. The Urban Water Management Planning Act requires every urban water supplier, which provides water directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually, to prepare and adopt an UWMP and periodically update that plan at least once every five years. The UWMP is a planning document and a source document to direct urban water suppliers to evaluate and compare their water supply and reliability to their existing water conservation efforts. Suburban is currently in the process of preparing the 2020 UWMP Update.

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Sincerely,

Paul DiMaggio
Production Manager
Suburban Water Systems

Suburban
Water Systems
A SouthWest Water Company

1325 N. Grand Avenue
Suite 100
Covina, CA 91724-4044
Phone 626.543.2500
Fax 626.331.4848
www.swwc.com

April 6, 2021

Adam Raymond, City Manager
City of Glendora
116 East Foothill Boulevard
Glendora, California 91741-3380

Re: Notice of Preparation for Suburban Water System's Urban Water Management Plan and Public Hearing

Dear Mr. Raymond,

Suburban Water Systems (Suburban) is currently in the process of reviewing its Urban Water Management Plan (UWMP) for the upcoming 2020 Update. The Urban Water Management Planning Act requires every urban water supplier, which provides water directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually, to prepare and adopt an UWMP and periodically update that plan at least once every five years. The UWMP is a planning document and a source document to direct urban water suppliers to evaluate and compare their water supply and reliability to their existing water conservation efforts. Suburban is currently in the process of preparing the 2020 UWMP Update.

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April 6, 2021

Troy Helling, City Manager
City of Industry
15625 EAST STAFFORD STREET #100
CITY OF INDUSTRY, CA 91744

Re: Notice of Preparation for Suburban Water System's Urban Water Management Plan and Public Hearing

Dear Mr. Helling,

Suburban Water Systems (Suburban) is currently in the process of reviewing its Urban Water Management Plan (UWMP) for the upcoming 2020 Update. The Urban Water Management Planning Act requires every urban water supplier, which provides water directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually, to prepare and adopt an UWMP and periodically update that plan at least once every five years. The UWMP is a planning document and a source document to direct urban water suppliers to evaluate and compare their water supply and reliability to their existing water conservation efforts. Suburban is currently in the process of preparing the 2020 UWMP Update.

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Covina, CA 91724-4044
Phone 626.543.2500
Fax 626.331.4848
www.swwc.com

April 6, 2021

Jim Sadro, City Manager
City of La Habra
201 E. La Habra Blvd.
La Habra, CA 90631

Re: Notice of Preparation for Suburban Water System's Urban Water Management Plan and Public Hearing

Dear Mr. Sadro,

Suburban Water Systems (Suburban) is currently in the process of reviewing its Urban Water Management Plan (UWMP) for the upcoming 2020 Update. The Urban Water Management Planning Act requires every urban water supplier, which provides water directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually, to prepare and adopt an UWMP and periodically update that plan at least once every five years. The UWMP is a planning document and a source document to direct urban water suppliers to evaluate and compare their water supply and reliability to their existing water conservation efforts. Suburban is currently in the process of preparing the 2020 UWMP Update.

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Covina, CA 91724-4044
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Fax 626.331.4848
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April 6, 2021

Jeff Boynton, City Manager
City of La Mirada
13700 La Mirada Blvd
La Mirada,CA 90638

Re: Notice of Preparation for Suburban Water System's Urban Water Management Plan and Public Hearing

Dear Mr. Boynton,

Suburban Water Systems (Suburban) is currently in the process of reviewing its Urban Water Management Plan (UWMP) for the upcoming 2020 Update. The Urban Water Management Planning Act requires every urban water supplier, which provides water directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually, to prepare and adopt an UWMP and periodically update that plan at least once every five years. The UWMP is a planning document and a source document to direct urban water suppliers to evaluate and compare their water supply and reliability to their existing water conservation efforts. Suburban is currently in the process of preparing the 2020 UWMP Update.

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April 6, 2021

Bob Lindsey, City Manager
City of La Puente
15900 E. Main Street
La Puente, CA 91744

Re: Notice of Preparation for Suburban Water System's Urban Water Management Plan and Public Hearing

Dear Mr. Lindsey,

Suburban Water Systems (Suburban) is currently in the process of reviewing its Urban Water Management Plan (UWMP) for the upcoming 2020 Update. The Urban Water Management Planning Act requires every urban water supplier, which provides water directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually, to prepare and adopt an UWMP and periodically update that plan at least once every five years. The UWMP is a planning document and a source document to direct urban water suppliers to evaluate and compare their water supply and reliability to their existing water conservation efforts. Suburban is currently in the process of preparing the 2020 UWMP Update.

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Suburban Water Systems

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1325 N. Grand Avenue
Suite 100
Covina, CA 91724-4044
Phone 626.543.2500
Fax 626.331.4848
www.swwc.com

April 6, 2021

David Carmany, City Manager
City of West Covina
1444 West Garvey Avenue South, Room 305
West Covina, CA 91790

Re: Notice of Preparation for Suburban Water System's Urban Water Management Plan and Public Hearing

Dear Mr. Carmany,

Suburban Water Systems (Suburban) is currently in the process of reviewing its Urban Water Management Plan (UWMP) for the upcoming 2020 Update. The Urban Water Management Planning Act requires every urban water supplier, which provides water directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually, to prepare and adopt an UWMP and periodically update that plan at least once every five years. The UWMP is a planning document and a source document to direct urban water suppliers to evaluate and compare their water supply and reliability to their existing water conservation efforts. Suburban is currently in the process of preparing the 2020 UWMP Update.

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Fax 626.331.4848
www.swwc.com

April 6, 2021

Brian Saeki, City Manager
City of Whittier
13230 Penn Street
Whittier, CA 90602

Re: Notice of Preparation for Suburban Water System's Urban Water Management Plan and Public Hearing

Dear Mr. Saeki,

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1325 N. Grand Avenue
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Covina, CA 91724-4044
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April 6, 2021

Amy J. Bodek, Director, Director of Planning
Los Angeles County
320 West Temple Street, 13th Floor
Los Angeles, California 90012

Re: Notice of Preparation for Suburban Water System's Urban Water Management Plan and Public Hearing

Dear Ms. Bodek,

Suburban Water Systems (Suburban) is currently in the process of reviewing its Urban Water Management Plan (UWMP) for the upcoming 2020 Update. The Urban Water Management Planning Act requires every urban water supplier, which provides water directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually, to prepare and adopt an UWMP and periodically update that plan at least once every five years. The UWMP is a planning document and a source document to direct urban water suppliers to evaluate and compare their water supply and reliability to their existing water conservation efforts. Suburban is currently in the process of preparing the 2020 UWMP Update.

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April 6, 2021

James Treadaway, Director of Public Works
Orange County
300 N. Flower Street
Santa Ana, CA, 92703

Re: Notice of Preparation for Suburban Water System's Urban Water Management Plan and Public Hearing

Dear Mr. Treadaway,

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Phone 626.543.2500
Fax 626.331.4848
www.swwc.com

April 6, 2021

Dan Buckshi, City Manager
City of Walnut
21201 La Puente Road
P.O. Box 682
Walnut, CA 91789

Re: Notice of Preparation for Suburban Water System's Urban Water Management Plan and Public Hearing

Dear Mr. Buckshi,

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Paul DiMaggio
Production Manager
Suburban Water Systems

Suburban
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A SouthWest Water Company

Appendix D: Two-Week & One-Week Notification of Public Hearing

Suburban Water Systems | 2020 Urban Water Management Plan

San Gabriel Valley Tribune
Affilated with SGV Newspaper Group
605 E. Huntington Drive, Suite 100
Monrovia, CA 91016

626-544-0917
john.thompson@sgvn.com

5036849

SUBURBAN WATER SYSTEMS
1325 N. Grand Avenue, Suite 100
Covina, California 91724

FILE NO. ADVERTISEMENT NTC 12 13 109 PAPE
PROOF OF PUBLICATION

(2015.5 C.C.P.)

STATE OF CALIFORNIA
County of Los Angeles

I am a citizen of the United States, and a resident of the county aforesaid; I am over the age of eighteen years, and not a party to or interested in the above-entitled matter. I am the principal clerk of the printer of the SAN GABRIEL VALLEY TRIBUNE, a newspaper of general circulation which has been adjudicated as a newspaper of general circulation by the Superior Court of the County of Los Angeles, State of California, on the date of September 10, 1957, Case Number 684891. The notice, of which the annexed is a true printed copy, has been published in each regular and entire issue of said newspaper and not in any supplement thereof on the following dates, to wit:

06/03/2021, 06/10/2021

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

Executed at Monrovia, LA Co. California
On this 16th day of June, 2021.

John Thompson
Signature

r.LP4-10/11/12

(Space below for use of County Clerk Only)

Legal No. **0011466406**

Suburban Water Systems
Notice of a Public Hearing

PLEASE TAKE NOTICE THAT:

Suburban Water Systems will hold a public hearing for the adoption of its 2020 Urban Water Management Plan (UWMP) and adoption of its 2020 Water Shortage Contingency Plan (WSCP):

Date: 6/17/2021
Time: 5:00pm to 6:00pm
Call in number: 1-682-324-9419
Call in code: 293115747#

The UWMP and WSCP are available on the company website at https://www.swwc.com/suburban/

Whittier Daily News
Affilated with SGV Newspaper Group
605 E. Huntington Drive, Suite 100
Monrovia, CA 91016

626-544-0917
john.thompson@sgvn.com

5036849

SUBURBAN WATER SYSTEMS
1325 N. Grand Avenue, Suite 100
Covina, California 91724

FILE NO. ADVERTISEMENT NTC 12 13 109 PAPE
PROOF OF PUBLICATION

(2015.5 C.C.P.)

STATE OF CALIFORNIA
County of Los Angeles

I am a citizen of the United States, and a resident of the county aforesaid; I am over the age of eighteen years, and not a party to or interested in the above-entitled matter. I am the principal clerk of the printer of the WHITTIER DAILY NEWS, a newspaper of general circulation which has been adjudicated as a newspaper of general circulation by the Superior Court of the County of Los Angeles, State of California, on the date of September 10, 1957, Case Number 684891. The notice, of which the annexed is a true printed copy, has been published in each regular and entire issue of said newspaper and not in any supplement thereof on the following dates, to wit:

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Newspaper : San Gabriel Valley Tribune Advertiser : SUBURBAN WATER SYSTEMS
Issue Date : 06/03/2021 Ad Number : 001146640601

CORONAVIRUS DAILY TRACKER

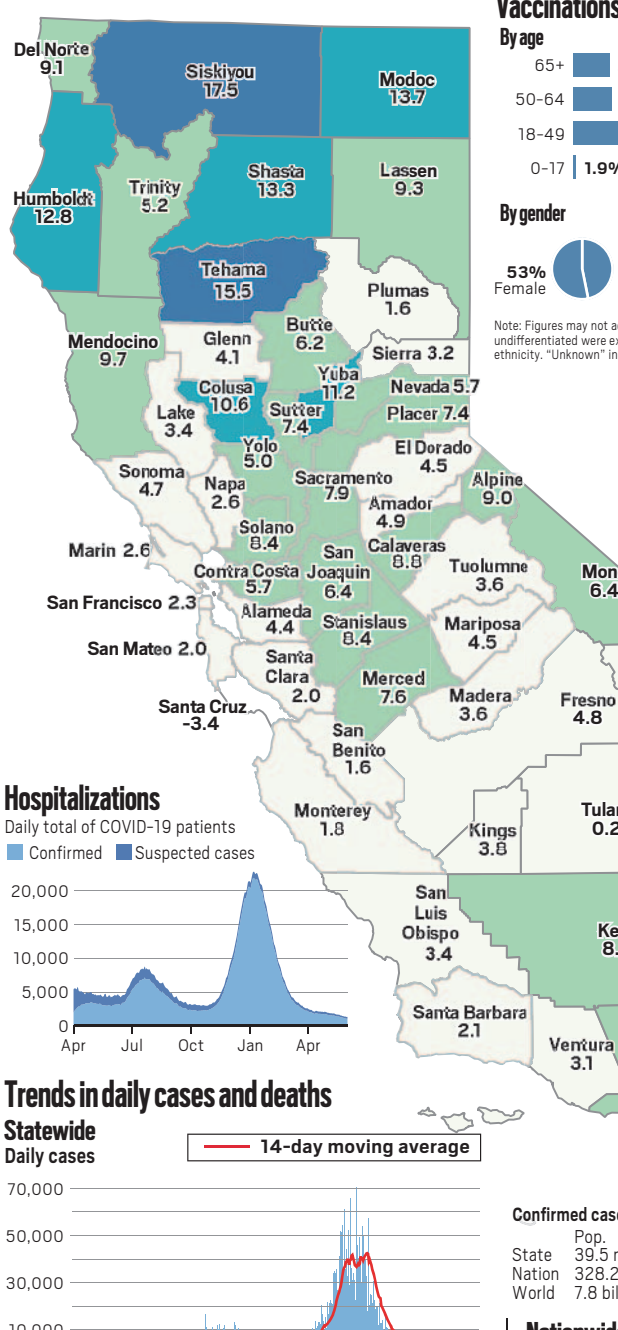
By JEFF GOERTZEN and KURT SNIBBE | Southern California News Group jgoertzen@scng.com
Data reporting by HARRIET ROWAN | Bay Area News Group hrowan@bayareanewsgroup.com

Data as of June 1

New cases rate

New cases per 10,000 people in the past 14 days: <0 cases; 0-4.9; 5-10.9; 10-14.9; 15-19.9; 20 or more

CASES 3,763,135 — 1,576 new cases
DEATHS 62,953 — 25 new deaths
HOSPITALIZATIONS 1,330 patients — 2 fewer patients
VACCINATIONS Since Dec. 15: 37 million Administered; 17.2 million People fully vaccinated; 42.8% % of population fully vaccinated



Vaccinations

Breakdown of Californians who are fully vaccinated since Dec. 15 by age, gender and race/ethnicity

By age

65+	24.8%
50-64	26.5%
18-49	46.8%
0-17	1.9%

By gender

53% Female; Male 46.7%

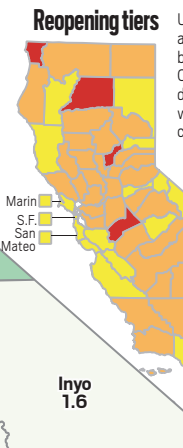
By race/ethnicity

White	37.5%
Latino	26%
Asian	17.4%
Other race	8.4%
Unknown	4.8%
Black or African American	3.8%
Multiracial	1.3%
Native Hawaiian or other Pacific Islander	0.5%
American Indian or Alaska native	0.3%

Note: Figures may not add up to 100% due to rounding. For gender, those whose gender was unknown or undifferentiated were excluded. For race/ethnicity, "other" means those who don't fall under any listed race or ethnicity. "Unknown" includes those who declined to state or whose race and ethnicity information is missing.

Reopening tiers

Under this program, California assigns each county to a tier, based on the prevalence of COVID-19 in the community, that determines how tightly businesses will be restricted. Details at: covid19.ca.gov/safer-economy



Tier: 1. Widespread; 2. Substantial; 3. Moderate; 4. Minimal (Higher ↑ / Lower ↓)
Transmission risk and restrictions

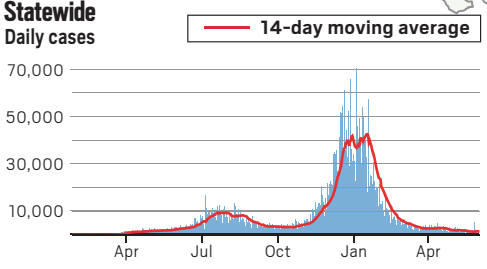
NOTE: Negative case rates mean that the total cases reported yesterday are lower than two weeks before.

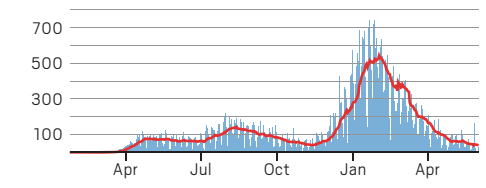
Hospitalizations

Daily total of COVID-19 patients

Trends in daily cases and deaths

Statewide





Confirmed cases per population

	Pop.	% infected
State	39.5 million	9.38%
Nation	328.2 million	10.06%
World	7.8 billion	2.23%

California*

County	Total Cases	Total Deaths	New Cases	New Deaths	Total cases per 10K	Hospitalizations: Confirmed/ suspected patients	Hospitalizations: In ICU	Vaccinations: No. fully vaccinated (1,000)	Vaccinations: % of pop.
Alameda	88,955	1,693	26	0	528	68	16	908.7	53.9%
Alpine	89	0	0	0	797	NA	NA	0.7	61.0%
Amador	3,652	47	3	0	948	2	1	13.2	34.4%
Butte	12,050	190	33	1	553	8	1	74.3	34.1%
Calaveras	2,184	56	10	0	493	0	0	15.7	35.5%
Colusa	2,265	18	0	0	1,003	0	0	6.9	30.5%
Contra Costa	69,693	799	17	0	601	41	8	629.3	54.2%
Del Norte	1,434	7	3	0	520	2	0	7.9	28.7%
El Dorado	10,304	113	8	0	534	1	0	75.0	38.9%
Fresno	102,507	1,706	70	1	993	56	13	345.6	33.5%
Glenn	2,352	27	3	1	801	0	0	9.1	31.0%
Humboldt	4,323	43	38	0	322	13	2	56.3	42.0%
Imperial	26,143	730	0	0	1,364	9	0	71.6	37.3%
Inyo	1,431	38	0	0	775	0	0	7.7	41.7%
Kern	110,147	1,389	16	0	1,188	43	9	262.6	28.3%
Kings	23,076	247	-1	0	1,475	4	1	33.4	21.4%
Lake	3,498	45	6	2	539	0	0	22.3	34.4%
Lassen	5,746	24	7	0	1,911	1	0	6.1	20.3%
Los Angeles	1,244,161	24,346	107	3	1,213	313	52	4,431.5	43.2%
Madera	16,448	245	18	1	1,027	6	0	49.7	31.0%
Marin	14,153	213	9	0	543	4	1	164.9	63.2%
Mariposa	458	7	4	0	257	0	0	4.5	25.5%
Mendocino	4,223	49	26	0	478	7	6	38.5	43.5%
Merced	32,168	470	26	1	1,119	7	3	69.3	24.1%
Modoc	514	4	0	0	542	0	0	2.5	26.5%
Mono	1,294	4	0	0	927	0	0	7.2	51.7%
Monterey	43,747	385	8	0	975	7	1	186.6	41.6%
Napa	9,936	81	7	0	711	2	1	73.8	52.8%
Nevada	4,821	75	9	0	488	3	1	39.3	39.8%
Orange	255,291	5,065	50	0	791	66	14	1,456.3	45.1%
Placer	23,042	297	38	0	575	38	7	169.2	42.3%
Plumas	723	6	0	0	381	0	0	7.2	38.1%
Riverside	300,732	4,608	31	0	1,218	51	10	843.0	34.2%
Sacramento	106,473	1,709	208	2	679	83	19	609.7	38.9%
San Benito	6,088	63	0	0	951	0	0	25.3	39.5%
San Bernardino	298,545	4,560	256	5	1,346	74	17	691.0	31.2%
San Diego	280,304	3,756	51	0	832	115	45	1,583.2	47.0%
San Francisco	36,694	546	24	1	411	18	7	524.6	58.8%
San Joaquin	73,899	1,419	105	0	944	32	9	247.0	31.6%
San Luis Obispo	21,327	261	12	0	765	3	0	122.4	43.9%
San Mateo	42,093	576	24	0	541	12	3	436.1	56.1%
Santa Barbara	34,498	451	10	1	756	6	3	201.6	44.2%
Santa Clara	119,094	2,142	20	0	605	57	14	1,100.1	55.9%
Santa Cruz	16,182	206	13	0	591	1	0	139.5	50.9%
Shasta	12,445	230	36	1	699	13	5	49.9	28.0%
Sierra	113	0	0	0	363	NA	NA	1.3	41.9%
Siskiyou	2,359	33	7	0	537	2	1	13.1	29.8%
Solano	33,397	243	104	5	752	29	5	175.8	39.6%
Sonoma	30,336	315	0	0	611	9	2	258.3	52.0%
Stanislaus	56,228	1,066	49	0	1,000	74	14	173.7	30.9%
Sutter	9,543	106	16	0	902	0	0	32.5	30.7%
Tehama	5,692	59	14	0	864	4	0	14.7	22.3%
Trinity	411	5	0	0	308	0	0	3.8	28.3%
Tulare	49,918	846	-16	0	1,030	10	3	139.8	28.9%
Tuolumne	4,170	67	2	0	797	1	1	19.7	37.6%
Ventura	81,382	1,018	38	0	954	28	4	392.4	46.0%
Yolo	13,995	208	13	0	626	3	0	96.6	43.2%
Yuba	6,389	41	18	0	806	4	0	19.3	24.3%
California	3,763,135	62,953	1,576	25	938	1,330	299	17,161	42.8%

*** NOTE:** California data is collected daily from county public health departments by this news organization and reflects the final totals reported two days prior to publication. Negative numbers of new cases or new deaths indicate adjustments and corrections from the reporting entities.

U.S.

State	Total Cases	Total Deaths	New Cases	New Deaths	Cases/ 10K
Ala.	544,045	11,156	640	10	1,105
Alaska	70,319	369	111	0	962
Ariz.	881,454	17,628	4	0	1,188
Ark.	341,450	5,834	69	1	1,127
Calif.*	3,763,135	62,953	1,576	25	938
Colo.	543,581	6,579	407	-1	936
Conn.	347,563	8,244	222	6	977
Del.	108,894	1,661	28	0	1,103
D.C.	49,000	1,134	102	2	687
Fla.	2,326,755	36,869	5,937	95	1,071
Ga.	1,124,080	20,838	239	1	1,050
Hawaii	36,332	500	56	0	258
Idaho	192,305	2,090	293	0	1,053
Ill.	1,382,505	25,233	404	10	1,098
Ind.	744,213	13,628	517	8	1,102
Iowa	371,478	6,057	54	2	1,174
Kan.	315,334	5,077	3	0	1,082
Ky.	458,712	7,067	437	285	1,025
La.	471,663	10,592	978	16	1,015
Maine	67,819	825	32	0	502
Md.	459,995	9,616	101	2	760
Mass.	707,131	17,883	186	11	1,026
Mich.	992,925	20,389	984	13	996
Minn.	601,517	7,520	133	1	1,063
Miss.	317,755	7,318	42	2	1,071
Mo.	606,670	9,499	181	1	986
Mont.	111,844	1,613	15	0	1,035
Neb.	223,404	2,249	36	0	1,153
Nev.	324,262	5,590	514	4	1,033
N.H.	98,767	1,353	41	0	723
N.J.	1,016,490	26,219	158	7	1,144
N.M.	203,151	4,264	330	1	964
N.Y.	2,102,869	53,329	465	26	1,087
N.C.	1,003,243	13,101	2,089	23	946
N.D.	109,962	1,543	18	0	1,437
Ohio	1,102,556	19,861	622	0	943
Okla.	453,243	7,291	466	0	1,139
Ore.	201,650	2,674	175	3	475
Pa.	1,204,598	27,204	913	3	942
R.I.	151,844	2,712	101	4	1,436
S.C.	593,262	9,736	0	0	1,137
S.D.	124,191	2,014	0	0	1,391
Tenn.	863,004	12,456	603	15	1,253
Texas	2,954,084	51,525	675	17	1,006
Utah	406,282	2,302	112	0	1,250
Vt.	24,224	255	4	0	389
Va.	675,597	11,194	59	8	786
Wash.	436,984	5,789	1,135	24	568
W.V.	161,858	2,797	571	5	907
Wis.	674,480	7,875	60	19	1,156
Wyo.	60,374	720	230	1	1,037
U.S.	33,136,694	592,533	22,956	637	1,006

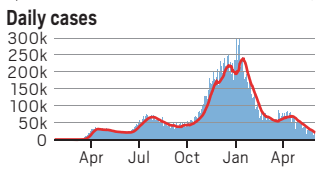
World

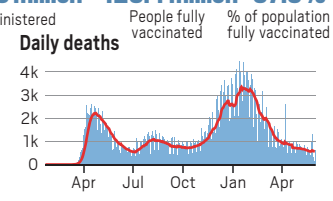
Top 10 countries by case

Country	Total Cases	Total Deaths	New Cases	New Deaths
1. U.S.	33,136,694	592,533	22,956	637
2. India	28,307,832	335,102	132,788	3,207
3. Brazil	16,624,480	465,199	78,926	2,408
4. France	5,738,641	109,824	9,853	134
5. Turkey	5,256,516	47,656	7,112	129
6. Russia	5,022,881	119,830	9,369	366
7. U.K.	4,506,333	128,045	3,102	NA
8. Italy	4,220,304	126,221	2,483	93
9. Argentina	3,817,139	78,733	35,355	640
10. Germany	3,692,908	88,781	2,987	180

Nationwide

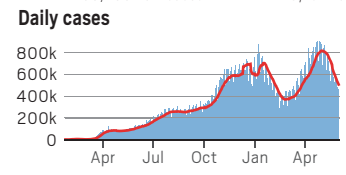
CASES 33,136,694 — 22,956 new cases
DEATHS 592,533 — 637 new deaths
VACCINATIONS Since Dec. 14: 292.6 million Administered; 123.4 million People fully vaccinated; 37.5% % of population fully vaccinated

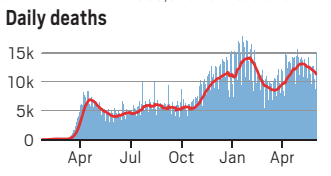




Worldwide

CASES 171,184,588 — 463,455 new cases
DEATHS 3,565,105 — 15,101 new deaths
RECOVERIES 108,310,596 — 583,600 new recoveries





Sources: State data is from the California Department of Public Health and county health departments. Unless noted, national and world data is from Johns Hopkins University.

Suburban Water Systems Notice of a Public Hearing

PLEASE TAKE NOTICE THAT:

Suburban Water Systems will hold a public hearing for the adoption of its 2020 Urban Water Management Plan (UWMP) and adoption of its 2020 Water Shortage Contingency Plan (WSCP):

Date: 6/17/2021
Time: 5:00pm to 6:00pm
Call in number: 1-682-324-9419
Call in code: 293115747#

The UWMP and WSCP are available on the company website at https://www.swwc.com/suburban/

L.A. County

FROM PAGE 3

Football Club. The contest is open to anyone receiving a first dose, or people receiving a second dose who bring another person with them to be vaccinated.

In Long Beach, which has its own health department, will offer its residents a chance to win either a two-night hotel stay, a $50 cash card or a $50 gift card for Fandango, Target or Walmart if they get vaccinated by Saturday. That contest is open to anyone who comes in for their first dose of vaccine. Long Beach officials said that since they began offering incentives last month, vaccine appointments have doubled.

On Friday, the state will hold the second and final drawing to award $50,000 cash prizes to another 15 vaccinated California residents. The first 15 winners were chosen Friday.

On Tuesday, June 15 — the day the state will lift the majority of its COVID-19 restrictions — the names of 10 vaccinated California residents will be chosen to win $1.5 million each.

The push for people to get vaccinated has intensified as Tuesday's economic-reopening date nears. So far, 65% of California residents have received at least one dose of vaccine, while 53% are fully vaccinated, said Dr. Mark Ghaly, the state's Health and Human Services secretary. The rate of people receiving at least one dose is likely higher, with federal health authorities putting the estimate at more than 70%, Ghaly said.

According to statistics released Monday, 65% of the county's population age 16 and over have received at least one dose of COVID-19 vaccine, while 54% — or roughly 4.5 million people — are fully vaccinated.

As of Wednesday, 53.6% of Long Beach residents had received at least one dose.

Long Beach Mayor Robert Garcia, during a Wednesday morning press conference, said 66% of eligible adults have been vaccinated and that he thinks the city will reach 70% by July 4.

Garcia gathered with the leaders of his city's hospitals on Wednesday to speak about how far the city — and the rest of the country — have come since the vaccinations came online.

In December, for example, MemorialCare Long Beach Medical Center had around 220 patients being treated for the virus. There were three patients being treated for the virus as of Wednesday.

"It's hard to believe that just six months ago, we all stood at the forefront of hope," said Long Beach Memorial Medical Center CEO John Bishop. "A hope that the vaccines would help bring a city back from the grips of the COVID-19 pandemic.

"We saw our very worst last December," he added. "The surge was at its peak and almost every one of our hospital units had someone fighting for their life against this terrible disease."

Ghaly, meanwhile, unveiled on Wednesday the state's long-awaiting mask-wearing guidelines that will take effect Tuesday in conjunction with the economic reopening. And Los Angeles County health officials — who are always authorized to enact stricter measures than the state — said they would align fully with the California masking guidelines.

The guidelines in general will allow fully vaccinated people to shed their masks in most situations, except while on public transit or in transportation hubs such as airports or train stations; while indoors at K-12 schools, child-care facilities or other youth settings; at health-care and long-term care facilities; at correctional facilities; and at homeless and emergency shelters.

Unvaccinated people will still be required to wear masks at indoor public settings and businesses, including retail stores, restaurants, movie theaters and family entertainment centers. Some businesses and event venues will retain the option of requiring all customers and patrons to wear masks, regardless of their vaccination status.

"We appreciate the hard work of everyone to keep each other safe and healthy," LA County Public Health Director Barbara Ferrer said in a statement. "Your efforts make it possible for us to look forward to a full re-opening next week. With the retiring of most distancing and capacity restrictions, businesses will be able to return to their customary activities.

"The remaining public health safety measures of appropriate masking (are) critically important to protect those who are unvaccinated," she added. "We urge everyone who is unvaccinated to continue to wear their mask while at indoor public settings and businesses and when at outdoor mega events. And we ask all who are fully vaccinated to wear a face covering as required when using public transit, indoors at schools, camps and childcare, at healthcare settings and high risk congregate housing facilities.

For residents or businesses owners who have questions about the economic reopening, the county Department of Public Health will hold a virtual town hall at 6 p.m. Thursday. The event will stream on the agency's Facebook, Twitter and YouTube channels. Information: tinyurl.com/AskReopeningTownHall.

Ferrer on Tuesday presented the Board of Supervisors with COVID-19 statistics from five states that eased their mask-wearing rules when the CDC announced its new guidance last month. All five of those states — Illinois, Michigan, New Mexico, New York and Washington — have vaccination rates above 57%, roughly the same as Los Angeles County, and all have continued to see declining case rates, Ferrer said.

The county's vaccination efforts are shifting more toward mobile and community sites, rather than large-scale vaccine locations. The county will have 237 mobile vaccination teams fanned across the area this week, the most in a single week to date.

The county on Monday began phasing out its large-scale vaccination sites. The large site at Cal State Northridge closed at the end of the day, with operations shifting to the Balboa Sports Complex in Encino.

The other large-scale sites run by the county — at the Forum in Inglewood, the Pomona Fairplex and the county Office of Education in Downey —will close at the end of the day Sunday. Beginning Tuesday, smaller sites will be opened at:

- Ted Watkins Memorial Park, 1335 E. 103rd St., Los Angeles.
- Commerce Senior Citizens Center, 2555 Commerce Way.
- Norwalk Arts & Sports Complex, 13000 Clarkdale Ave.

Those three sites will operate from 11 a.m. to 6 p.m. Tuesdays through Saturdays.

Four more COVID-19 deaths were reported by the county on Wednesday, lifting the county's overall death toll to 24,408.

Another 202 new cases were also confirmed, raising the cumulative number from throughout the pandemic to 1,245,588.

According to state figures, there were 244 people hospitalized due to COVID-19 in the county as of Wednesday, up from 243 on Tuesday, with 45 people in intensive care, up from 40 a day earlier.

Long Beach reported one additional death Wednesday, bringing the total to 942. It also reported three new cases; 53,468 cases have been reported in Long Beach since the pandemic began.

Pasadena, which also has its own health department, reported no new deaths and three new cases Wednesday. So far, the city has reported 349 deaths and 11,303 cases.

Staff writer Hunter Lee contributed to this report.

TERRY PIERSON—STAFF PHOTOGRAPHER

Nurses prepares to give Pfizer BioNTech COVID-19 vaccines to people who had appointments at the Pomona Fairplex in January. The large-scale vaccination site will close at the end of the day Sunday.

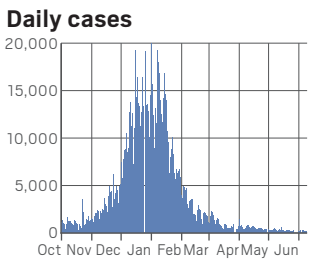
L.A. County coronavirus cases

CASES
1,245,588
202 new cases

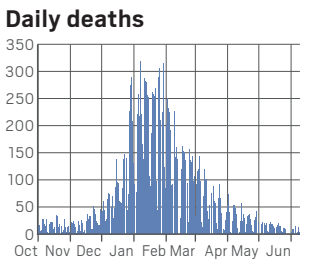
DEATHS
24,408
Four new deaths

HOSPITALIZATIONS
243
17% in ICUs
11 more patients since Tuesday

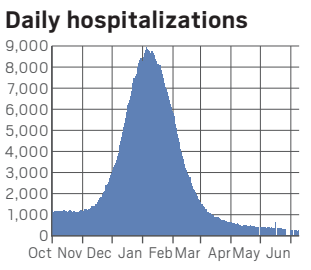
Daily cases



Daily deaths

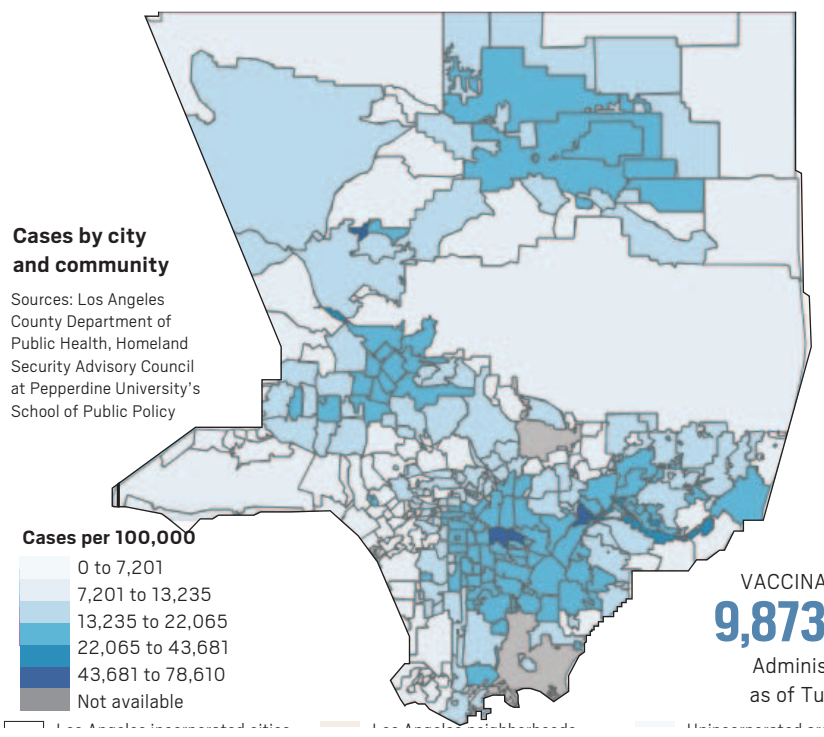


Daily hospitalizations



Cases by city and community

Sources: Los Angeles County Department of Public Health, Homeland Security Advisory Council at Pepperdine University's School of Public Policy



VACCINATIONS
9,873,249
Administered as of Tuesday

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CORONAVIRUS DAILY TRACKER

By JEFF GOERTZEN and KURT SNIBBE | *Southern California News Group jgoertzen@scng.com*
Data reporting by HARRIET ROWAN | *Bay Area News Group hrowan@bayareanewsgroup.com*

Data as of June 1

New cases rate

New cases per 10,000 people in the past 14 days

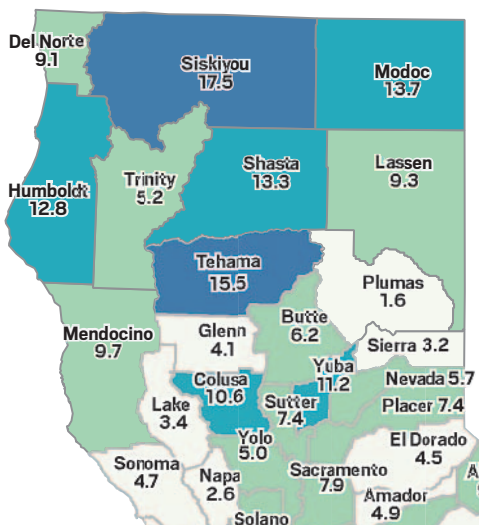
<0 cases
0-4.9
5-10.9
10-14.9
15-19.9
20 or more

CASES **3,763,135** 1,576 new cases

DEATHS **62,953** 25 new deaths

HOSPITALIZATIONS **1,330** patients, 2 fewer patients

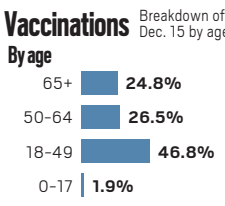
VACCINATIONS Since Dec. 15
37 million Administered
17.2 million People fully vaccinated
42.8% % of population fully vaccinated



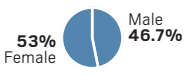
Vaccinations

Breakdown of Californians who are fully vaccinated since Dec. 15 by age, gender and race/ethnicity

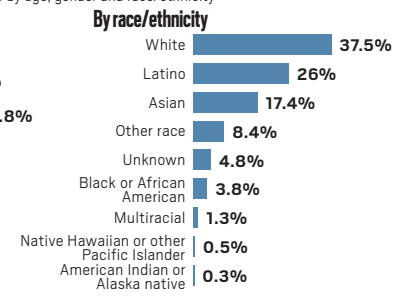
By age



By gender



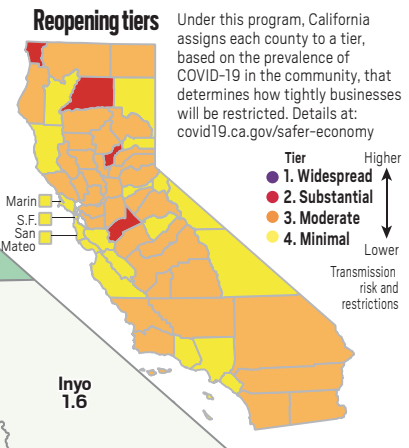
By race/ethnicity



Note: Figures may not add up to 100% due to rounding. For gender, those whose gender was unknown or undifferentiated were excluded. For race/ethnicity, "other" means those who don't fall under any listed race or ethnicity. "Unknown" includes those who declined to state or whose race and ethnicity information is missing.

Reopening tiers

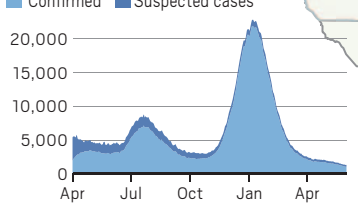
Under this program, California assigns each county to a tier, based on the prevalence of COVID-19 in the community, that determines how tightly businesses will be restricted. Details at: covid19.ca.gov/safer-economy



NOTE: Negative case rates mean that the total cases reported yesterday are lower than two weeks before.

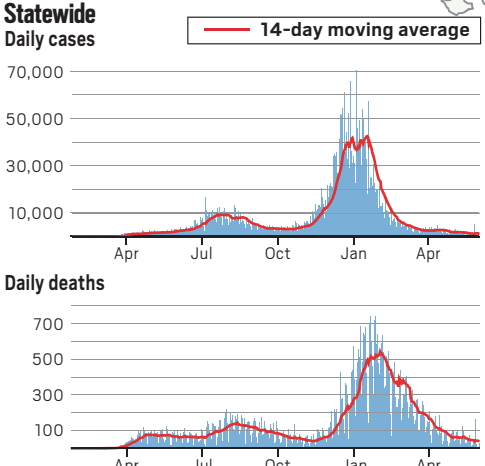
Hospitalizations

Daily total of COVID-19 patients



Trends in daily cases and deaths

Statewide

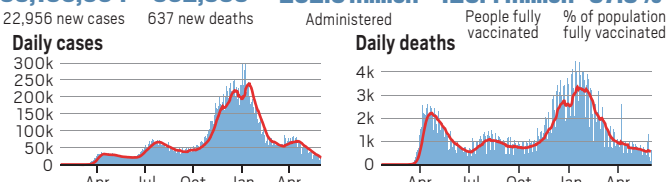


Confirmed cases per population

	Pop.	% infected
State	39.5 million	9.38%
Nation	328.2 million	10.06%
World	7.8 billion	2.23%

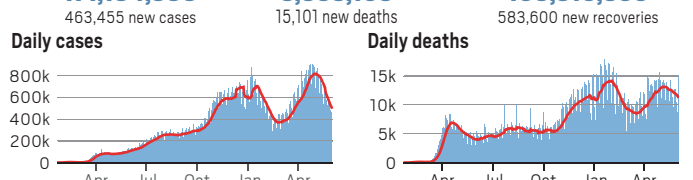
Nationwide

CASES **33,136,694** 22,956 new cases
DEATHS **592,533** 637 new deaths
VACCINATIONS Since Dec. 14
292.6 million Administered
123.4 million People fully vaccinated
37.5% % of population fully vaccinated



Worldwide

CASES **171,184,588** 463,455 new cases
DEATHS **3,565,105** 15,101 new deaths
RECOVERIES **108,310,596** 583,600 new recoveries



Sources: State data is from the California Department of Public Health and county health departments. Unless noted, national and world data is from Johns Hopkins University.

California*

County	Total Cases	Total Deaths	New Cases	New Deaths	Total cases per 10K	Hospitalizations: Confirmed/ suspected patients	Hospitalizations: In ICU	Vaccinations: No. fully vaccinated (1,000)	Vaccinations: % of pop.
Alameda	88,955	1,693	26	0	528	68	16	908.7	53.9%
Alpine	89	0	0	0	797	NA	NA	0.7	61.0%
Amador	3,652	47	3	0	948	2	1	13.2	34.4%
Butte	12,050	190	33	1	553	8	1	74.3	34.1%
Calaveras	2,184	56	10	0	493	0	0	15.7	35.5%
Colusa	2,265	18	0	0	1,003	0	0	6.9	30.5%
Contra Costa	69,693	799	17	0	601	41	8	629.3	54.2%
Del Norte	1,434	7	3	0	520	2	0	7.9	28.7%
El Dorado	10,304	113	8	0	534	1	0	75.0	38.9%
Fresno	102,507	1,706	70	1	993	56	13	345.6	33.5%
Glenn	2,352	27	3	1	801	0	0	9.1	31.0%
Humboldt	4,323	43	38	0	322	13	2	56.3	42.0%
Imperial	26,143	730	0	0	1,364	9	0	71.6	37.3%
Inyo	1,431	38	0	0	775	0	0	7.7	41.7%
Kern	110,147	1,389	16	0	1,188	43	9	262.6	28.3%
Kings	23,076	247	-1	0	1,475	4	1	33.4	21.4%
Lake	3,498	45	6	2	539	0	0	22.3	34.4%
Lassen	5,746	24	7	0	1,911	1	0	6.1	20.3%
Los Angeles	1,244,161	24,346	107	3	1,213	313	52	4,431.5	43.2%
Madera	16,448	245	18	1	1,027	6	0	49.7	31.0%
Marin	14,153	213	9	0	543	4	1	164.9	63.2%
Mariposa	458	7	4	0	257	0	0	4.5	25.5%
Mendocino	4,223	49	26	0	478	7	6	38.5	43.5%
Merced	32,168	470	26	1	1,119	7	3	69.3	24.1%
Modoc	514	4	0	0	542	0	0	2.5	26.5%
Mono	1,294	4	0	0	927	0	0	7.2	51.7%
Monterey	43,747	385	8	0	975	7	1	186.6	41.6%
Napa	9,936	81	7	0	711	2	1	73.8	52.8%
Nevada	4,821	75	9	0	488	3	1	39.3	39.8%
Orange	255,291	5,065	50	0	791	66	14	1,456.3	45.1%
Placer	23,042	297	38	0	575	38	7	169.2	42.3%
Plumas	723	6	0	0	381	0	0	7.2	38.1%
Riverside	300,732	4,608	31	0	1,218	51	10	843.0	34.2%
Sacramento	106,473	1,709	208	2	679	83	19	609.7	38.9%
San Benito	6,088	63	0	0	951	0	0	25.3	39.5%
San Bernardino	298,545	4,560	256	5	1,346	74	17	691.0	31.2%
San Diego	280,304	3,756	51	0	832	115	45	1,583.2	47.0%
San Francisco	36,694	546	24	1	411	18	7	524.6	58.8%
San Joaquin	73,899	1,419	105	0	944	32	9	247.0	31.6%
San Luis Obispo	21,327	261	12	0	765	3	0	122.4	43.9%
San Mateo	42,093	576	24	0	541	12	3	436.1	56.1%
Santa Barbara	34,498	451	10	1	756	6	3	201.6	44.2%
Santa Clara	119,094	2,142	20	0	605	57	14	1,100.1	55.9%
Santa Cruz	16,182	206	13	0	591	1	0	139.5	50.9%
Shasta	12,445	230	36	1	699	13	5	49.9	28.0%
Sierra	113	0	0	0	363	NA	NA	1.3	41.9%
Siskiyou	2,359	33	7	0	537	2	1	13.1	29.8%
Solano	33,397	243	104	5	752	29	5	175.8	39.6%
Sonoma	30,336	315	0	0	611	9	2	258.3	52.0%
Stanislaus	56,228	1,066	49	0	1,000	74	14	173.7	30.9%
Sutter	9,543	106	16	0	902	0	0	32.5	30.7%
Tehama	5,692	59	14	0	864	4	0	14.7	22.3%
Trinity	411	5	0	0	308	0	0	3.8	28.3%
Tulare	49,918	846	-16	0	1,030	10	3	139.8	28.9%
Tuolumne	4,170	67	2	0	797	1	1	19.7	37.6%
Ventura	81,382	1,018	38	0	954	28	4	392.4	46.0%
Yolo	13,995	208	13	0	626	3	0	96.6	43.2%
Yuba	6,389	41	18	0	806	4	0	19.3	24.3%
California	3,763,135	62,953	1,576	25	938	1,330	299	17,161	42.8%

*** NOTE:** California data is collected daily from county public health departments by this news organization and reflects the final totals reported two days prior to publication. Negative numbers of new cases or new deaths indicate adjustments and corrections from the reporting entities.

U.S.

State	Total Cases	Total Deaths	New Cases	New Deaths	Cases/ 10K
Ala.	544,045	11,156	640	10	1,105
Alaska	70,319	369	111	0	962
Ariz.	881,454	17,628	4	0	1,188
Ark.	341,450	5,834	69	1	1,127
Calif.*	3,763,135	62,953	1,576	25	938
Colo.	543,581	6,579	407	-1	936
Conn.	347,563	8,244	222	6	977
Del.	108,894	1,661	28	0	1,103
D.C.	49,000	1,134	102	2	687
Fla.	2,326,755	36,869	5,937	95	1,071
Ga.	1,124,080	20,838	239	1	1,050
Hawaii	36,332	500	56	0	258
Idaho	192,305	2,090	293	0	1,053
Ill.	1,382,505	25,233	404	10	1,098
Ind.	744,213	13,628	517	8	1,102
Iowa	371,478	6,057	54	2	1,174
Kan.	315,334	5,077	3	0	1,082
Ky.	458,712	7,067	437	285	1,025
La.	471,663	10,592	978	16	1,015
Maine	67,819	825	32	0	502
Md.	459,995	9,616	101	2	760
Mass.	707,131	17,883	186	11	1,026
Mich.	992,925	20,389	984	13	996
Minn.	601,517	7,520	133	1	1,063
Miss.	317,755	7,318	42	2	1,071
Mo.	606,670	9,499	181	1	986
Mont.	111,844	1,613	15	0	1,035
Neb.	223,404	2,249	36	0	1,153
Nev.	324,262	5,590	514	4	1,033
N.H.	98,767	1,353	41	0	723
N.J.	1,016,490	26,219	158	7	1,144
N.M.	203,151	4,264	330	1	964
N.Y.	2,102,869	53,329	465	26	1,087
N.C.	1,003,243	13,101	2,089	23	946
N.D.	109,962	1,543	18	0	1,437
Ohio	1,102,556	19,861	622	0	943
Okla.	453,243	7,291	466	0	1,139
Ore.	201,650	2,674	175	3	475
Pa.	1,204,598	27,204	913	3	942
R.I.	151,844	2,712	101	4	1,436
S.C.	593,262	9,736	0	0	1,137
S.D.	124,191	2,014	0	0	1,391
Tenn.	863,004	12,456	603	15	1,253
Texas	2,954,084	51,525	675	17	1,006
Utah	406,282	2,302	112	0	1,250
Vt.	24,224	255	4	0	389
Va.	675,597	11,194	59	8	786
Wash.	436,984	5,789	1,135	24	568
W.V.	161,858	2,797	571	5	907
Wis.	674,480	7,875	60	19	1,156
Wyo.	60,374	720	230	1	1,037
U.S.	33,136,694	592,533	22,956	637	1,006

World

Top 10 countries by case

Country	Total Cases	Total Deaths	New Cases	New Deaths
1. U.S.	33,136,694	592,533	22,956	637
2. India	28,307,832	335,102	132,788	3,207
3. Brazil	16,624,480	465,199	78,926	2,408
4. France	5,738,641	109,824	9,853	134
5. Turkey	5,256,516	47,656	7,112	129
6. Russia	5,022,881	119,830	9,369	366
7. U.K.	4,506,333	128,045	3,102	NA
8. Italy	4,220,304	126,221	2,483	93
9. Argentina	3,817,139	78,733	35,355	640
10. Germany	3,692,908	88,781	2,987	180

Suburban Water Systems Notice of a Public Hearing

PLEASE TAKE NOTICE THAT:

Suburban Water Systems will hold a public hearing for the adoption of its 2020 Urban Water Management Plan (UWMP) and adoption of its 2020 Water Shortage Contingency Plan (WSCP):

Date: 6/17/2021
Time: 5:00pm to 6:00pm
Call in number: 1-682-324-9419
Call in code: 293115747#

The UWMP and WSCP are available on the company website at https://www.swwc.com/suburban/

L.A. County

FROM PAGE 3

Football Club. The contest is open to anyone receiving a first dose, or people receiving a second dose who bring another person with them to be vaccinated.

In Long Beach, which has its own health department, will offer its residents a chance to win either a two-night hotel stay, a $50 cash card or a $50 gift card for Fandango, Target or Walmart if they get vaccinated by Saturday. That contest is open to anyone who comes in for their first dose of vaccine. Long Beach officials said that since they began offering incentives last month, vaccine appointments have doubled.

On Friday, the state will hold the second and final drawing to award $50,000 cash prizes to another 15 vaccinated California residents. The first 15 winners were chosen Friday.

On Tuesday, June 15 — the day the state will lift the majority of its COVID-19 restrictions — the names of 10 vaccinated California residents will be chosen to win $1.5 million each.

The push for people to get vaccinated has intensified as Tuesday's economic-reopening date nears. So far, 65% of California residents have received at least one dose of vaccine, while 53% are fully vaccinated, said Dr. Mark Ghaly, the state's Health and Human Services secretary. The rate of people receiving at least one dose is likely higher, with federal health authorities putting the estimate at more than 70%, Ghaly said.

According to statistics released Monday, 65% of the county's population age 16 and over have received at least one dose of COVID-19 vaccine, while 54% — or roughly 4.5 million people — are fully vaccinated.

As of Wednesday, 53.6% of Long Beach residents had received at least one dose.

Long Beach Mayor Robert Garcia, during a Wednesday morning press conference, said 66% of eligible adults have been vaccinated and that he thinks the city will reach 70% by July 4.

Garcia gathered with the leaders of his city's hospitals on Wednesday to speak about how far the city — and the rest of the country — have come since the vaccinations came online.

In December, for example, MemorialCare Long Beach Medical Center had around 220 patients being treated for the virus. There were three patients being treated for the virus as of Wednesday.

"It's hard to believe that just six months ago, we all stood at the forefront of hope," said Long Beach Memorial Medical Center CEO John Bishop. "A hope that the vaccines would help bring a city back from the grips of the COVID-19 pandemic.

"We saw our very worst last December," he added. "The surge was at its peak and almost every one of our hospital units had someone fighting for their life against this terrible disease."

Ghaly, meanwhile, unveiled on Wednesday the state's long-awaiting mask-wearing guidelines that will take effect Tuesday in conjunction with the economic reopening. And Los Angeles County health officials — who are always authorized to enact stricter measures than the state — said they would align fully with the California masking guidelines.

The guidelines in general will allow fully vaccinated people to shed their masks in most situations, except while on public transit or in transportation hubs such as airports or train stations; while indoors at K-12 schools, child-care facilities or other youth settings; at health-care and long-term care facilities; at correctional facilities; and at homeless and emergency shelters.

Unvaccinated people will still be required to wear masks at indoor public settings and businesses, including retail stores, restaurants, movie theaters and family entertainment centers. Some businesses and event venues will retain the option of requiring all customers and patrons to wear masks, regardless of their vaccination status.

"We appreciate the hard work of everyone to keep each other safe and healthy," LA County Public Health Director Barbara Ferrer said in a statement. "Your efforts make it possible for us to look forward to a full re-opening next week. With the retiring of most distancing and capacity restrictions, businesses will be able to return to their customary activities.

"The remaining public health safety measures of appropriate masking (are) critically important to protect those who are unvaccinated," she added. "We urge everyone who is unvaccinated to continue to wear their mask while at indoor public settings and businesses and when at outdoor mega events. And we ask all who are fully vaccinated to wear a face covering as required when using public transit, indoors at schools, camps and childcare, at healthcare settings and high risk congregate housing facilities.

For residents or businesses owners who have questions about the economic reopening, the county Department of Public Health will hold a virtual town hall at 6 p.m. Thursday. The event will stream on the agency's Facebook, Twitter and YouTube channels. Information: tinyurl.com/AskReopeningTownHall.

Ferrer on Tuesday presented the Board of Supervisors with COVID-19 statistics from five states that eased their mask-wearing rules when the CDC announced its new guidance last month. All five of those states — Illinois, Michigan, New Mexico, New York and Washington — have vaccination rates above 57%, roughly the same as Los Angeles County, and all have continued to see declining case rates, Ferrer said.

The county's vaccination efforts are shifting more toward mobile and community sites, rather than large-scale vaccine locations. The county will have 237 mobile vaccination teams fanned across the area this week, the most in a single week to date.

The county on Monday began phasing out its large-scale vaccination sites. The large site at Cal State Northridge closed at the end of the day, with operations shifting to the Balboa Sports Complex in Encino.

The other large-scale sites run by the county — at the Forum in Inglewood, the Pomona Fairplex and the county Office of Education in Downey —will close at the end of the day Sunday. Beginning Tuesday, smaller sites will be opened at:

- Ted Watkins Memorial Park, 1335 E. 103rd St., Los Angeles.
- Commerce Senior Citizens Center, 2555 Commerce Way.
- Norwalk Arts & Sports Complex, 13000 Clarkdale Ave.

Those three sites will operate from 11 a.m. to 6 p.m. Tuesdays through Saturdays.

Four more COVID-19 deaths were reported by the county on Wednesday, lifting the county's overall death toll to 24,408.

Another 202 new cases were also confirmed, raising the cumulative number from throughout the pandemic to 1,245,588.

According to state figures, there were 244 people hospitalized due to COVID-19 in the county as of Wednesday, up from 243 on Tuesday, with 45 people in intensive care, up from 40 a day earlier.

Long Beach reported one additional death Wednesday, bringing the total to 942. It also reported three new cases; 53,468 cases have been reported in Long Beach since the pandemic began.

Pasadena, which also has its own health department, reported no new deaths and three new cases Wednesday. So far, the city has reported 349 deaths and 11,303 cases.

Staff writer Hunter Lee contributed to this report.

TERRY PIERSON—STAFF PHOTOGRAPHER

Nurses prepares to give Pfizer BioNTech COVID-19 vaccines to people who had appointments at the Pomona Fairplex in January. The large-scale vaccination site will close at the end of the day Sunday.

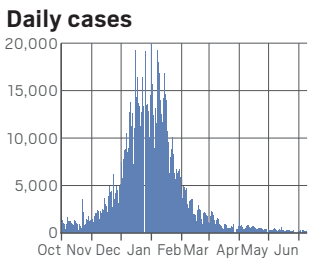
L.A. County coronavirus cases

CASES
1,245,588
202 new cases

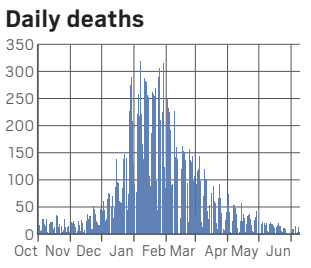
DEATHS
24,408
Four new deaths

HOSPITALIZATIONS
243
17% in ICUs
11 more patients since Tuesday

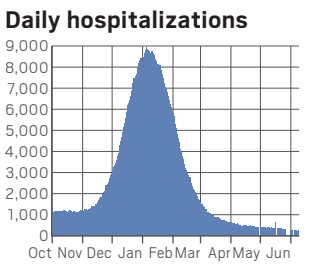
Daily cases



Daily deaths

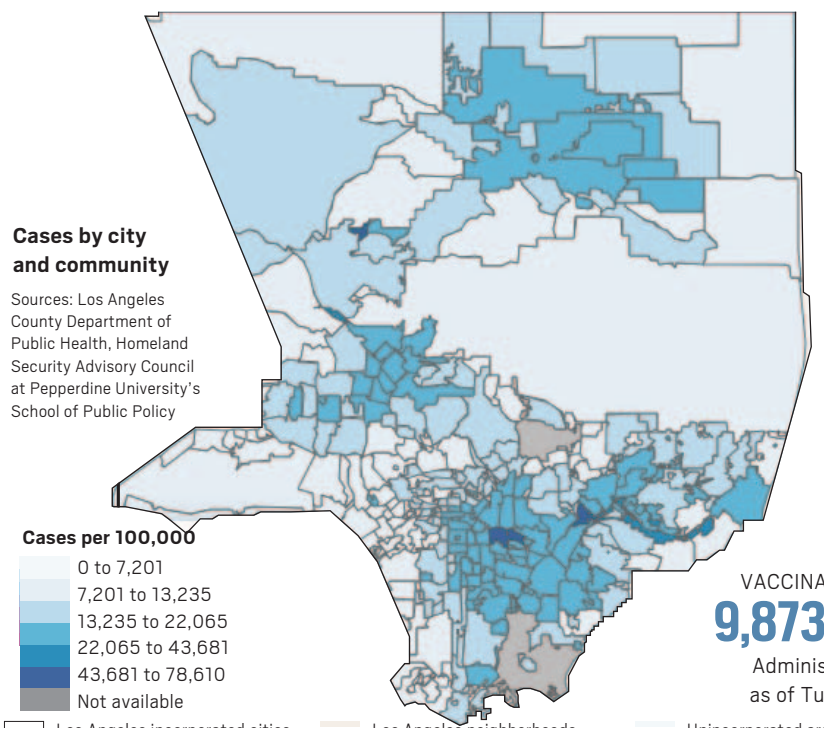


Daily hospitalizations



Cases by city and community

Sources: Los Angeles County Department of Public Health, Homeland Security Advisory Council at Pepperdine University's School of Public Policy



VACCINATIONS
9,873,249
Administered as of Tuesday

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Suburban
Water Systems
A SouthWest Water Company

Appendix E: Board Resolutions Adopting 2020 UWMP & WSCP

Suburban Water Systems | 2020 Urban Water Management Plan

ACTION BY UNANIMOUS WRITTEN CONSENT
OF THE BOARD OF DIRECTORS OF
SUBURBAN WATER SYSTEMS
ADOPTING THE 2020 URBAN WATER MANAGEMENT PLAN

Under and in accordance with Section 307(b) of the California Corporations Code and the Bylaws of Suburban Water Systems, a California corporation (the "Company"), the undersigned, being all the members of the Board of Directors (the "Board") of the Company, hereby execute this instrument, or a counterpart thereof, to evidence their consent to the taking of the actions set forth in, and the adoption of, the following preambles and resolutions without the holding of a meeting:

WHEREAS, The California Urban Water Management Planning Act, (Water Code section 10610, et seq. ("the Act")), mandates that every urban 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 adopt an Urban Water Management Plan ("UWMP"); and

WHEREAS, the Act generally requires that said UWMP be updated and adopted at least once every five years on or before July 1, in years ending in six and one; and

WHEREAS, pursuant to recent amendments to the Act, urban water suppliers are required to update and electronically submit their 2020 UWMPs to the California Department of Water Resources ("DWR") by July 1, 2021; and

WHEREAS, pursuant to the Water Conservation Act of 2009, also referred to as SB X7-7 (Water Code section 10608, et seq.), an "urban retail water supplier" is defined as a water supplier that directly provides potable municipal water to more than 3,000 end users or that supplies more than 3,000 acre feet of potable water annually at retail for municipal purposes, and an "urban wholesale water supplier" is defined as a water supplier that provides more than 3,000 acre feet of water annually at wholesale for potable municipal purposes; and

WHEREAS, the Company meets the definition of an urban retail water supplier for purposes of the Act and SB X7-7; and

WHEREAS, the Company has prepared a 2020 UWMP in accordance with the Act and SB X7-7, and in accordance with applicable legal requirements, has undertaken certain coordination, notice, public involvement, public comment, and other procedures in relation to its 2020 UWMP; and

WHEREAS, in accordance with the Act and SB X7-7, the Company has prepared its 2020 UWMP with its own staff, with the assistance of consulting professionals, and in cooperation with other governmental agencies, and has utilized and relied upon industry standards and the expertise of industry professionals in preparing its 2020 UWMP, and has also utilized DWR's Urban Water Management Plan Guidebook 2020, including its related appendices, in preparing its 2020 UWMP; and

WHEREAS, a Notice of a Public Hearing regarding the Company's UWMP was published within the service area of the Company on June 3, 2021, and June 10, 2021; and

WHEREAS, in accordance with applicable law, including but not limited to Water Code section 10608.26, in a format consistent with various public health orders relating to the COVID-19 pandemic, a virtual public hearing was held on June 17, 2021 at 5:00 p.m., in order to provide members of the public and other interested entities with the opportunity to be heard in connection with proposed adoption of the UWMP and issues related thereto; and

WHEREAS, pursuant to said public hearing on the Company's 2020 UWMP, the Company, among other things, encouraged the active involvement of diverse social, cultural, and economic members of the community within the Company's service area with regard to the 2020 UWMP and encouraged community input regarding the Company's 2020 UWMP; and

WHEREAS, the Company has reviewed and considered the purposes and requirements of the Act and SB X7-7, the contents of the 2020 UWMP, and the documentation contained in the Company's files relating to the 2020 UWMP, and has determined that the factual analyses and conclusions set forth in the 2020 UWMP are legally sufficient; and

WHEREAS, the Company desires to adopt the 2020 UWMP prior to July 1, 2021 in order to comply with the Act and SB X7-7.

NOW THEREFORE, the Board hereby resolves as follows:

1. The Company's 2020 UWMP is hereby adopted**.**

2. The President of the Company or his designee is hereby authorized and directed to include a copy of this Resolution in the Company's 2020 UWMP.

3. The President of the Company or his designee is hereby authorized and directed, in accordance with subdivision (d) of Water Code section 10621 and subdivisions (a)(1) and (a)(2) of Water Code section 10644, to electronically submit a copy of the 2020 UWMP to the DWR no later than July 1, 2021.

4. The President of the Company or his designee is hereby authorized and directed, in accordance with subdivision (a) of Water Code section 10644, to submit a copy of the 2020 UWMP to the California State Library, and any city of county within which the Company provides water supplies no later than thirty (30) days after this adoption date.

5. The President of the Company or his designee is hereby authorized and directed, in accordance with Water Code section 10645, to make the 2020 UWMP available for public review at the Company's offices during normal business hours and/or on the Company's website at www.swwc.com/suburban no later than thirty (30) days after filing a copy of the UWMP with DWR.

6. The President of the Company or his designee is hereby authorized and directed, in accordance with subdivision (c) of Water Code Section 10635, to provide that portion of the 2020 UWMP prepared pursuant to subdivisions (a) and (b) of Water Code Section 10635 to any city or county within which the Company provides water supplies no later than sixty (60) days after submitting a copy of the UWMP with DWR.

7. The President of the Company or his designee is hereby authorized and directed to implement the 2020 UWMP in accordance with the Act and SB X7-7 and to provide recommendations to the California Public Utilities Commission regarding the necessary budgets, procedures, rules, regulations, or further actions to carry out the effective and equitable implementation of the 2020 UWMP.

IN WITNESS WHEREOF, the undersigned, constituting all of the directors of the Company, have executed the foregoing written consent, effective as of June 25, 2021.

Rita Carroll
1919F37DF826D675C791BCAF8185A5CD contractworks.

Rita Carroll

Craig Gott
FE161386726808B3BAA39C0FB6235BB0 contractworks.

Craig Gott

Richard Rich
CAC955F54A5DF0B3FF67D2AE1A24C095 contractworks.

Richard Rich

Joseph Park
D1F8FA1C6B5D7325E9A594D3AD835C44 contractworks.

Joseph Park

ACTION BY UNANIMOUS WRITTEN CONSENT
OF THE BOARD OF DIRECTORS OF
SUBURBAN WATER SYSTEMS
ADOPTING THE 2020 WATER SHORTAGE CONTINGENCY PLAN

Under and in accordance with Section 307(b) of the California Corporations Code and the Bylaws of Suburban Water Systems, a California corporation (the "Company"), the undersigned, being all the members of the Board of Directors (the "Board") of the Company, hereby execute this instrument, or a counterpart thereof, to evidence their consent to the taking of the actions set forth in, and the adoption of, the following preambles and resolutions without the holding of a meeting:

WHEREAS, the California Urban Water Management Planning Act, (Water Code §10610, et seq. ("the Act")), mandates that every urban 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 adopt, in accordance with prescribed requirements, a Water Shortage Contingency Plan ("WSCP") as part of its Urban Water Management Plan ("UWMP"); and

WHEREAS, the Act specifies the requirements and procedures for adopting such WSCPs; and

WHEREAS, urban water suppliers are required to adopt and electronically submit their WSCPs to the California Department of Water Resources ("DWR") by July 1, 2021; and

WHEREAS, pursuant to the Act, "urban water supplier" means a supplier, either publicly or privately owned, providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually. An urban water supplier includes a supplier or contractor for water, regardless of the basis of right, which distributes or sells for ultimate resale to customers; and

WHEREAS, the Company meets the definition of an urban water supplier for purposes of the Act and is required to prepare and adopt a WSCP as part of its 2020 UWMP; and

WHEREAS, the Company has prepared a WSCP in accordance with the Act, and in accordance with applicable legal requirements, has undertaken certain coordination, notice, public involvement, public comment, and other procedures in relation to its WSCP; and

WHEREAS, in accordance with the Act, the Company has prepared its WSCP with its own staff, with the assistance of consulting professionals, and in cooperation with other governmental agencies, and has utilized and relied upon industry standards and the expertise of industry professionals in preparing its WSCP, and has also utilized DWR's Urban Water Management Plan Guidebook 2020, including its related appendices, in preparing its WSCP; and

WHEREAS, Water Code section 10642 requires privately owned water suppliers to conduct a public hearing after providing public notice equivalent to the notice required by Government Code section 6066; and

WHEREAS, a Notice of a Public Hearing regarding the Company's WSCP was published within the service area of the Company on June 3, 2021, and June 10, 2021; and

WHEREAS, in accordance with applicable law, including but not limited to Water Code section 10642, in a format consistent with various public health orders relating to the COVID-19 pandemic, a virtual public hearing was held on June 17, 2021 at 5:00 p.m., in order to provide members of the public and other interested entities with the opportunity to be heard in connection with proposed adoption of the WSCP and issues related thereto; and

WHEREAS, pursuant to said public hearing on the Company's WSCP, the Company, among other things, encouraged the active involvement of diverse social, cultural, and economic members of the community within the Company's service area with regard to the WSCP, and encouraged community input regarding the Company's WSCP; and

WHEREAS, the Company has reviewed and considered the purposes and requirements of the Act, the contents of the WSCP, and the documentation contained in the Company's files relating to the WSCP, and has determined that the factual analyses and conclusions set forth in the WSCP are legally sufficient; and

WHEREAS, the Company desires to adopt the WSCP and to incorporate it as part of its 2020 UWMP prior to July 1, 2021 in order to comply with the Act.

NOW THEREFORE the Board hereby resolves as follows:

1. The WSCP is hereby adopted and shall be incorporated into the Company's 2020 UWMP;

2. The President of the Company or his designee is hereby authorized and directed to include a copy of this Resolution in the Company's WSCP and/or in the Company' 2020 UWMP;

3. The President of the Company or his designee is hereby authorized and directed, in accordance with subdivision (d) of Water Code section 10621 and subdivisions (a)(1) and (a)(2) of Water Code section 10644, to electronically submit a copy of the WSCP, as part of its 2020 UWMP, to DWR no later than July 1, 2021;

4. The President of the Company or his designee is hereby authorized and directed, in accordance with subdivision (a) of Water Code section 10644, to submit a copy of the WSCP, as part of its 2020 UWMP, to the California State Library, and to any city or county within which the Company provides water supplies no later than thirty (30) days after this adoption date;

5. The President of the Company or his designee is hereby authorized and directed, in accordance with Water Code section 10645, to make the WSCP available for public review at the Company's offices during normal business hours and/or on its website at www.swwc.com/suburban no later than thirty (30) days after filing a copy of the WSCP, as part of its 2020 UWMP, with DWR; and

6. The President of the Company or his designee is hereby authorized and directed to implement the WSCP in accordance with the Act and to provide

recommendations to the California Public Utilities Commission regarding the necessary budgets, procedures, rules, regulations, or further actions to carry out the effective and equitable implementation of the WSCP.

IN WITNESS WHEREOF, the undersigned, constituting all of the directors of the Company, have executed the foregoing written consent, effective as of June 25, 2021.

Rita Carroll

1919F37DF826D675C791BCAF8185A5CD contractworks.

Rita Carroll

Craig Gott

FE1613867268O8B3BAA39C0FB6235BB0 contractworks.

Craig Gott

Richard Rich

CAC955F54A5DF0B3FF67D2AE1A24C095 contractworks.

Richard Rich

Joseph Park

D1F8FA1C6B5D7325E9A594D3AD835C44 contractworks.

Joseph Park

Suburban
Water Systems
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Appendix F: Long Beach Judgment

Suburban Water Systems | 2020 Urban Water Management Plan

Superior Court of the State of California
For the County of Los Angeles

BOARD OF WATER COMMISSIONERS OF THE CITY OF LONG BEACH, et al.,
Plaintiffs

vs.

SAN GABRIEL VALLEY WATER COMPANY, et al.,
Defendants

No. 722647

SETTLEMENT DOCUMENTS

STIPULATION FOR JUDGMENT
JUDGMENT
MAP OF WHITTIER NARROWS
ENGINEERING APPENDIX
REIMBURSEMENT CONTRACT

Approved by Joint Negotiating Committees July 6, 1964.

EXHIBIT NO. 7

SUPERIOR COURT OF THE STATE OF CALIFORNIA

FOR THE COUNTY OF LOS ANGELES

BOARD OF WATER COMMISSIONERS OF THE CITY OF LONG BEACH, a municipal corporation; CENTRAL BASIN MUNICIPAL WATER DISTRICT, a municipal water district; and CITY OF COMPTON, a municipal corporation,

Plaintiffs,

vs.

SAN GABRIEL VALLEY WATER COMPANY, a corporation; AZUSA AGRICULTURAL WATER COMPANY, a corporation; AZUSA VALLEY WATER COMPANY, a corporation; CALIFORNIA WATER & TELEPHONE COMPANY, a corporation; THE COLUMBIA LAND AND WATER COMPANY, a corporation; COVINA IRRIGATING COMPANY, a corporation; CROSS WATER COMPANY, a corporation; DUARTE WATER COMPANY, a corporation; EAST PASADENA WATER CO. LTD., a corporation; GLENDORA IRRIGATING COMPANY, a corporation; SAN DIMAS WATER COMPANY, a corporation; SOUTHERN CALIFORNIA WATER COMPANY, a corporation; SUBURBAN WATER SYSTEMS, a corporation; SUNNY SLOPE WATER CO., a corporation; VALLECITO WATER CO., a corporation; CITY OF ALHAMBRA, a municipal corporation; CITY OF ARCADIA, a municipal corporation; CITY OF AZUSA, a municipal corporation; CITY OF COVINA, a municipal corporation; CITY OF EL MONTE, a municipal corporation; CITY OF GLENDORA, a municipal corporation; CITY OF MONROVIA, a municipal corporation; CITY OF MONTEREY PARK, a municipal corporation; CITY OF SOUTH PASADENA, a municipal corporation; BALDWIN PARK COUNTY WATER DISTRICT, a county water district; and SAN GABRIEL COUNTY WATER DISTRICT, a county water district,

Defendants,

UPPER SAN GABRIEL VALLEY MUNICIPAL WATER

NO. 722,647

STIPULATION FOR JUDGMENT

DISTRICT, a municipal water district, and CALIFORNIA DOMESTIC WATER COMPANY, a corporation,

Intervenors.

Plaintiffs Central Basin Municipal Water District, a municipal water district (herein sometimes referred to as Central Municipal); City of Long Beach, a municipal corporation, acting by and through the Board of Water Commissioners of the City of Long Beach; and City of Compton, a municipal corporation; and defendants City of Alhambra, a municipal corporation; City of Arcadia, a municipal corporation; City of Azusa, a municipal corporation; Azusa Agricultural Water Company, a corporation, sued herein as DOE 1; Azusa Valley Water Company, a corporation, for itself and as successor by merger to Azusa Irrigating Company, a corporation; Baldwin Park County Water District, a county water district; California Water and Telephone Company, a corporation; Columbia Land and Water Company, a corporation; City of Covina, a municipal corporation; Covina Irrigating Company, a corporation; Cross Water Company, a corporation, sued herein as DOE 2; Duarte Water Company (formerly Duarte Domestic Water Company), a corporation; East Pasadena Water Company, Ltd., a corporation, for itself and as successor by merger to California-Michigan Land and Water Company, a corporation; City of El Monte, a municipal corporation; City of Glendora, a municipal corporation; Glendora Irrigating Company, a corporation; City of Monrovia, a municipal corporation; City of Monterey Park, a municipal corporation; San Dimas Water Company, a corporation, sued herein as DOE 3; San Gabriel County Water District, a county water district; San Gabriel Valley Water Company, a corporation; Southern California Water Company, a corporation; City of South Pasadena, a municipal corporation; Suburban Water Systems, a corporation; Sunny Slope Water Company, a corporation; and Vallecito Water Company, a corporation; and

intervening defendant Upper San Gabriel Valley Municipal Water District, a municipal water district (herein sometimes referred to as Upper District); and intervening defendant California Domestic Water Company, a corporation; stipulate and agree as follows:

1. A Judgment in the form attached hereto as Exhibit I may be made and entered by the Court in the above-entitled action.

2. The following facts, considerations and objectives, among others, provide the basis for this Stipulation for Judgment:

(a) By their complaint plaintiffs seek a determination of the rights of the defendants, other than Upper District, in and to the waters of the San Gabriel River System and further seek to restrain defendants, other than Upper District, from an alleged interference with the rights of plaintiffs and persons represented by Central Municipal in and to said waters.

(b) At the present time, and for some time prior to the commencement of this action, the water supply of the San Gabriel River System has been inadequate to supply the diversions and extractions of both plaintiffs and defendants other than Central Municipal and Upper District but including the persons represented by Central Municipal and by Upper District, and as a result said diversions and extractions have exceeded, and still exceed, the natural replenishment of the water supply of the San Gabriel River System.

(c) The parties recognize and agree that the natural outflow from the San Gabriel Valley

to the Lower Area as defined in the Judgment has varied, and will vary from year to year, depending on the amount of precedent rainfall and other conditions.

(d) The parties recognize and agree that there is a need for a declaration of rights and a physical solution for the problems resulting from the inadequate and varying water supplies of the San Gabriel River System.

(e) The parties agree that the physical solution contained in said Judgment will bring about a fair division of the water of the San Gabriel River System as between plaintiffs and defendants other than Central Municipal and Upper District but including the persons represented by Central Municipal and by Upper District.

(f) The parties recognize that it may be necessary for defendants or some of them to use supplemental water in order to comply with the obligations imposed under said physical solution.

(g) Defendant Upper District is now a member unit of The Metropolitan Water District of Southern California, which will be supplied with water from sources in northern California under an existing contract with the State of California. Certain of the defendants not within the area of defendant Upper District are within the area of San Gabriel Valley Municipal Water District, which district also has contracted with the State of California for delivery of water from sources in northern California. It is anticipated that the

importation of this water will augment the natural supply of ground water within Upper Area as defined in the Judgment. Defendant Upper District intends to replenish the San Gabriel Valley with supplemental supplies.

3. The parties hereto hereby waive any and all Findings of Fact, Conclusions of Law, and any and all notice of the making or entry herein of the attached form of Judgment, and all rights of appeal, if any, from such Judgment.

4. Plaintiffs and defendants agree that during the period prior to entry of the attached form of Judgment, they will cooperate in endeavoring to collect such information as the Watermaster would obtain if the attached form of Judgment had been entered and the Watermaster had been appointed by the Court pursuant to paragraph 6 of the Judgment, which information is herein referred to as "said information." To that end, the parties hereto hereby agree that promptly following the complete execution of this stipulation by all parties, Upper District and Central Municipal shall each notify the other in writing as to the identity of the person who it expects will be nominated as the representative of Upper Area Parties or Lower Area Parties, as the case may be, under paragraph 6 of the Judgment. Upon receiving such notice, Upper District and Central Municipal shall each instruct its designated nominee that until the attached form of Judgment is entered and the Watermaster has been appointed pursuant to paragraph 6 of the Judgment he shall in cooperation with the other designated nominee do all things reasonably necessary to obtain such of said information as is available from the parties hereto or any public agency.

5. Judgment shall not be rendered pursuant hereto unless and until the execution of this stipulation by Central Basin Municipal Water District and by Upper San Gabriel Valley

Municipal Water District shall have been validated by a decree or decrees rendered in a proceeding or proceedings instituted in a court of competent jurisdiction of the State of California, and either such decree or decrees shall have become final or both of said Districts shall have further stipulated that said Judgment shall be rendered.

6. This stipulation may be executed in counterparts (each counterpart being an exact copy or duplicate of the original) and all counterparts collectively shall be considered as constituting one complete Stipulation for Judgment.

DATED: _____, 1964.

Attorneys
(for the respective party listed opposite and to the right of the respective attorneys listed below)

Leonard Putnam
City Attorney
Clifford E. Hayes
Principal Deputy City Attorney
City of Long Beach

By _____

Burris & Lagerlof
Stanley C. Lagerlof
H. Jess Senecal
Jack T. Swafford

By _____

Signature of Stipulating Party and Its Designation of Mailing Address

Board of Water Commissioners of the City of Long Beach

By _____

Its _____ President

By _____

Its _____ Secretary

1800 East Wardlow Road
Long Beach 7, California

Burris & Lagerlof
Stanley C. Lagerlof
H. Jess Senecal
Jack T. Swafford

By _____

Central Basin Municipal Water District

By _____

Its President

By _____

Its Secretary

7439 East Florence Avenue
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Lloyd A. Bulloch
City Attorney
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_____

Burris & Lagerlof
Stanley C. Lagerlof
H. Jess Senecal
Jack T. Swafford

By _____

City of Compton

By _____

Its Mayor

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Compton, California

Don D. Bercu
City Attorney
City of Alhambra

_____

Taylor & Smith

By _____

City of Alhambra

By _____

Its Mayor

City Hall
111 South First Street
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James A. Nicklin
City Attorney
City of Arcadia

_____

Surr & Hellyer

By _____

Clayson, Stark, Rothrock
& Mann

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City of Arcadia

By _____

Its Mayor

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Arcadia, California

Harry C. Williams
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_____

Taylor & Smith

By _____

City of Azusa

By _____

Its Mayor

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213 East Foothill Boulevard
Azusa, California

Taylor & Smith

By _____

Azusa Agricultural Water Company

By _____

Its ____ President

By _____

Its _____ Secretary

18352 East Foothill Boulevard
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Surr & Hellyer

By _____

Clayson, Stark, Rothrock
& Mann

By _____

Azusa Valley Water Company

By _____

Its ____ President

By _____

Its _____ Secretary

P. O. Box "W"
Azusa, California

Surr & Hellyer

By _____

Clayson, Stark, Rothrock & Mann

By _____

Baldwin Park County Water District

By _____

Its ____ President

By _____

Its _____ Secretary

14521 East Ramona Boulevard
Baldwin Park, California

Bacigalupi, Elkus & Salinger

By _____

Surr & Hellyer

By _____

Clayson, Stark, Rothrock & Mann

By _____

California Water & Telephone Company

By _____

Its ____ President

By _____

Its _____ Secretary

300 Montgomery Street
San Francisco, California

Allard, Shelton & O'Connor

By _____

Surr & Hellyer

By _____

Clayson, Stark, Rothrock & Mann

By _____

Columbia Land & Water Company

By _____

Its ____ President

By _____

Its _____ Secretary

P. O. Box 296
San Dimas, California

Allard, Shelton & O'Connor

By _____

Surr & Hellyer

By _____

Clayson, Stark, Rothrock
& Mann

By _____

Kerckhoff & Kerckhoff

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Surr & Hellyer

By _____

Clayson, Stark, Rothrock
& Mann

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George C. Gillette

_____

Henry W. Shatford
Shatford & Shatford

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Surr & Hellyer

By _____

Clayson, Stark, Rothrock
& Mann

By _____

City of Covina

By _____

Its Mayor

City Hall
Covina, California

Covina Irrigating Company

By _____

Its _____ President

By _____

Its _____ Secretary

146 East College Street
Covina, California

Cross Water Company

By _____

Its _____ President

By _____

Its _____ Secretary

15825 East Main Street
La Puente, California

Duarte Water Company

By _____

Its _____ President

By _____

Its _____ Secretary

1101 South Oak Avenue
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Gray & Maddox

By _____

Surr & Hellyer

By _____

Clayson, Stark, Rothrock
& Mann

By _____

East Pasadena Water Company, Ltd.

By _____

Its ____ President

By _____

Its _____ Secretary

269 South Rosemead
Pasadena, California

James A. Nicklin
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City of El Monte

_____

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Its Mayor

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By _____

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City of Glendora

By _____

Its Mayor

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By _____

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By _____

Clayson, Stark, Rothrock
& Mann

By _____

Glendora Irrigating Company

By _____

Its ____ President

By _____

Its _____ Secretary

224 North Michigan Avenue
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Homer H. Bell
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_____

Surr & Hellyer

By _____

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& Mann

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City of Monrovia

By _____

Its Mayor

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Charles R. Martin
City Attorney
City of Monterey Park

_____

Taylor & Smith

By _____

City of Monterey Park

By _____

Its Mayor

City Hall
320 West Newmark Avenue
Monterey Park, California

Allard, Shelton & O'Connor

By _____

Surr & Hellyer

By _____

Clayson, Stark, Rothrock & Mann

By _____

Surr & Hellyer

By _____

Clayson, Stark, Rothrock & Mann

By _____

J. E. Skelton

_____

Surr & Hellyer

By _____

Clayson, Stark, Rothrock & Mann

By _____

San Dimas Water Company

By _____

Its ____ President

By _____

Its _____ Secretary

P. O. Box 181
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San Gabriel County Water District

By _____

Its ____ President

By _____

Its _____ Secretary

8229 East Las Tunas Drive
San Gabriel, California

San Gabriel Valley Water Company

By _____

Its ____ President

By _____

Its _____ Secretary

11142 Garvey Avenue
El Monte, California

O'Melveny & Myers

By _____

Surr & Hellyer

By _____

Clayson, Stark, Rothrock
& Mann

By _____

Charles R. Martin
City Attorney
City of South Pasadena

_____

Surr & Hellyer

By _____

Clayson, Stark, Rothrock
& Mann

By _____

Frank E. Gray

_____

Surr & Hellyer

By _____

Clayson, Stark, Rothrock
& Mann

By _____

Hahn & Hahn

By _____

Southern California Water Company

By _____

Its ____ President

By _____

Its _____ Secretary

11911 South Vermont Avenue
Los Angeles 44, California

City of South Pasadena

By _____

Its Mayor

825 Mission Street
South Pasadena, California

Suburban Water Systems

By _____

Its ____ President

By _____

Its _____ Secretary

16340 East Maplegrove Street
La Puente, California

Sunny Slope Water Company

By _____

Its ____ President

By _____

Its _____ Secretary

1040 El Campo Drive
Pasadena, California

Surr & Hellyer

By _____

Clayson, Stark, Rothrock
& Mann

By _____

Stearns, Gross and Moore

By _____

Ralph B. Helm

_____

Vallecito Water Company

By _____

Its ____ President

By _____

Its _____ Secretary

749 South Ninth Avenue
City of Industry, California

California Domestic Water Company

By _____

Its ____ President

By _____

Its _____ Secretary

P. O. Box 1026, Perry Annex
Whittier, California

Upper San Gabriel Valley
Municipal Water District

By _____

Its ____ President

By _____

Its _____ Secretary

11229 East Valley Boulevard
El Monte, California

SUPERIOR COURT OF THE STATE OF CALIFORNIA

FOR THE COUNTY OF LOS ANGELES

BOARD OF WATER COMMISSIONERS OF THE CITY OF LONG BEACH, a municipal corporation; CENTRAL BASIN MUNICIPAL WATER DISTRICT, a municipal water district; and CITY OF COMPTON, a municipal corporation,

Plaintiffs,

vs.

SAN GABRIEL VALLEY WATER COMPANY, a corporation; AZUSA AGRICULTURAL WATER COMPANY, a corporation; AZUSA VALLEY WATER COMPANY, a corporation; CALIFORNIA WATER & TELEPHONE COMPANY, a corporation; THE COLUMBIA LAND AND WATER COMPANY, a corporation; COVINA IRRIGATING COMPANY, a corporation; CROSS WATER COMPANY, a corporation; DUARTE WATER COMPANY, a corporation; EAST PASADENA WATER CO. LTD., a corporation; GLENDORA IRRIGATING COMPANY, a corporation; SAN DIMAS WATER COMPANY, a corporation; SOUTHERN CALIFORNIA WATER COMPANY, a corporation; SUBURBAN WATER SYSTEMS, a corporation; SUNNY SLOPE WATER CO., a corporation; VALLECITO WATER CO., a corporation; CITY OF ALHAMBRA, a municipal corporation; CITY OF ARCADIA, a municipal corporation; CITY OF AZUSA, a municipal corporation; CITY OF COVINA, a municipal corporation; CITY OF EL MONTE, a municipal corporation; CITY OF GLENDORA, a municipal corporation; CITY OF MONROVIA, a municipal corporation; CITY OF MONTEREY PARK, a municipal corporation; CITY OF SOUTH PASADENA, a municipal corporation; BALDWIN PARK COUNTY WATER DISTRICT, a county water district; and SAN GABRIEL COUNTY WATER DISTRICT, a county water district,

Defendants,

UPPER SAN GABRIEL VALLEY MUNICIPAL WATER

NO. 722,647

JUDGMENT

DISTRICT, a municipal water district, and CALIFORNIA DOMESTIC WATER COMPANY, a corporation,

Intervenors.

The original complaint herein was filed by Plaintiffs on May 12, 1959, and an amended complaint was filed herein on June 8, 1961. Each Defendant in this action filed an answer to the amended complaint denying the material allegations therein. On _____, 1964, and _____, 1964, respectively, Upper San Gabriel Valley Municipal Water District, a municipal water district, and California Domestic Water Company, a corporation, intervened in the action as Defendants. On _____, 1964, there was filed herein a Stipulation for Judgment signed by all of the parties to this action.

After due examination and consideration of the pleadings, said Stipulation for Judgment and other documents and papers on file herein, it appears to the Court that:

(a) In bringing and maintaining this action, plaintiff Central Basin Municipal Water District, a municipal water district, has done so as a representative of and for the benefit of all owners of water rights within, all owners of land within, and all inhabitants of, the district, except to the extent that defendant California Domestic Water Company is representing itself.

(b) In intervening in this action, defendant Upper San Gabriel Valley Municipal Water District, a municipal water district, has done so as representative of and for the benefit of all owners of water rights within, all owners of land within, and all inhabitants of, the district, except to the extent that other Defendants who are within the district are representing themselves.

(c) There is a need for a physical solution to the complex water problems which have given rise to this action.

(d) The physical solution embodied in this Judgment is a feasible, equitable and just resolution of the issues presented by the amended complaint and answers thereto on file herein, and it will bring about a fair division of the water supply of the San Gabriel River System between Upper Area and Lower Area, as those terms are hereinafter defined.

(e) On the basis of the Stipulation for Judgment filed herein and the consent of all Plaintiffs and Defendants it is in the interests of justice and in furtherance of the water policy of the State of California to proceed without trial and to make and enter this Judgment.

Now, therefore, it is hereby ORDERED, ADJUDGED AND DECREED:

JURISDICTION

1. The Court has jurisdiction of the subject matter of this action and of the Upper Area Parties and Lower Area Parties, as those terms are hereinafter defined.

EXHIBITS

2. The following Exhibits marked A and B, are attached to this Judgment and made a part hereof:

(a) Exhibit A -- Map entitled "Rio Hondo and San Gabriel River in Vicinity of Whittier Narrows Dam".

(b) Exhibit B -- Engineering Appendix.

DEFINITIONS

3. As used in this Judgment, the following terms shall have the meanings assigned to them:

(a) Central Municipal -- Central Basin Municipal Water District.

(b) Upper District -- Upper San Gabriel Valley Municipal Water District.

(c) Lower Area Parties -- the Plaintiffs, and

all persons, firms and corporations, public or private, who are represented by Central Municipal.

(d) Upper Area Parties -- the Defendants, and all persons, firms and corporations, public or private, who are represented by Upper District.

(e) Upper Area -- the area (exclusive of the Raymond Basin and the portion of San Gabriel Mountains tributary thereto) wherein surface and subsurface waters are tributary to Whittier Narrows upstream from the common boundary of Upper District and Central Municipal through Whittier Narrows.

(f) Lower Area -- the area which lies downstream from the common boundary of Central Municipal and Upper District through Whittier Narrows and which is included within the incorporated limits of the Plaintiffs.

(g) Whittier Narrows -- a gap between Merced Hills and Puente Hills shown on Exhibit A.

(h) Montebello Forebay -- the area designated as such on Exhibit A.

(i) Export to Lower Area -- water diverted from surface streams in Upper Area or pumped or developed from underground sources in Upper Area, and in either case conveyed by conduit through Whittier Narrows.

(j) Subsurface Flow -- all water which passes as ground water through Whittier Narrows at the "narrowest section" as shown on Exhibit A.

(k) Surface Flow -- all water other than Export to Lower Area and Subsurface Flow, which passes from Upper Area to Lower Area through Whittier Narrows.

(l) Usable Water -- all Surface Flow, Subsurface Flow and Export to Lower Area, but excluding:

(1) that portion of Surface Flow, if any, which crosses the southerly boundary of Montebello Forebay as surface runoff less the amount of Surface Flow which has been caused to flow out of Montebello Forebay as surface runoff by any spreading of water in Montebello Forebay by or on behalf of Lower Area Parties, or any of them;

(2) water imported by or on behalf of Lower Area Parties from outside of the watershed of the San Gabriel River System;

(3) Reclaimed Water, as defined in subparagraph (o) herein, provided, however, that Reclaimed Water (other than that reclaimed by or on behalf of Lower Area Parties) which is percolated and commingled with ground water in Upper Area shall be deemed Subsurface Flow, Surface Flow, or Export to Lower Area as the case may be, when and if it passes through Whittier Narrows;

(4) that portion, if any, of Export to Lower Area which in any Water Year after September 30, 1966, exceeds 23,395 acre-feet;

(5) Make-up Water, as defined in subpara-

graph (m) herein; and

(6) any water whether flowing on the surface or beneath the surface of the ground which has passed any of the points of surface measurement in Whittier Narrows shown on Exhibit B and prior to its passing from Upper Area to Lower Area is intercepted and returned upstream by conduit or otherwise so that it could again pass any such points of measurement.

(m) Make-up Water -- water of usable quality for ground water recharge required to be delivered to Lower Area under terms of paragraph 5 of this Judgment.

(n) Water Year -- October 1 through the following September 30.

(o) Reclaimed Water -- water reclaimed from sewage generated in the watershed of the San Gabriel River System above Whittier Narrows.

DECLARATION OF RIGHT

4. Lower Area Parties have rights in the water supply of the San Gabriel River System. The nature and extent of such rights is not known; however, Lower Area Parties and all other persons downstream from Whittier Narrows who receive water from the San Gabriel River System or have rights in and to such water, shall have, as against Upper Area Parties and all other pumpers of water in the San Gabriel Valley, a right to receive from Upper Area an average annual usable supply of ninety-eight thousand four hundred fifteen (98,415) acre-feet of water over a long-term period of normal rainfall derived as set forth in Exhibit B, consisting

of Surface Flow, Subsurface Flow, Export to Lower Area and Make-up Water. If in the future a court of competent jurisdiction shall decree that any person downstream from Whittier Narrows within Central and West Basin Water Replenishment District who is not bound by this Judgment, shall have, as against Upper Area Parties and substantially all other pumpers in the San Gabriel Valley, a right to receive from Upper Area a stated amount of usable supply consisting of Surface Flow, Subsurface Flow, Export to Lower Area or Make-up Water, which right arose out of and is based upon the ownership of land or the production of water downstream from Whittier Narrows and within Central and West Basin Water Replenishment District, then and in that event the stated amount of such right so decreed shall not increase the declared rights as set forth in this paragraph 4.

PHYSICAL SOLUTION

5. In recognition of the complexities of annual supply and demand and variations in the components thereof, the Court hereby declares the following physical solution to be a fair and equitable basis for satisfaction of the declared right set forth in paragraph 4 hereof. Compliance with this paragraph 5 shall constitute full and complete satisfaction of said declared right.

AVERAGE ANNUAL ENTITLEMENT

(a) It is determined that the amount of Lower Area average annual entitlement to Usable Water is ninety-eight thousand four hundred fifteen (98,415) acre-feet.

BASIS OF ANNUAL ENTITLEMENT

(b) The outflow of water from Upper Area through Whittier Narrows to Lower Area has

varied from year to year and will vary from year to year in the future depending on changing conditions of supply and demand; and as to any Water Year, the average annual rainfall for the San Gabriel Valley during the ten (10) consecutive Water Years ending with that Water Year, is a reasonable basis for determining the entitlement of Lower Area to Usable Water for such Water Year.

DETERMINATION OF RAINFALL

(c) The rainfall in each Water Year for the San Gabriel Valley shall be determined by application of the procedures described in Exhibit B.

RAINFALL ADJUSTMENT TABLE

(d) The quantity of water which Lower Area is entitled to receive in any Water Year (hereinafter called Lower Area Annual Entitlement) shall be determined in accordance with the following table, except that no determination of Lower Area Annual Entitlement shall be made for the last year of any Long-term Accounting Period as hereinafter defined.

TABLE A

LOWER AREA ANNUAL ENTITLEMENT
BASED ON 10-YEAR AVERAGE RAINFALL
FOR SAN GABRIEL VALLEY

(In Acre-feet)

Inches of Rainfall	0	.1	.2	.3	.4	.5	.6	.7	.8	.9
14	64,200	64,900	65,700	66,500	67,200	68,000	68,700	69,500	70,300	71,100
15	71,800	72,600	73,400	74,100	74,900	75,600	76,400	77,200	77,900	78,700
16	79,500	80,200	81,000	81,800	82,600	83,300	84,000	84,800	85,600	86,400
17	87,100	87,900	88,700	89,400	90,200	91,000	91,500	92,500	93,200	94,000
18	94,800	95,300	96,200	96,900	97,600	98,300	98,800	99,500	100,100	100,800
19	101,400	102,000	102,700	103,300	103,900	104,500	105,100	105,700	106,300	107,000
20	107,600	108,200	108,800	109,400	110,100	110,700	111,300	111,900	112,500	113,100
21	113,700	114,300	115,000	115,600	116,200	116,800	117,400	118,100	118,600	119,300
22	119,900	120,400	121,000	121,600	122,200	122,700	123,300	123,900	124,400	125,000
23	125,500	126,100	126,700	127,200	127,800	128,400	128,900	129,500	130,100	130,600
24	131,200	131,700	132,200	132,700	133,100	133,700	134,100	134,700	135,100	135,600

DETERMINATION OF ACCRUED DEBIT OR CREDIT

(e) The difference between the aggregate of water entitlements determined as provided in this Judgment and the aggregate of Usable Water and delivered Make-up Water shall be computed as of the end of each Water Year. Any excess of water entitlements over the quantity of Usable Water and Make-up Water received by Lower Area after September 30, 1963, is hereinafter referred to as Accrued Debit of Upper Area. Any excess of Usable Water and Make-up Water received by Lower Area after September 30, 1963, over water entitlements, is hereinafter referred to as Accrued Credit of Upper Area.

ACCRUED DEBIT

(f) If at the end of any Water Year it is determined pursuant to subparagraph (e) of this paragraph 5 that there is an Accrued Debit of Upper Area, then Upper District shall cause Make-up Water to be delivered to Lower Area during the following Water Year in an amount not less than the sum of (1) one-third of such Accrued Debit of Upper Area, and (2) that portion, if any, of such Accrued Debit of Upper Area over 25,000 acre-feet which remains after deducting said one-third. If Upper District shall fail to deliver Make-up Water as next above provided and Plaintiffs shall have diligently pursued their legal and equitable remedies to cause Upper District to so deliver, and either: (1) it shall be finally determined that Upper District is not obligated to so deliver, or (2) it shall appear that Upper District will not thereafter deliver Make-up Water, then Defendants and any successor or successors in interest by title to a Defendant's water right in Upper Area shall be obligated to so deliver Make-up Water. The provisions of this paragraph are subject to the provisions of paragraph 5(h) below.

ACCRUED CREDIT

(g) If at the end of any Water Year it is determined pursuant to subparagraph (e) of this paragraph 5 that there is an Accrued Credit of Upper Area, then there shall be no obligation to deliver Make-up Water to Lower Area during the following Water Year.

LONG-TERM ACCOUNTING

(h) Following September 30, 1963, a Long-term Accounting shall be made from time to time but not sooner than at the end of 15 Water Years, nor later than 25 Water Years after September 30, 1963, or after the last such accounting, whichever is later. A Long-term Accounting shall be made sooner than said 25-year period whenever the average annual rainfall in the San Gabriel Valley for a period of 15 Water Years or more after September 30, 1963, or after the last such accounting, whichever is later, is at least 18 inches but not more than 19 inches.

In making such Long-term Accounting for any such period (herein called Long-term Accounting Period), the aggregate of all Usable Water and Make-up Water received by Lower Area during such period shall be determined and (a) there shall be deducted from said aggregate the amount of Make-up Water, if any, delivered during such period by reason of the existence of an Accrued Debit of Upper Area at the end of the immediately preceding Long-term Accounting Period, or (b) there shall be added to said aggregate the amount of any Accrued Credit of Upper Area determined to exist at the end of the immediately preceding Long-term Accounting Period. The net aggregate amount of Usable Water and Make-up Water so computed shall be compared to the result to be obtained by (1) multiplying the 98,415 acre-feet of water to be received by

Lower Area as its average annual usable supply by the number of Water Years in the Long-term Accounting Period, and (2) adjusting the product by the percentage by which the average annual rainfall (to the nearest one hundredth of an inch) for the Long-term Accounting Period involved exceeds or is less than 18.52 inches. (i.e.:

98,415 x (number of Water Years in Period) x $\frac{\text{(average rainfall for the Period)}}{18.52}$.)

If as a result of such comparison it is determined that there is a deficiency in the net aggregate amount of Usable Water and Make-up Water received during the Long-term Accounting Period, then such deficiency shall be compensated in the following Water Year by delivery of Make-up Water to Lower Area in the manner and by the means provided herein. If it is determined as a result of such comparison that there is an excess of net aggregate Usable Water and Make-up Water received, then the amount of such excess shall be carried forward as an Accrued Credit of Upper Area.

MAKE-UP WATER DELIVERY

(i) Make-up Water which Defendants are obligated to deliver through Upper District may be delivered by any one or more of the following means:

SURFACE FLOW DELIVERY

(1) By causing water other than Reclaimed Water to flow on the surface into Montebello Forebay by any means and from any source, provided that such deliveries shall

be at such rates or flows and at such times as may be scheduled by the Watermaster.

RECLAIMED WATER CREDIT

(2) By paying to Central Municipal for the benefit of all Lower Area Parties the total amount or any portion of the total amount which Central and West Basin Water Replenishment District or any Plaintiff shall have expended in reclaiming water or for the purchase of Reclaimed Water in the preceding Water Year, and which water when so reclaimed or purchased shall have been passed through Whittier Narrows to Lower Area. Upon written request made by Upper District not later than three months after the end of a Water Year, Central Municipal shall give a written notice to Upper District and the Watermaster of the total number of acre-feet of such Reclaimed Water so reclaimed or purchased during the preceding Water Year and of the cost per acre-foot therefor at the existing Whittier Narrows Water Reclamation Plant for reclamation of waste water, and at any future additions thereto, and payment therefor at said cost, or costs, may be made not later than one year after receipt of such written notice. Such payment shall be made for the total production of Reclaimed Water from the existing plant in the preceding Water Year before Upper District shall be entitled to make payment for all, or any portion of

Reclaimed Water produced in that year by any future addition to that plant. Such payment by Upper District on behalf of Defendants shall be deemed a delivery of Make-up Water equal to the quantity of Reclaimed Water for which the expenditure of a like sum would have paid at the cost, or costs, per acre-foot so paid for such Reclaimed Water. In no event, however, shall any payment by Upper District under this subparagraph (i)(2) be deemed a delivery of Make-up Water in excess of 14,735 acre-feet in any Water Year during which the amount of Make-up Water required to be furnished by Upper Area is available to it at ground water replenishment rates for delivery to Lower Area, except with the prior written consent of Plaintiffs.

DIRECT DELIVERY

(3) By delivering, or causing to be delivered, water to any of Lower Area Parties with consent of Plaintiffs for use in Lower Area.

WATER RIGHTS BOUND

(j) It is further determined and adjudicated that the obligations provided above in subparagraphs (f) and (h) of this paragraph 5 for each Defendant shall constitute and be a servitude upon the existing water rights of each Defendant in and to the water supply of the San Gabriel River System upstream from Lower Area and shall run with and forever bind said water rights for the benefit of the water

rights of Lower Area Parties.

TRANSFER OF WATER RIGHTS

(k) If any Defendant, other than Upper District, shall desire to transfer all or any of its said water rights to a person, firm or corporation, public or private, who or which is not then bound by this Judgment as a Defendant, such Defendant shall as a condition to being discharged as hereinafter provided cause such transferee to appear in this action and file a valid and effective express assumption of the obligations imposed upon such Defendant under this Judgment as to such transferred water rights. Such appearance and assumption of obligations shall include the filing of a designation of the address to which shall be mailed all notices, requests, objections, reports and other papers permitted or required by the terms of this Judgment.

If any Defendant shall have transferred all of its said water rights and each transferee not theretofore bound by this Judgment as a Defendant shall have appeared in this action and filed a valid and effective express assumption of the obligations imposed upon such Defendant under this Judgment as to such transferred water rights, such transferring Defendant shall thereupon be discharged from all obligations hereunder. If any Defendant other than Upper District shall cease to own any rights in and to the water supply of the San Gabriel River System upstream from Lower Area, and shall have caused the appearance

and assumption provided for in the third preceding sentence with respect to each voluntary transfer, then upon application to this Court and after notice and hearing such Defendant shall thereupon be relieved and discharged from all further obligations hereunder. Any such discharge of any Defendant hereunder shall not impair the aggregate rights of Lower Area Parties or the responsibility hereunder of the remaining Defendants or any of the successors.

WATERMASTER PROVISIONS

WATERMASTER APPOINTMENT

6. A Watermaster comprised of three persons to be nominated as hereinafter provided shall be appointed by and serve at the pleasure of and until further order of this Court. One shall be a representative of Upper Area Parties nominated by and through Upper District, one shall be a representative of Lower Area Parties nominated by and through Central Municipal, and one shall be jointly nominated by Upper District and Central Municipal. If a dispute arises in choosing the joint appointee, the Court shall make the appointment. If Central Municipal or Upper District shall at any time or times nominate a substitute appointee in place of the appointee last appointed to represent Lower Area Parties, in the case of Central Municipal, or to represent Upper Area Parties, in the case of Upper District, or if Central Municipal and Upper District shall at any time or times jointly nominate a substitute appointee in place of the joint appointee last appointed,

such substitute appointee shall be appointed by the Court in lieu of such last appointee or joint appointee. Each such nomination shall be made in writing, served upon the other parties to this action and filed with the Court. The Watermaster when so appointed shall administer and enforce the provisions of this Judgment and the instructions and subsequent orders of this Court.

POWERS AND DUTIES

7. The Watermaster shall have the following powers and duties and shall take all steps necessary to make the following determinations for each Water Year promptly after the end of such Water Year:

(a) the amount of Surface Flow,

(b) the amount of Subsurface Flow,

(c) the amount of Export to Lower Area,

(d) the amount of water which passed as Surface Flow or Subsurface Flow across the boundary between Upper Area and Lower Area through Whittier Narrows and which was imported by or on behalf of Lower Area Parties from outside of the watershed of the San Gabriel River System above Whittier Narrows,

(e) the amount and quality of Reclaimed Water reclaimed by or on behalf of Lower Area,

(f) the total amount of Make-up Water delivered to Lower Area, together with the respective amounts delivered by each method specified in paragraph 5 of this Judgment,

(g) the amount of Usable Water received by Lower Area,

(h) the amount of local storm inflow, originating in Lower Area, to the channel of

each of Rio Hondo and San Gabriel River within Montebello Forebay,

(i) the surface outflow from Montebello Forebay in the channel of each of the Rio Hondo and San Gabriel River,

(j) the number of inches of depth of average rainfall in the San Gabriel Valley,

(k) the average annual rainfall in the San Gabriel Valley for the ten consecutive Water Years just ended,

(l) Lower Area Annual Entitlement or the entitlement for the Long-term Accounting Period, determined pursuant to subparagraph (d) or (h), respectively, of paragraph 5 of this Judgment,

(m) Accrued Debit of Upper Area, if any, or Accrued Credit of Upper Area, if any, as it exists at the end of such Water Year, and

(n) the amount, if any, of Make-up Water which Upper District is obligated to deliver during the following Water Year.

DETERMINATIONS TO BE BASED ON EXHIBIT B

8. Each of the above required determinations shall be based on and conform to the procedures specified in this Judgment and in Exhibit B insofar as said exhibit provides a procedure.

REPORTS MEASUREMENTS AND DATA

9. The Watermaster shall report to the Court and to each party in writing at the same time and not more than five months after the end of each Water Year the determinations required by paragraph 7 above.

The Watermaster shall cause to be installed and maintained in good working order such measuring

devices in Whittier Narrows and elsewhere as are necessary or required and not otherwise available for the making of the determinations required by paragraph 7 above.

The Watermaster shall collect and assemble from each of the parties, and the parties shall make available to the Watermaster, such records, reports and other data as may reasonably be required in the making of the determinations required of the Watermaster under paragraph 7 above. All records, reports and data received, maintained or compiled by the Watermaster shall be open to inspection by any party or its representative.

OBJECTIONS

10. Any party who objects to any determination made by the Watermaster pursuant to paragraph 7 above, may make such objection in writing to the Watermaster within thirty (30) days after the Watermaster gives the required written notice of such determination. Within thirty (30) days after expiration of the time within which objection may be made to such determination, the Watermaster shall consider all objections thereto and shall amend, modify or affirm the determination and give notice thereof at the same time to all parties and shall file a copy of such final determination with the Court. If the Watermaster denies any objection in whole or in part, the party whose objection was so denied may within thirty (30) days after service of the final determination upon it, make written objection to such denial by filing its objections with the Court after first mailing a copy of such objections to the

Watermaster and to each party, and such party shall bring its objections on for hearing before the Court upon notice and motion and at such time as the Court may direct. If the Watermaster shall change or modify any determination, then any party may within fifteen (15) days after service of such final determination upon it object to such change or modification by following the procedure prescribed above in the case of a denial of an objection to the first determination. If objection to a final determination is filed with the Court as herein provided and brought on for hearing, then such final determination may be confirmed or modified in whole or in part as the Court may deem proper.

CHANGE IN METHOD OF MEASUREMENT

11. If the Watermaster shall deem it advisable to make a change in the method of making any measurement required under the terms of this Judgment, the Watermaster shall notify all parties of such proposed change, and if within sixty (60) days of such notification no party shall file written objections to such change with the Watermaster, the Watermaster may put such proposed change into effect. If, however, any party files its written objection to the proposed change, it shall by notice of motion filed not later than fifteen (15) days after the expiration of said 60-day period and served on the Watermaster and all parties bring its objection on for hearing before the Court at such time as the Court may direct, and the Court shall rule on whether the Watermaster may make such proposed change.

BUDGET

12. In addition to the above-specified administrative powers and duties, the Watermaster shall prepare a tentative budget for each Water Year, stating the estimated expense for discharging the duties of the Watermaster set forth in this Judgment. The Watermaster shall mail a copy of the tentative budget to each of the parties at the same time at least sixty (60) days before the beginning of each Water Year. However, with respect to the first Water Year following the entry of this Judgment, the tentative budget shall be mailed not later than one hundred and twenty (120) days from the entry of this Judgment. If any party has an objection to a tentative budget, or any suggestions with respect thereto, that party shall present the same in writing to the Watermaster within fifteen (15) days after service of the tentative budget upon it. If no objections are received, the tentative budget shall become the final budget. If objections to the tentative budget are received, the Watermaster shall, within fifteen (15) days after the expiration of the time for presenting objections, consider all such objections, prepare a final budget, and mail a copy thereof to each party, together with a statement of the amount assessed, if any, to each party, computed as provided in paragraph 13. If the Watermaster denies any objection in whole or in part, the party whose objection was so denied may, within fifteen (15) days after service of the final budget upon it, make written objection to such denial by filing

its objections with the Court after first mailing a copy of such objections to each party, and such party shall bring its objections on for hearing before the Court upon notice and motion and at such time as the Court may direct. If the Watermaster makes a change in the tentative budget, then any party may within fifteen (15) days after service of the final budget upon it object to any such change by following the procedure prescribed above in the case of a denial of an objection to the tentative budget. If objection to the final budget is filed with the Court as herein provided and brought on for hearing, then such final budget may be confirmed or adjusted in whole or part as the Court may deem proper.

FEES AND EXPENSES

13. The fees, compensation and expenses of the Watermaster hereunder shall be borne by the parties in the following proportions: 50% by Upper District, 41.2% by Central Municipal, 7.125% by the City of Long Beach, and 1.675% by the City of Compton, or such other division among the Plaintiffs as they may agree upon in writing and file with the Watermaster.

Payment of the amount assessed to a party, whether or not subject to adjustment by the Court as provided in paragraph 12, shall be paid on or prior to the beginning of the Water Year to which the final budget and statement of assessed costs is applicable. If such payment by any party is not made on or before said date, the Watermaster shall add a penalty of 5% thereof to such party's

statement. Payment required of any party hereunder may be enforced by execution issued out of this Court, or as may be provided by order hereinafter made by this Court. All such payments and penalties received by the Watermaster shall be expended by him for the administration of this Judgment. Any money remaining at the end of any Water Year shall be available for use in the following Water Year.

SUCCESSOR OF UPPER DISTRICT

14. If a public agency or district shall be formed hereafter which shall include the present area of Upper District and shall have ability equal to or greater than that which Upper District now has to perform the obligations under this Judgment, and shall appear in this action and file a valid and effective assumption of such obligations, then Upper District upon application to this Court, and after notice and hearing, shall thereupon be relieved and discharged from all further obligations hereunder.

CONTINUING JURISDICTION OF THE COURT

15. Full jurisdiction, power and authority is retained and reserved by the Court for the purpose of enabling the Court upon application of any party by motion and upon at least thirty (30) days notice thereof, and after hearing thereon (i) to make such further or supplemental orders or directions as may be necessary or appropriate for the construction, enforcement or carrying out of this Judgment, and (ii) to modify, amend or amplify any of the provisions of this Judgment whenever substantial developments affecting the physical, hydrological or other conditions dealt

with herein may, in the Court's opinion, justify or require such modification, amendment or amplification.

If at any time Plaintiffs and at least two-thirds of the Defendants including any two of the cities of Alhambra, Azusa and Monterey Park, shall file with the Court a written stipulation (i) that henceforth in determining any one or more of the component parts of Usable Water received by Lower Area in any Water Year, the Watermaster shall not use the method specified in this Judgment but shall use instead a new, different or altered method as specified and described in such stipulation, and (ii) that such new, different or altered method or methods shall be applied to redetermine the average annual amount of Usable Surface Flow, Subsurface Flow and Export to Lower Area which Lower Area received each Water Year during the period October 1, 1934 to September 30, 1959, referred to as the base period, and that on the basis of such redetermination the Court may modify paragraphs 4 and 5 of this Judgment to establish a new and different water entitlement and yearly adjustment thereto which shall thereafter control, then and in that event, after hearing pursuant to motion and notice to all parties, held at such time as the Court may direct, the Court may deny the motion or it may grant it and (a) approve the future use of the stipulated new, different or altered method or methods, by the Watermaster, and (b) by use of the stipulated new, different or altered method or

methods, redetermine the average annual amount of Usable Surface Flow, Subsurface Flow and Export to Lower Area received each Water Year during the base period, and on the basis thereof modify paragraphs 4 and 5 of this Judgment to provide for a new and different water entitlement and yearly adjustment thereto, which modifications shall be effective and control commencing with the Water Year following the entry of the order so modifying paragraphs 4 and 5.

REPORT OF TRANSFER OF WATER RIGHTS

16. Every transfer of any of those water rights of Defendants which are the subject of Paragraph 5(j) of this Judgment, whether such transfer is voluntary or involuntary, shall be reported promptly in writing by the transferor to the Watermaster; and the Watermaster shall give prompt written notice of such transfer to each party and to each transferee involved in every other transfer of any of those water rights. Such report by the transferor and notice by the Watermaster shall contain the following information as to each such transfer:

(a) The identity of the transferor;

(b) The identity of the transferee;

(c) The effective date of the transfer;

(d) A brief description of the document by which such transfer is made, and the recording data, if any;

(e) A statement as to whether the transfer was voluntary or involuntary;

(f) A statement whether or not after such transfer the transferor still has or

claims to have any of the water rights which are the subject of Paragraph 5(j) of this Judgment.

NOTICES

17. All notices, requests, objections, reports and other papers permitted or required by the terms of this Judgment shall be given or made by written document and shall be served by mail on each party and on each transferee of water rights who has appeared and filed the assumption of obligations required by paragraph 5(k) of this Judgment, and where required or appropriate, on the Watermaster. For all purposes of this paragraph the mailing address of each party shall be that set forth below its signature to the Stipulation for Judgment, and the mailing address of each transferee of water rights shall be that set forth in the appearance and assumption of obligations required by paragraph 5(k) of this Judgment, until changed as provided below. No further notice of any kind as to any matter arising hereunder, including notice to attorneys of record for any party or such transferee, need be given, made or served.

If any party or any such transferee of water rights shall desire to change its designation of mailing address, it shall file a written notice of such change with the clerk of this court and shall serve a copy thereof by mail on the Watermaster. Upon the receipt of any such notice the Watermaster shall promptly give written notice thereof to each party and to each transferee of water rights.

EFFECTIVE DATE

18. The rights decreed and the obligations imposed by this Judgment shall be effective October 1, 1963, and shall accrue from that date.

COSTS

19. None of the parties shall recover any costs from any other party.

Dated: _____, 1964.

_____
Judge

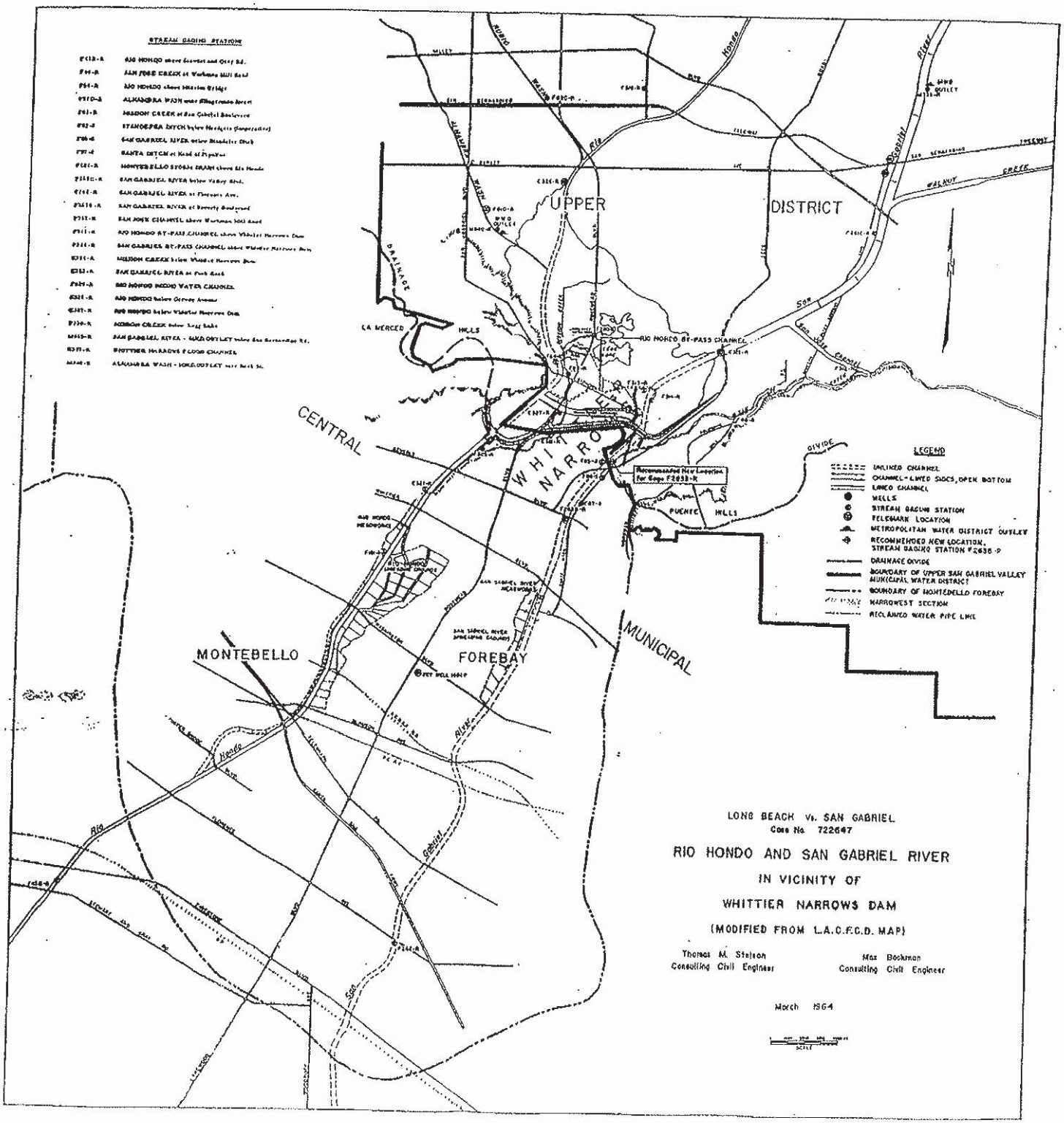
STREAM GAGING STATION
UPPER
DISTRICT
CENTRAL
BASIN
MONTEBELLO
FOREBAY
WHITTIER NARROWS DAM
MUNICIPAL
LA MERCED HILLS
PUENTE HILLS
RIO HONDO BY-PASS CHANNEL
Recommended New Location for Gage F2638-R
LEGEND
UNLINED CHANNEL
CHANNEL - LINED SIDES, OPEN BOTTOM
LINED CHANNEL
WELLS
STREAM GAGING STATION
TELEMARK LOCATION
METROPOLITAN WATER DISTRICT OUTLET
RECOMMENDED NEW LOCATION, STREAM GAGING STATION F2638-R
DRAINAGE DIVIDE
BOUNDARY OF UPPER SAN GABRIEL VALLEY MUNICIPAL WATER DISTRICT
BOUNDARY OF MONTEBELLO FOREBAY
NARROWEST SECTION
RECLAIMED WATER PIPE LINE
LONG BEACH Vs. SAN GABRIEL
Case No. 722647
RIO HONDO AND SAN GABRIEL RIVER
IN VICINITY OF
WHITTIER NARROWS DAM
(MODIFIED FROM L.A.C.F.C.D. MAP)
Theresa M. Stetson
Consulting Civil Engineer
Max Beckman
Consulting Civil Engineer
March 1964

EXHIBIT A

LONG BEACH v. SAN GABRIEL

ENGINEERING APPENDIX

EXHIBIT B

ENGINEERING APPENDIX

Table of Contents

Tables

ENGINEERING APPENDIX

INTRODUCTION

Pursuant to the declaration of rights contained in paragraph 4 of the Judgment and the physical solution contained in paragraph 5 of the Judgment, the purpose of this exhibit is to establish the basis for calculations and measurements to provide for operation of the Judgment in the future.

Unless otherwise provided in this exhibit, all terms used herein are used in the same sense as defined or used in the Judgment.

The derivation of the Lower Area average annual entitlement is based upon the data presented herein covering the base period. However, if a more accurate method of determining Subsurface Flow is developed at some future time, it will be acceptable for use in carrying out the terms of this Judgment so long as it can also apply to the base period and to the years over which the Judgment shall have operated to that time.

I. DERIVATION OF LOWER AREA AVERAGE ANNUAL ENTITLEMENT

The Lower Area average annual entitlement is stipulated in paragraph 5 (a) of the Judgment to be 98,415 acre-feet. It was derived from three components of water supply over the base period, October 1, 1934, through September 30, 1959. Said components were: (1) Usable Surface Flow, (2) Subsurface Flow, and (3) Export to Lower Area.

A. Usable Surface Flow

For the base period, Usable Surface Flow was calculated as that portion of Surface Flow which percolated

in Montebello Forebay, less the calculated amounts of Lower Area Replenishment Water (hereby defined as water imported from outside of the watershed of the San Gabriel River system by or on behalf of Lower Area Parties for replenishment of Montebello Forebay and passing from Upper Area to Lower Area), and less one-half of the Raymond Basin sewage discharged in Upper Area from the Tri-City Sewage Treatment Plant.

Table 1 presents the calculation of Usable Surface Flow during the base period. The average annual quantity was calculated to be 51,620 acre-feet. Its derivation is summarized in the following tabulation.

		Average annual quantity in acre-feet
1. Surface Flow		108,560
2. Montebello Forebay surface outflow	45,000	
3. Local storm inflow within Montebello Forebay	1,660	
4. Portion of Surface Flow leaving Montebello Forebay (2 minus 3)		43,340
5. Surface Flow percolated in Montebello Forebay (1 minus 4)		65,220
6. Lower Area Replenishment Water (Colorado River water) passing through Whittier Narrows	11,870	
7. One-half of Raymond Basin sewage discharged in Upper Area	1,730	
8. Usable Surface Flow (5 minus 6 minus 7)		51,620

TABLE

CALCU OF US URFACE

G BASE

cre-Fe

(1) Water Year	(2) Hondo -64	Su (4) Rio H Bypa F-3	Flo (5) camore Canyon	(6) abriel at num g water	(7) tl +5+6)	B	Montebe (9) San Gabri Rive F-26	bay surf (10) btotal (8+9)	low (11) Ballo Drain 81	(12) ow of rface low -11)	(13) os Flat lated in tebello robay -12)	(14) olorado ater pa ittler N	One- Basin in	Raymond Discharg Area	(16) Usable rface Fl (13-14-1
1934-3	9,230		390	2,410	170		4,	10,700	50	9,050	52,120				), 470
3	0,700		70	6,140	720		1,	5,970	90	5,080	41,640				8,905
3	0,900		260	7,750	750		21,	47,870	70	5,700	64,050				, 185
3	9,330		510	9,120	660		60,	132,100	50	0,050	103,610				), 650
3	0,650		200	8,380	560		2,	12,080	80	1,100	74,460				, 490
1939-4	7,660		110	9,510	490		1,	6,750	90	5,860	67,630				
4	0,650		1,070	2,440	280		75,	169,040	90	4,950	97,330				4,645
4	8,810		80	3,770	400		13,	20,300	60	9,340	72,060				, 125
4	9,470		150	2,670	700		186,	128,330	80	5,750	73,950				, 920
4	1,390		220	1,420	880		79,	106,750	90	4,360	87,520				), 715
1944-4	2,300		70	7,130	520		26,	34,570	70	3,800	73,720				, 975
4	3,160		70	1,580	440		16,	27,760	70	6,890	83,550				, 230
4	8,410		110	6,790	540		27,	43,680	50	2,330	77,210				, 915
4	5,370		20	0,970	030			3,510	10	2,600	56,430				, 425
4	1,100		40	3,590	370			1,490	60	630	34,740				, 365
1949-5	2,280		110	1,780	950			2,840	40	1,600	31,350				, 740
5	7,880		0	8,420	000			780	90	-110	23,110				, 350
5	4,570		530	6,800	990		24,	50,290	30	6,960	51,030				, 110
5	6,120		50	2,350	730		9	4,430	30	3,000	41,730				, 030
5	3,390	7,2	100	8,130	430		3,	14,550	90	2,360	40,070	15,6			, 730
1954-5	1,350	9,7	70	4,630	880		1,	9,000	10	7,790	31,090	23,1			, 380
5	6,180	14,9	150	8,930	560		10,	24,900	10	2,790	39,770	42,8			, 960
5	6,840	20,4	50	2,220	350		1,	6,030	20	4,910	56,440	51,8			, 100
5	9,320	15,3	540	1,320	140		23,	54,220	50	0,970	78,170	103,9			, 570
1958-5	9,800		10	9,790	520		3,	7,030	30	5,800	77,720	59,3			, 270
TOTAL	6,860	67,6	4,980	8,040	060		586,	124,970	10	3,560	30,500	296,8			, 330
Averag	3,870	2,7	200	1,120	560		23,	45,000	60	3,340	85,220	11,87			, 385
															, 620

B. Subsurface Flow

The State of California, Department of Water Resources, published in April 1962, Appendix B, "Safe Yield Determinations", of Bulletin No. 104, a report entitled "Planned Utilization of the Ground Water Basins of the Coastal Plain of Los Angeles County". That report included estimates of the seasonal Subsurface Flow through Whittier Narrows for each Water Year during the period 1934-35 through 1956-57. By applying the same methods of computation, the estimates have been extended through the Water Year 1958-59 and a 25-year average of 28,400 acre-feet derived.

Table 2 sets out the Subsurface Flow for each Water Year in the base period and the average annual Subsurface Flow during the base period.

TABLE 2

SUBSURFACE FLOW
DURING BASE PERIOD

Water Year	Acre-Feet
1934-35	33,500
36	33,500
37	31,100
38	25,600
39	25,000
1939-40	23,900
41	23,300
42	21,800
43	21,900
44	23,700
1944-45	23,500
46	23,100
47	22,400
48	25,700
49	30,300
1949-50	34,000
51	32,800
52	32,100
53	32,800
54	33,200
1954-55	33,600
56	32,200
57	32,600
58	30,500
1958-59	27,800
TOTAL	709,900
Average	28,400

C. Export to Lower Area

During the base period there were a number of water producers or water service agencies which produced water by surface diversions or wells in Upper Area and exported it to Lower Area. At the present time, and for the past several years, all such water has been pumped from wells in Upper Area.

There are four water service agencies which currently so export water. They are the Rincon Ditch Company, California Domestic Water Company, Suburban Water Systems, and the City of Whittier.

Table 3 sets forth Export to Lower Area for each Water Year during the base period and the average annual Export to Lower Area during the base period.

TABLE 3

EXPORT TO LOWER AREA
DURING BASE PERIOD

Water Year	Acre-Feet
1934-35	15,049
35-36	21,644
36-37	22,668
37-38	25,151
38-39	27,532
1939-40	22,566
40-41	24,191
41-42	27,514
42-43	30,484
43-44	31,182
1944-45	25,953
45-46	27,456
46-47	29,877
47-48	30,165
48-49	25,515
1949-50	18,363
50-51	21,651
51-52	16,302
52-53	18,141
53-54	18,360
1954-55	18,796
55-56	20,728
56-57	19,686
57-58	22,031
58-59	23,881
TOTAL	584,886
Average	23,395

D. Derivation of Lower Area Average Annual Entitlement

Table 4 presents the derivation of the Lower Area average annual entitlement.

TABLE 4

LOWER AREA AVERAGE ANNUAL ENTITLEMENT

(In acre-feet for base period)

Usable Surface Flow (Table 1)	51,620
Subsurface Flow (Table 2)	28,400
Export to Lower Area (Table 3)	23,395
Sub-total	103,415
Stipulated deduction	5,000
Lower Area average annual entitlement	98,415

II. DETERMINATION OF FUTURE LOWER AREA ANNUAL ENTITLEMENT

In determining a future Lower Area Annual Entitlement, as set forth in paragraph 5 (d) of the Judgment, the annual rainfall for San Gabriel Valley shall be determined in accordance with procedures set forth below, which are those presently utilized by the Los Angeles County Flood Control District. The 90-year (1872-73 through 1961-62) average rainfall for San Gabriel Valley has been calculated by said District to be eighteen and fifty-two one-hundredths (18.52) inches. For purposes of this Judgment, this quantity shall be the long-term average annual rainfall for San Gabriel Valley and shall not be subject to change.

The arithmetic average of the annual rainfall recorded at the four precipitation stations listed below shall constitute the rainfall for San Gabriel Valley for the respective Water Year.

Station No.	Location
95	114 East First Street, San Dimas
102C	19711 East Valley Blvd., Walnut
108C	119 South Hoyt Avenue, El Monte
610B	City Hall, Pasadena

Table 5 presents the annual rainfall for San Gabriel Valley for the Water Years 1954-55 through 1962-63.

TABLE 5

ANNUAL RAINFALL FOR SAN GABRIEL VALLEY

Water Year	Rainfall, Inches
1954-55	13.9
56	16.7
57	13.7
58	30.2
59	8.5
1959-60	10.6
61	5.9
62	22.4
63	12.3

The average rainfall in inches for the ten (10) consecutive Water Years ending with the year for which entitlement is being calculated shall be used as the basis for determining Lower Area Annual Entitlement.

Lower Area Annual Entitlements have been computed for 10-year average rainfall in increments of one-tenth (0.1) inch between fourteen (14) and twenty-five (25) inches and are set forth in Table A in paragraph 5 (d) of the Judgment. The following outlines the procedure for determining Lower Area Annual Entitlement from Table A:

(1) Derive the 10-year average rainfall for San Gabriel Valley to the nearest one-tenth (0.1) inch;

(2) Enter Table A in left-hand column at whole number of inches of rainfall; and

(3) Read horizontally to the vertical column representing the appropriate tenth of an inch of rainfall to obtain the quantity of Lower Area Annual Entitlement in acre-feet.

III. FUTURE MEASUREMENTS

It will be necessary to maintain records of measurement of stream flow, flow in pipelines, rainfall and depth to ground water at a number of locations. The purpose of this Part III is to locate and identify those measurement stations and to specify the manner in which the measurements are to be used in the future operation of the Judgment. The line through Whittier Narrows shown on Exhibit A as "narrowest section" is the line at which accounting shall be made of the water to be received in the future by Lower Area Parties. The Watermaster shall, insofar as practicable, utilize measurement data available from existing sources. When such data are not available the Watermaster may make such measurements as may be necessary or reasonably required for the purposes of this Judgment. The Watermaster is hereby authorized to re-establish, rebuild or replace measuring stations whenever necessary for the operation of this Judgment.

A. Surface Water Measurements and Calculations.

There may be several categories of water flowing on the surface through Whittier Narrows. Among them may be local stream flow, Lower Area Replenishment Water, Reclaimed Water and Make-up Water. The Watermaster shall have the responsibility of determining the quantities of each category of water flowing through Whittier Narrows in the future.

The approximate locations of stream measuring stations in and near Whittier Narrows are shown on Exhibit A. The surface

water measurements and calculations shall include the following:

1. Measurements of Surface Flow.
    a. Rio Hondo above Mission Bridge, Station F64-R.
    b. Mission Creek at San Gabriel Boulevard, Station F83-R.
    c. Rio Hondo By-pass Channel, Station F313-R.
    d. Whittier Narrows Flood Channel, Station E337-R.
    e. Calculation of Sycamore Canyon runoff based on annual rainfall to nearest inch at Station 170-C as shown on Table 6.
    f. San Gabriel River near Parkway Bridge. This is to be a new station to replace the existing station on San Gabriel River at Beverly Boulevard, Station F263B-R.
    g. The portion of Reclaimed Water from Whittier Narrows Reclamation Plant diverted to Rio Hondo.
2. Measurement of local storm inflow to the channel of each of the Rio Hondo and San Gabriel River within Montebello Forebay.
    a. Montebello storm drain, Station F181-R.
    b. Calculation of unmeasured local storm inflow.
3. Measurements of diversions to spreading grounds Montebello Forebay.
4. Measurement of surface outflow from Montebello Forebay in the channel of each of Rio Hondo and

San Gabriel River.

a. Rio Hondo above Stewart and Gray Road, Station F45B-R.

b. San Gabriel River at Florence Avenue, Station F262-R.

5. Measurement of Lower Area Replenishment Water imported to Upper Area from outside the watershed of the San Gabriel River system.

a. Rio Hondo By-pass Channel, Station F313-R.

b. San Gabriel By-pass Channel, Station F314-R.

c. San Gabriel River MWD Outlet, Station M335-R.

d. Alhambra Wash MWD Outlet, Station M340-R.

e. Any other measuring point or points in Upper Area at which such replenishment water is released.

6. Measurement of total Reclaimed Water from Whittier Narrows Reclamation Plant reclaimed by or on behalf of Lower Area Parties.

In the event that any of the aforementioned gaging stations are inoperative for any reason and for any period of time the Watermaster shall estimate the quantity that would have been measured at the station had it been operative. The estimate shall be based on correlation to nearby operative measuring stations or on other reasonable engineering methods.

TABLE 6

RAINFALL - RUNOFF RELATIONSHIP OF SYCAMORE CANYON*

Annual rainfall, in inches at Precipitation Station No. 170-C	Estimated runoff in acre-feet
6	5
7	10
8	15
9	25
10	35
11	45
12	60
13	75
14	90
15	105
16	125
17	145
18	170
19	200
20	240
21	275
22	315
23	355
24	400
25	445
26	490
27	535
28	580
29	630
30	685

Extrapolate for rainfall values in excess of 30 inches.

* Located on Westerly side of Whittier Narrows, upstream from dam and downstream from stream gaging Station F64-R. Approximate drainage area is 2.77 square miles.

B. Subsurface Flow

The determination of Subsurface Flow involves certain measurements and procedures which are set forth in this section. In connection with a recent comprehensive study made by the State of California, Department of Water Resources, for Bulletin No. 104, "Planned Utilization of the Ground Water Basins of the Coastal Plain of Los Angeles County", estimates were made of Subsurface Flow through Whittier Narrows. The State concluded that a reasonable method of determining Subsurface Flow was by the transmissibility method, which is based on Darcy's Law applied

at the location shown on Exhibit A as "narrowest section". Darcy's Law states that $Q = PIA$, in which

Q = Subsurface Flow

P = Permeability, in gallons per day per square foot under unit hydraulic gradient

I = Slope of water table

A = Cross-sectional area

Under this Judgment calculations shall be made by the Watermaster for the spring and fall of each year and because of slight variations due to the nature of the data available, Subsurface Flow for any one year will be equal to the tri-annual average of the quantities calculated for the three years ending with the year of calculation. In this manner, annual Subsurface Flow shall be based on the average of six calculations, the first of which shall be the spring of 1962.

The elevation of the ground surface at the "narrowest section" of Whittier Narrows is deemed to be 208 feet above sea level, and the width of the section is deemed to be 7,900 feet. Water levels fluctuate at Whittier Narrows and the cross-sectional area of the ground water at Whittier Narrows will vary with fluctuations in ground water elevation.

It should be noted that $T = PD$, where T = transmissibility in gallons per day per foot of width under unit hydraulic gradient and D = saturated depth in feet. Therefore $PA = TW$ and $Q = PAI = TWI$. The product TW (or PA) for the entire cross-sectional area was determined to be 4,739.5 x 1,000,000 gallons per day, or 7,333.6 cfs. The actual slope of the water table, I, would then be applied to the calculated quantity of TW (or PA).

The average permeability of the material to a depth of 100 feet below the ground surface has been determined to be equal to 2,000 gallons per day per square foot, which is

equal to .003095 cubic feet per second per square foot. This represents the average permeability in the zone of water level fluctuation.

In order to correct for the unsaturated depth, the equation $Q = TWI$ is modified to $Q = (TW - C)I$ where

$C = P_1 W d$,

C = The flow which would occur in the unsaturated section if it were saturated, in cubic feet per second under unit hydraulic gradient.

P_1 = Average permeability for a distance of 100 feet below the ground surface.

W = The cross-sectional width, or 7,900 feet.

d = The distance from the water surface to the top of the ground, or 208 feet minus ground water elevation.

Utilizing the values of permeability shown above, then

C = 24.45 d, in cubic feet per second, for values of "d" to a depth of 100 feet below the ground surface.

The "effective transmissibility" is equal to the total transmissibility times the width at the narrowest section minus C, or,

$Tw_e = TW - C$

$Tw_e = 7,334 - C$, in cubic feet per second.

Subsurface Flow is equal to the effective transmissibility times the average slope of the water table. The formula derived from the foregoing, may be stated as follows:

$Q = 724\ I\ [7,334 - 24.45\ (208 - E)]$

Where: Q = Subsurface Flow in acre-feet per year,

I = Average adjusted slope of ground water surface at narrowest section, and

E = Ground water elevation of the water surface in feet above sea level at the narrowest cross-section.

The detailed steps to be carried out by the Watermaster are as follows:

(1) Ground water level contour maps in the vicinity of Whittier Narrows are drawn on the basis of water level measurements.

(2) A line representing the narrowest cross-section is drawn on the ground water contour maps.

(3) This line is subdivided into four equal lengths.

(4) The average slope of the water table at each of the three points within the narrowest section is determined along a line perpendicular to the ground water contours in the manner heretofore used by the State of California, Department of Water Resources.

(5) Adjustment is made to the ground water slope at each of the three points so that it is perpendicular to the narrowest section by:

(a) measuring the angle, in degrees, between the line representing the narrowest cross-section and the tangent to the flow line at the narrowest cross-section,

(b) applying the sine of that angle to the previously determined slope to determine the adjusted slope, and

(c) obtaining an average of the three adjusted slopes to represent the average slope through the narrowest cross-section.

(6) The elevation of the water surface at the narrowest cross-section is determined by interpolating between the ground water contours.

(7) The distance to the ground water surface is computed from the top of the ground by the formula: $d = 208 - E$, where E represents the average water level elevation of the narrowest cross-section, in feet.

(8) The correction factors for the transmissibility for the area from the top of ground to the water surface is computed by the formula $C = 24.45\ d$, in cubic feet per second.

(9) The effective transmissibility is computed by the formula $Tw_e = 7,334 - C$, in cubic feet per second.

(10) Subsurface Flow is computed by multiplying the effective transmissibility by the average adjusted slope.

(11) The computed Subsurface Flow, in cubic feet per second, is converted to acre-feet per year by multiplying it by 724.

The selected wells within the vicinity of Whittier Narrows which have been used for drawing the ground water contours are as follows:

Location No.	State No.
2927B	2S 11W 06M01S
2927D	06K01S
2928	07B01S
2936	06A01S
2936A	1S 11W 31J03S
2938A	2S 11W 07H1S
2938D	05N05S
2939	08N01S
2939B	18B01S
2939G	07R01S
2947C	-
2947F	05L01S
2947N	05P01S
2948	05N04S
2948E	08B02S
2948F	08L03S
2957H	-

The Watermaster shall obtain measurements of ground water elevations in the spring and fall of each year when they are at their approximate high and low levels, respectively. Such measurements may be made at, but need not be limited to, all of the above listed wells.

C. Export to Lower Area

If present measuring devices on existing conduits are inadequate, the Watermaster shall install or cause to be installed adequate measuring devices to determine the amount of Export to Lower Area.

IV. ACCOUNTING

Utilizing the appropriate measurements described in the previous portion of this Exhibit B, the Watermaster shall maintain accounts for the determination of Lower Area Annual Entitlement, the annual amount of Usable Water, Make-up Water to be delivered, Make-up Water received, the annual total amount of Usable Water and Make-up Water, the accumulated Lower Area Annual Entitlements, the accumulated amounts of Usable Water and Make-up Water received subsequent to September 30, 1963, Accrued Debit of Upper Area or Accrued Credit of Upper Area, and records necessary for accomplishing the Long-term Accounting.

In maintaining the accounting records listed above, the Watermaster shall establish the necessary accounting procedures to accomplish the recordation of data and required calculations for accomplishment of the provisions set forth in paragraph 5 of the Judgment.

A. Components of Usable Water

1. Surface Flow. Surface Flow shall be measured as set forth in Part III.A. of this exhibit to include all water other than Export to Lower Area and Subsurface Flow which passes from Upper Area to Lower Area through Whittier Narrows. When the new station to be constructed on the San Gabriel River near Parkway Bridge is completed, it shall replace the gaging station on the San Gabriel River at Beverly Boulevard, Station F263B-R. Until such new station is in operation, Surface Flow as measured at Station F263B-R shall be increased by the amount of Surface Flow which has percolated or been diverted between Station F263B-R and the point of maximum rising water. The Watermaster shall determine the quantity so percolated or diverted based upon available measurements by the Los Angeles County Flood Control District.

2. Subsurface Flow. Subsurface Flow shall be calculated in accordance with the procedures heretofore set forth.

3. Export to Lower Area. The Watermaster shall reduce to acre-feet the meter readings on each of the conduits transporting through Whittier Narrows water diverted from surface streams in Upper Area or pumped or developed from underground sources in Upper Area. These quantities shall be used to determine Export to Lower Area except that after September 30, 1966, Export to Lower Area used for determination of Usable Water shall not exceed 23,395 acre-feet per year. (Paragraph 3(1) of this Judgment.)

B. Calculation of Usable Water

After determining the amounts of Surface Flow, Subsurface Flow and Export to Lower Area during a Water Year, as provided above, the Watermaster, in order to determine the extent to which such water constitutes the receipt of Usable Water by Lower Area during such Water Year, shall deduct from the total of such amounts, the following:

1. Lower Area Replenishment Water. An amount equal to the total quantity of Lower Area Replenishment Water released in Upper Area in each Water Year subsequent to September 30, 1963, less such amount, if any, as the Watermaster determines to be lost due to evaporation or transpiration prior to the receipt of such water in Lower Area;

2. Reclaimed Water. An amount equal to the total quantity of Reclaimed Water which is reclaimed by or on behalf of Lower Area Parties;

3. Make-up Water. An amount equal to the quantity of Make-up Water delivered to Lower Area during such Water Year, calculated as hereafter provided, to the extent included in

Surface Flow or Export to Lower Area;

4. Paragraph 3(1)(6) Water. An amount equal to the quantity of any water which falls within the scope of paragraph 3(1)(6) of the Judgment; and

5. Unusable Surface Flow. An amount equal to the quantity of Unusable Surface Flow, which is determined by deducting from the total outflow as measured at Stations F45B-R and F262-R: (1) Local Storm Outflow and (2) the portion of Surface Flow which has been caused to pass said stations by reason of any spreading of water in Montebello Forebay by or on behalf of Lower Area Parties.

Local Storm Outflow is a portion of local storm inflow originating in Montebello Forebay upstream from said measuring stations, the amount of which outflow is to be determined as hereinafter provided. When actual measurements of local storm inflow are not available, the amount thereof discharging to the channels of Rio Hondo or San Gabriel River within Montebello Forebay upstream from stations F45B-R and F262-R shall be estimated by correlation with the local storm inflow measured at Montebello Storm Drain, Station F181-R. Such quantities shall be estimated on the basis of the individual drainage areas of storm drain projects and the runoff per unit area determined from the Montebello Storm Drain, Station F181-R, during the particular time interval under consideration. When water is flowing out of Montebello Forebay on the surface in the Rio Hondo or San Gabriel River channels, the Watermaster shall determine Local Storm Outflow as follows:

a. Local Storm Outflow from Rio Hondo. When outflow occurs at Station F45B-R, all local storm inflow, both measured and estimated, which enters the Rio Hondo channel between that station and Upper Area shall constitute Local Storm Outflow from Rio Hondo, but the amount thereof shall not exceed the amount of

outflow at Station F45B-R for such periods.

b. Local Storm Outflow from San Gabriel River. At such times as local storm inflow does not join Surface Flow in San Gabriel River, the portion of such local storm inflow passing Station F262-R shall constitute Local Storm Outflow. In addition, at such times as Surface Flow in the San Gabriel River commingles with the local storm inflow, then the Watermaster shall determine Local Storm Outflow as follows:

(1) Calculate the total amount of local storm inflow to the San Gabriel River during such times, but such amount to be used in the determination of Local Storm Outflow shall not exceed the amount of San Gabriel River outflow passing Station F262-R during such periods.

(2) Calculate the Local Storm Outflow passing Station F262-R during such times, which calculation shall be based on the Surface Flow and local storm inflow to the San Gabriel River channel, giving appropriate weight to the quantities involved and the distance the respective quantities of water traverse Montebello Forebay in said channel.

(3) These two calculations shall then be averaged arithmetically and the resulting amount shall be Local Storm Outflow from San Gabriel River.

C. Determination and Delivery of Make-up Water

1. By Additions to Surface Flow (paragraph 5(i)(1) of Judgment). The determination of the amount of Make-up Water which is delivered to Lower Area as an addition to Surface Flow shall be based upon (a) measurements of Make-up Water at the

delivery outlet of such water upstream from Whittier Narrows, (b) measurements of water consisting in whole or in part of Make-up Water passing the applicable stations listed in Part III.A.1. of this Exhibit B, and (c) such deductions from the measurements of Make-up Water at said stations so listed as are necessary to take into account (i) the amount of any water other than Make-up Water included in the measurements at said stations so listed, (ii) any losses due to evaporation or transpiration of Make-up Water after such measurement and prior to its receipt in Lower Area, and (iii) any percolation of Make-up Water after such measurement and prior to the time it reaches the "narrowest section" in Whittier Narrows.

As changing conditions may require, the Watermaster shall change the points of measurement of Make-up Water in order to obtain those measurements necessary to determine the amount of Make-up Water delivered to Lower Area Parties by means of increasing Surface Flow.

2. By Payment for Reclaimed Water (paragraph 5(i)(2) of the Judgment). The Watermaster shall determine (a) the quantity of Reclaimed Water reclaimed at the Whittier Narrows Water Reclamation Plant as it existed October 1, 1963, and which when so reclaimed shall have been passed through Whittier Narrows, and (b) the quantity, if any, of Reclaimed Water reclaimed at any future additions to said plant after September 30, 1963, and which when so reclaimed shall have been passed through Whittier Narrows. Such quantities shall be ascertained from the records of Los Angeles County Flood Control District.

Upon being advised that a payment has been made by Upper District or Defendants to Central Municipal pursuant to the provisions of paragraph 5(i)(2) of the Judgment, the Watermaster shall credit Upper Area Parties with the delivery of Make-up Water computed according to said paragraph of the

Judgment.

3. By Deliveries to a Lower Area Party (paragraph 5(i)(3) of the Judgment). Any Make-up Water delivered directly to a Lower Area Party with the consent of Plaintiffs shall be metered and the meter records reduced to acre-feet per year. Upon being advised that a Lower Area Party has received a direct delivery of Make-up Water pursuant to the provisions of paragraph 5(i)(3) of the Judgment, the Watermaster shall credit Upper Area Parties with delivery of such Make-up Water in the Water Year in which it was so delivered.

D. Long-term Accounting

The Watermaster shall maintain a record of the annual rainfall in the San Gabriel Valley, including a running average of such rainfall, so that the Watermaster will be informed when a Long-term Accounting shall be carried out as specified in paragraph 5(h) of the Judgment, and shall thereafter perform the necessary calculations for accomplishment of the adjustment, if any, between the aggregate amount of water received compared to the aggregate entitlement for the period.

E. Water Usable for Ground Water Replenishment

With respect to any delivery of Make-up Water the Watermaster shall determine the suitability of such water for ground water replenishment. The Watermaster shall gather, insofar as readily available from public and private agencies, data relating to the quality of all categories of water, Surface Flow, Subsurface Flow, Export to Lower Area, Reclaimed Water, Lower Area Replenishment Water and Make-up Water.

REIMBURSEMENT CONTRACT

LONG BEACH v. SAN GABRIEL

REIMBURSEMENT CONTRACT

Contents

ed.

REIMBURSEMENT CONTRACT

THIS CONTRACT is made by and between UPPER SAN GABRIEL VALLEY MUNICIPAL WATER DISTRICT, herein called "Upper District", and the cities of ALHAMBRA, ARCADIA, AZUSA, COVINA, EL MONTE, GLENDORA, MONTEREY PARK, MONROVIA, SOUTH PASADENA, and WHITTIER; BALDWIN PARK COUNTY WATER DISTRICT, and SAN GABRIEL COUNTY WATER DISTRICT; AZUSA AGRICULTURAL WATER COMPANY, AZUSA VALLEY WATER COMPANY, CALIFORNIA DOMESTIC WATER COMPANY, CALIFORNIA WATER & TELEPHONE COMPANY, COLUMBIA LAND AND WATER COMPANY, COVINA IRRIGATING COMPANY, CROSS WATER COMPANY, DUARTE WATER COMPANY, EAST PASADENA WATER COMPANY, LTD., GLENDORA IRRIGATING COMPANY, SAN DIMAS WATER COMPANY, SAN GABRIEL VALLEY WATER COMPANY, SOUTHERN CALIFORNIA WATER COMPANY, SUBURBAN WATER SYSTEMS, SUNNYSLOPE WATER COMPANY, and VALLECITO WATER COMPANY, corporations, herein collectively called "Pumpers."

ed.

RECITALS

1. The Action. In the matter of Board of Water Commissioners of the City of Long Beach, et al. v. San Gabriel Valley Water Company, et al., (L. A. Superior Court No. 722,647) the water rights of substantially all major water producers in the main San Gabriel Valley are sought to be restricted.

2. Judgment. The parties named above, except City

of Whittier, are concurrently executing a Stipulation that a Judgment substantially in the form annexed hereto shall be rendered and it is anticipated that such Judgment will be rendered in the action.

3. Public Interest in Settlement. It is in the best interests of the Pumpers and in the best interests of the water users and taxpayers within the corporate boundaries of those Pumpers which are public agencies, of the consumers of those Pumpers which are utilities or mutual water companies, and of all residents and taxpayers of Upper District, that said action be settled and disposed of in accordance with the terms of said judgment in order to preserve the water supplies within Upper Area.

DEFINITIONS

1. "Contract Costs" -- All costs hereafter paid by Upper District:

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(a) In providing Make-up Water under the terms of the judgment. In computing such cost of providing Make-up Water, any cost which Upper District shall pay which it would have paid even though it had not provided Make-up Water shall be excluded; and particularly but not exclusively, no amount which shall be paid to The Metropolitan Water District of Southern California as a condition to any past or future annexation shall be

deemed a cost of providing Make-up Water. Such costs may include interest paid by Upper District upon money borrowed for advancements made by it or interest which would have been received by the District, but which it lost by reason of making such advancements.

(b) In complying with the terms of said judgment.

(c) In keeping the records, making the determinations and collecting the moneys required by the later provisions of this contract.

2. "Assessable Pumpage" -- The amount of ground water produced in the applicable calendar year by or on behalf of any Pumper by pumping or extraction thereof from the Upper Area, including ground water produced under rights hereafter acquired from any source.

ed.

3. Common Terms With Judgment -- All terms specially defined in said judgment are used herein in the sense in which they are therein defined, and said special definitions are incorporated herein by this reference.

OPERATIVE PROVISIONS

1. Consideration for Execution. The great majority of the defendants in the action are situated in whole or in part within Upper District and pump water therein. Certain defendants, including the Cities of Alhambra, Azusa and

Monterey Park, as well as the City of Whittier which is not a defendant, lie outside Upper District. Execution of this agreement by all parties to it is essential to induce each party hereto to execute this agreement, and likewise, execution of the Stipulation for Judgment by all defendants in the action is necessary to induce each party hereto to execute this contract. Each party executes this contract in consideration of its execution by the other parties, and in consideration of the execution of the Stipulation by the parties thereto. Moreover, by this contract each party other than City of Whittier waives its right to cross-complain in the action so as to bring City of Whittier into the action as a party.

2. Intervention by Upper District. In consideration of the execution of this contract by Pumpers and to contribute to the physical solution of providing adequate water for its inhabitants, Upper District has intervened as a defendant in the action and agrees to execute the stipulation for said judgment.

3. Administration. Upper District shall administer the provisions of Paragraphs 6 through 9, below, as to all Pumpers, including additional parties hereto mentioned in Paragraph 16.

4. Covenant to Reimburse. Each Pumper hereby agrees to pay to Upper District such Pumper's share of Contract

Costs allocated and determined as provided below.

5. Allocation of Costs Among Pumpers. Pumpers agree among themselves, each for the benefit of all other Pumpers, to share and participate in the payment of any sums due Upper District hereunder in such proportion as the Assessable Pumpage of each Pumper bears to the total Assessable Pumpage of all Pumpers for the applicable period covered by any assessment as hereinafter provided, subject to the provisions of Paragraph 9 below.

6. Reports by Pumpers. Pumpers shall file under penalty of perjury the reports hereinafter specified in the form provided by Upper District, as follows:

(a) Time and Procedure for Filing. Each year, on or before March 1, each Pumper shall file with Upper District a written report of its extractions of water from Upper Area for the preceding calendar year containing the information set forth in subparagraph (b) of this paragraph.

ed.

(b) Contents of the Report. Such annual reports to Upper District shall set forth:

(1) The name and address of the Pumper; and

(2) The number of acre feet of water which was pumped or extracted from Upper Area by or on behalf of the Pumper during

the calendar year covered.

(c) Determination in Lieu of Report. In the event any Pumper fails to so file such report, Upper District may make a determination of the Assessable Pumpage of such Pumper, which determination shall be final and binding.

7. Notice of Assessment. On or before June 1 of each year, Upper District shall serve a Notice of Assessment on each Pumper covering the preceding calendar year which will contain a statement of:

(a) The amount of Assessable Pumpage by each Pumper;

(b) A detailed statement of Contract Costs during the preceding calendar year, if any; and

(c) A statement of the amount of such Contract Costs which are assessable to and payable by the Pumper to whom such notice is sent.

ed.

8. Payment--Delinquency and Default. All assessments herein provided for shall be due and payable on the following July 31. In the event of nonpayment of any assessment, Upper District may bring an action and shall have the right to recover such assessment, together with interest thereon at the rate of 7% per annum from the date of delinquency and costs of suit, including any reasonable attorneys' fees incurred.

If, after due diligence, Upper District is unable to collect a Pumper's allocated cost, such uncollectible amount (including interest, costs and attorneys' fees) shall be prorated among and paid by the other Pumpers in the same proportions as they paid assessments for the year or years in question. Said proration shall be billed and payable with the next succeeding assessment.

9. Redetermination of Assessable Pumpage. Any Pumper may at any time within 90 days after receipt of any Notice of Assessment request a redetermination of the Assessable Pumpage of such Pumper or of any other Pumper or Pumpers reflected in such notice. Such request shall be addressed in writing to Upper District and shall set forth the basis of the requesting Pumper's belief that such data are incorrect. Upon the receipt of any request, the following procedures shall be undertaken by Upper District:

ed.

(a) Notice of Request for Redetermination. Upper District shall forthwith notify in writing any Pumper whose Assessable Pumpage has been questioned, of the fact of such request and the name of the requesting Pumper. Notice shall further be sent to all Pumpers that procedures will be undertaken pursuant to this paragraph, and shall state briefly the issues to be determined.

(b) Availability of Records. Subsequent to such notice, the records of the Pumper whose Assessable Pumpage is subject to a request for redetermination shall be made available at reasonable hours and upon reasonable demand to Upper District, insofar as such records are relevant to a determination of the Assessable Pumpage of the Pumper during the period involved.

(c) Investigation and Notice of Hearing. Upper District shall conduct an investigation and shall by written decision served on all Pumpers redetermine or affirm such Assessable Pumpage. Upper District may at its option set a date for hearing. In such event, at least ten days' notice in writing of said hearing date shall be given to all Pumpers.

ed.

(d) Conduct of Hearing and Decision. If hearing be held, Upper District shall not be bound therein by strict rules of evidence, but may rely on any evidence which it deems of probative value. Any Pumper may present evidence and arguments thereat. The written decision of Upper District, with or without such hearing, shall be served on all Pumpers and shall be conclusive for purposes of this contract, unless said issue is submitted

to a court of competent jurisdiction within 90 days from notice of such decision.

(e) Reallocation of Contract Costs. If Assessable Pumpage is modified by any such decision, Contract Costs shall be reallocated in accordance therewith. Said reallocation shall be billed and payable with the next succeeding assessment.

10. Water Rights Unaffected. This contract relates solely to the equitable allocation of Contract Costs and does not involve or constitute an admission or agreement as to the water rights of any Pumper. Execution of this contract shall not prevent any party hereto from bringing or maintaining any action or proceeding to determine rights to pump, extract or store water, or to limit or curtail any pumping, extraction or storage of water in or from Upper Area or elsewhere, except as limited by Paragraphs 1 and 16 of the Operative Provisions hereof.

ed.

11. Changed Conditions. It is recognized that conditions in Upper Area may hereafter change to such an extent that it may become equitable to modify either the total obligation of Pumpers to Upper District hereunder or the allocation of Contract Costs. While this contract is entered into to assure Upper District of reimbursement of an amount up to its entire Contract Costs, it is not intended hereby, and this contract shall not be deemed, to prevent Upper District

from modifying and reducing such obligation or from applying other relief which may reduce the burden on Pumpers. Without limitation upon the power of Upper District to otherwise reduce the aggregate amount payable under this contract, the following specific instances of changed conditions are contemplated:

(a) Allocation of Portion of Burden to Taxes. It may at some future date appear equitable and fair to allocate all or a portion of Contract Costs to ad valorem taxes or other revenues of Upper District. In such event, Upper District may, in the discretion of its Board of Directors, allocate all or a portion of Contract Costs to such revenue sources and the remainder, if any, thereof, shall be payable under the terms of this contract.

(b) Imposition of Pump Tax. If Upper District should acquire and exercise the right to levy a tax upon the pumping or extraction of ground water, then the aggregate of such tax shall be credited proportionally amongst Pumpers with respect to Assessable Pumpage within Upper District.

(c) Adjudication of Rights. If all or substantially all of the water rights within Upper Area shall be adjudicated (including the rights of all Pumpers), and its natural and safe yield

determined, then this contract shall be deemed modified to the extent that Assessable Pumpage shall include only that amount of water produced over and above the safe yield portion of adjudicated rights owned by any Pumper; provided that this subparagraph (c) shall not apply to any year in which the aggregate of all Assessable Pumpage as so modified is less than 25,000 acre feet.

12. Effective Date. This contract shall be effective ten (10) days after notice in writing of execution thereof by all parties, which notice shall be given to all Pumpers by Upper District, but shall cease and terminate on July 1, 1966, unless by said date (a) this contract shall have been validated as provided below, and (b) the Judgment shall have been rendered.

ed.

13. Validation. Within four months after this contract becomes effective, a proceeding or proceedings shall be instituted by Upper District in a court of competent jurisdiction by an appropriate action or actions for determination of the validity of this contract.

14. Term. The term of this contract shall commence upon its effective date and continue so long as the Judgment, as entered or as modified, shall remain in effect, subject, however, to the provisions of Paragraph 12 above.

15. Notices. Any notice to be served upon any party hereunder may be served either personally or by mail. If served by mail, such notice shall be mailed in the County of Los Angeles, State of California, by certified mail, postage prepaid, return receipt requested, or by registered mail, and shall be addressed to the party to be served at its address as set forth below, or (in the case of Upper District) at such other address as it may have last specified in writing to the Pumper or Pumpers involved for the service of notices hereunder, or (in the case of a Pumper) at such other address as it may have last specified in writing to Upper District for the service of notices hereunder. Any notice so served by mail shall be deemed to have been served upon the first business day (excluding Saturdays, Sundays and holidays) after such mailing.

ed.

16. Additional Parties. In addition to Pumpers and their successors and assigns referred to in Paragraph 17 below, any other person or entity who or which shall pump or extract water in or from Upper Area (herein referred to as an "additional party"), may become a party to this contract, provided (a) Upper District shall give its written consent thereto, and (b) no Pumper or additional party shall serve upon Upper District its written objection thereto. If Upper District shall give its written consent to execution of this contract by an applying additional party, it shall

then give written notice of such application and consent by Upper District to each Pumper and each additional party, and if within thirty (30) days after such notice no Pumper or additional party shall have served upon Upper District its written objection to execution of this contract by the applying additional party, such additional party's application shall be deemed to have been accepted and it may become a party to this contract by delivery to Upper District of a duly executed instrument in writing stating that such person or entity joins in and becomes a party to this contract.

Any additional party so joining shall become bound by all obligations of this contract, becoming due or which should be performed within the terms of this contract on and after the ensuing January 1. Such obligations include the duty to make the report of extractions during the preceding calendar year (i.e., the year in which the contract is executed) required by Paragraph 6, and to make the payment based upon such extractions as required by Paragraph 5, provided, however, that such additional party shall have no liability under Paragraph 8 with respect to any nonpayments of an assessment based upon extractions by a Pumper or other additional party prior to the year in which such additional party joins in this contract.

ed.

As to each Pumper who executes this contract after it becomes effective, Upper District agrees that for a

period of 90 days after giving its said written consent, it will bring no action against such additional party to limit or define its rights to pump water in or from Upper Area. Further, if more than one such Pumper shall become a party to this agreement at the same time as any other pumper, each will execute and shall be deemed to have executed this contract and to have joined therein in consideration of the joinder in this contract by the other or others concurrently joining in this contract.

Any such additional party shall be deemed a Pumper for all purposes of this agreement.

17. Successors and Assigns. This contract shall inure to the benefit of and bind the successors in ownership of the water rights of the parties. If any Pumper shall sell or transfer or agree to sell or transfer its water rights in Upper Area or any part of such water rights, such Pumper shall require as a condition of any such sale, transfer or agreement that the purchaser or transferee, if not already a party to this contract, shall execute this contract and become a party thereto. Upon a full transfer of such rights by a Pumper and assumption by the assignee as above provided, the assigning Pumper shall be discharged of obligation hereunder. If such Pumper fails to obtain such assumption (except in cases of a transfer under order of court or by operation of law) the assigning Pumper shall

ed.

remain bound by the contract and production of water by said assignee by the exercise of the right assigned shall be treated as production by such Pumper.

18. Execution in Counterparts. This contract may be executed in counterparts (each counterpart being an exact copy or duplicate of the original) and all counterparts collectively shall be considered as constituting one complete contract.

IN WITNESS WHEREOF this contract is executed by the undersigned by its duly authorized officer.

Dated: _____.

_____

(SEAL)

By _____

By _____

ed.

Suburban
Water Systems
A SouthWest Water Company

Appendix G: Main Basin Judgment

Suburban Water Systems | 2020 Urban Water Management Plan

SUPERIOR COURT OF THE STATE OF CALIFORNIA

FOR THE COUNTY OF LOS ANGELES

UPPER SAN GABRIEL VALLEY
MUNICIPAL WATER DISTRICT

Plaintiff,

vs.

CITY OF ALHAMBRA, et al,

Defendants.

No. 924128

AMENDED JUDGMENT
(and Exhibits Thereto),

Honorable Florence T. Pickard
Assigned Judge Presiding

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

JUDGMENT AS AMENDED AUGUST 24, 1989

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Attorney for Watermaster

SUPERIOR COURT OF CALIFORNIA, COUNTY OF LOS ANGELES

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

HONORABLE FLORENCE T. PICKARD

Assigned Judge Presiding

DEPARTMENT 38

August 24, 1989

AMENDED JUDGMENT
TABLE OF CONTENTS

And
Amended Judgment Sections
Identified With Prior Judgment
Section Numbers

EXHIBITS

Exhibits Continued

"B" -- Boundaries of Relevant Watershed

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

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

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

"F" -- Table Showing Special Category Rights

"G" -- Table Showing Non-consumptive Users

"H" -- Watermaster Operating Criteria

"J" -- Puente Narrows Agreement

"K" -- Overlying Rights

"L" -- List of Producers and Their Designees (New)

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

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SUPERIOR COURT OF CALIFORNIA, COUNTY OF LOS ANGELES

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

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

I. INTRODUCTION

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(d) Diverter -- Any party who Diverts.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(u) Prescriptive Pumping Right -- (Prior Judgment

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Exhibit "B" -- Boundaries of Relevant Watershed.

Exhibit "C" -- Table Showing Base Annual Diversion

Rights of Certain Diverters.

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

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

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

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

Exhibit "H" -- Watermaster Operating Criteria.

Exhibit "J" -- Puente Narrows Agreement.

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

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

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

II. DECREE

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

A. DECLARATION OF HYDROLOGIC CONDITIONS

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

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

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

B. DECLARATION OF RIGHTS

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

C. INJUNCTION

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

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

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

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

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

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

D. CONTINUING JURISDICTION

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

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

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

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

E. WATERMASTER

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(3) determination by Watermaster of, and

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

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

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

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

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

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

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

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

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

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

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

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

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

F. PHYSICAL SOLUTION

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

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

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Telephone (818) 769-2002

Attorney for Watermaster - Petitioner

SUPERIOR COURT OF CALIFORNIA, COUNTY OF LOS ANGELES

UPPER SAN GABRIEL VALLEY MUNICIPAL WATER DISTRICT, Plaintiff, vs. CITY OF ALHAMBRA, et al., Defendants.	No. 924129 ORDER AMENDING JUDGMENT TO EXPAND WATERMASTER'S POWERS TO INCLUDE MAINTENANCE, IMPROVEMENT, AND CONTROL OF BASIN WATER QUALITY WITH ALLOWABLE FUNDING THROUGH IN-LIEU ASSESSMENTS Hearing: August 7, 1990 Department 38, 9:15 A. M.

The Petition of the Main San Gabriel Basin Watermaster (Watermaster) for Amendment to Judgment herein to expand its powers to include maintenance, improvement, and control of Basin water quality by controlling pumping in the Basin, with allowable funding for associated costs to be paid through its In-Lieu Assessments, was continued on July 31, 1990, to August 7, 1990, when it duly and regularly came on for hearing, at 9:15 o'clock A. M. in Department 38 of the above entitled Court, the Honorable FLORENCE T. PICKARD, Assigned Judge Presiding. Ralph B. Helm appeared as Attorney for Watermaster - Petitioner; Wayne K. Lemieux appeared for Defendant, San Gabriel Valley Municipal Water District, in support of the Petition; Fred Vendig, General

Counsel, Karen L. Tachiki, Assistant General Counsel, and Victor E. Gleason, Senior Deputy General Counsel, by Victor E. Gleason, appeared for Defendant, The Metropolitan Water District of Southern California, in support of the Petition; Timothy J. Ryan appeared for Defendant, San Gabriel Valley Water Company, in opposition to the Petition; Lagerlof, Senecal, Drescher & Swift, by H. Jess Senecal, appeared for Defendants, Calmat Company, Livingston-Graham, Owl Rock Products, AZ-Two, Inc., and Sully-Miller Contracting Company, in opposition to the Petition; Ira Reiner, Los Angeles County District Attorney, by Jan Chatten-Brown, Special Assistant to the District Attorney, appeared in opposition to the Petition; and Sarah F. Bates and Laurens H. Silver, by Sarah F. Bates, appeared on behalf of Amicus Curiae Sierra Club, in opposition to the Petition.

The Court acknowledged receipt and consideration of: letters in support of the Petition by the California Regional Water Quality Control Board - Los Angeles Region and by the State Water Resources Control Board; a copy of a letter addressed to the Attorney for Petitioner, from the US Environmental Protection Agency - Region IX, by Mark J. Klaiman, Assistant Regional Counsel, regarding several matters of federal law which EPA believed might ultimately affect the subject Petition; a letter in opposition to the Petition by East Valleys Organization; and a FAX communication to the Court, in opposition to the Petition, from Congressman Esteban E. Torres, which was not communicated to nor seen by the parties.

Members of the public, present in Court, were invited to, and did, present oral testimony during the hearing.

Under date of December 10, 1990 the Court entered its Intended Decision Re Amendment To Judgment and, by minute order duly entered and mailed to Counsel for Petitioner, ordered copies thereof mailed forthwith to all appearing parties, including those appearing as friends of the court, and to all other affected parties on the case's current mailing list.

A Proof Of Service by mail on December 13, 1990, Of Intended Decision Re Amendment To Judgment, as ordered, has been filed with the Court.

Opposition to Petitioner's Proposed Order were filed by Amicus Curiae Sierra Club, Amicus Curiae Los Angeles District Attorney, and by Producer Parties Calmat Co., Livingston-Graham, Owl Rock Products Company, AZ-Two, Inc., and Sully-Miller Contracting Company.

Proof being made to the satisfaction of the Court and good cause appearing:

IT IS, HEREBY, ORDERED:

1. That the Amended Judgment herein be further amended by amending Subsection (j) of Section 10 thereof, Definitions, and Section 40 thereof, Division F, Physical Solution, to read as follows:

"10 (j) <u>In-Lieu Water Cost</u> - - The differential between a particular Producer's cost of Watermaster directed produced, treated, blended, substituted, or Supplemental Water delivered or substituted to, for, or taken by, such Producer in-lieu of his cost of otherwise normally Producing a like amount of Ground Water from the Basin.

"40. <u>Watermaster Control.</u> (Prior Judgment Section 32)

In order to develop an adequate and effective program of Basin management, it is essential that Watermaster have broad discretion in the making of Basin management decisions within the ambit hereinafter set forth. The maintenance, improvement, and control of the water quality and quantity of the Basin, withdrawal and replenishment of supplies of the Basin and Relevant Watershed, and the utilization of the water resources thereof, must be subject to procedures established by Watermaster in implementation of the Physical Solution provisions of this Judgment. Both the quantity and quality of said water resource are thereby preserved and its beneficial utilization maximized.

"(a) Watermaster shall develop an adequate and effective program of Basin management. The maintenance, improvement, and control of the water quality and quantity of the Basin, withdrawal and replenishment of supplies of the Basin and Relevant Watershed, and the utilization of the water resources thereof, must be subject to procedures established by Watermaster in implementation of the Physical Solution provisions of this Judgment. All Watermaster programs and procedures shall be adopted only after a duly noticed public hearing pursuant to Sections 37 and 40 of the Amended Judgment herein.

"(b) Watermaster shall have the power to control pumping in the Basin by water Producers therein for Basin cleanup and water quality control so that specific well production can be directed as to a lesser amount, to total cessation, as to an increased amount, and even to require pumping in a new location in the

Basin. Watermaster's right to regulate pumping activities of Producers shall be subordinate to any conflicting Basin cleanup plan established by the EPA or other public governmental agency with responsibility for ground water management or clean up.

"(c) Watermaster may act individually or participate with others to carry on technical and other necessary investigations of all kinds and collect data necessary to carry out the herein stated purposes. It may engage in contractual relations with the EPA or other agencies in furtherance of the clean up of the Basin and enter into contracts with agencies of the United States, the State of California, or any political subdivision, municipality, or district thereof, to the extent allowed under applicable federal or state statutes. Any cooperative agreement between the Watermaster and EPA shall require the approval of the appropriate Agency(s) of the State of California.

"(d) For regulation and control of pumping activity in the Basin, Watermaster shall adopt Rules and Regulations and programs to promote, manage and accomplish clean up of the Basin and its waters, including, but not limited to, measures to confine, move, and remove contaminants and pollutants. Such Rules and Regulations and programs shall be adopted only after a duly Noticed Public Hearing by Watermaster and shall be subject to Court review pursuant to Section 37 of the Amended Judgment herein.

"(e) Watermaster shall determine whether funds from local, regional, state or federal agencies are available for regulating pumping and the various costs associated with, or arising from such activities. If no public funds are available from local,

regional, state, or federal agencies, the costs shall be obtained and paid by way of an In-Lieu Assessment by Watermaster pursuant to Section 10 (j) of the Amended Judgment herein. Provided such In-Lieu Assessments become necessary, the costs shall be borne by all Basin Producers.

"(f) Watermaster is a Court empowered entity with limited powers, created pursuant to the Court's Physical Solution Jurisdiction under Article X, Section 2 of the California Constitution. None of the Powers granted herein to Watermaster shall be construed as designating Watermaster a political subdivision of the State of California or authorizing Watermaster to act as 'lead agency' to administer the federal Superfund for clean up of the Basin."

2. This Amended Judgment shall continue in full force and effect as hereby Ordered and Amended.

Dated: January 29, 1991.

/s/Florence T. Pickard
FLORENCE T. PICKARD
Judge of the Superior Court,
Specially Assigned

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

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

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

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

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

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

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

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

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

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

44. Reports of Pumping and Diversion. (Prior Judgment

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

G. MISCELLANEOUS PROVISIONS

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

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

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

District.

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

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

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

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

designation filed by that party.

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

(1) a Transporting Party, or

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

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

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

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

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

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

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

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

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

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

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

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

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

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

DATED: August 24, 1989.

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

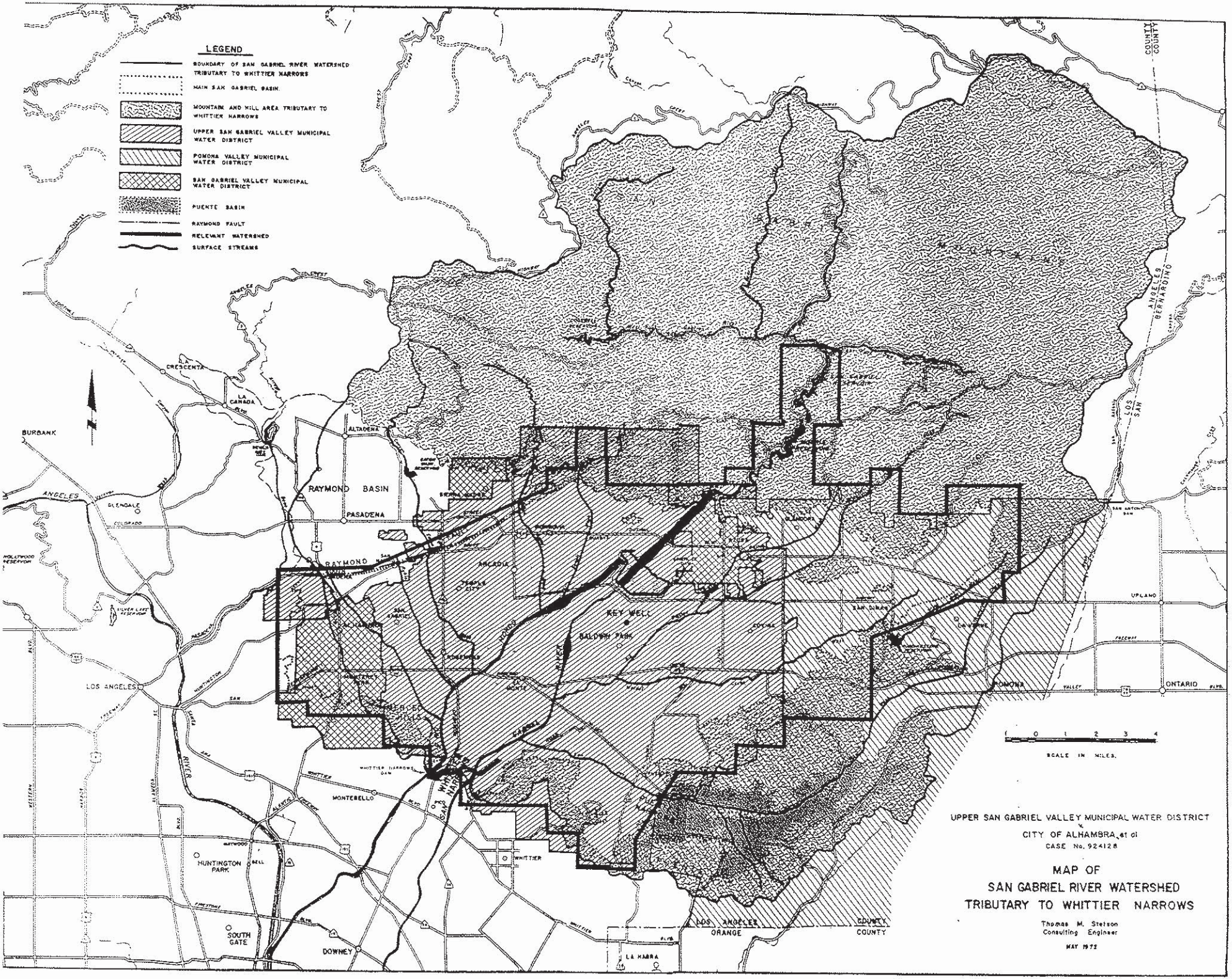

LEGEND
BOUNDARY OF SAN GABRIEL RIVER WATERSHED TRIBUTARY TO WHITTIER NARROWS
MAIN SAN GABRIEL BASIN
MOUNTAIN AND HILL AREA TRIBUTARY TO WHITTIER NARROWS
UPPER SAN GABRIEL VALLEY MUNICIPAL WATER DISTRICT
POMONA VALLEY MUNICIPAL WATER DISTRICT
SAN GABRIEL VALLEY MUNICIPAL WATER DISTRICT
PUENTE BASIN
RAYMOND FAULT
RELEVANT WATERSHED
SURFACE STREAMS
RAYMOND BASIN
KEY WELL
BALDWIN PARK
ALTADENA
PASADENA
ARCADIA
MONROVIA
DUARTE
MONTEBELLO
WHITTIER
HUNTINGTON PARK
SOUTH GATE
DOWNEY
LA HABRA
LOS ANGELES
BURBANK
GLENDALE
LA CRESCENTA
LA CANADA
UPLAND
ONTARIO
POMONA
SAN GABRIEL RIVER
SCALE IN MILES
0 1 2 3 4
UPPER SAN GABRIEL VALLEY MUNICIPAL WATER DISTRICT
CITY OF ALHAMBRA, et al
CASE No. 924128
MAP OF
SAN GABRIEL RIVER WATERSHED
TRIBUTARY TO WHITTIER NARROWS
Thomas M. Stetson
Consulting Engineer
MAY 1972

Exhibit "B"

BOUNDARIES OF RELEVANT WATERSHED

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Thence South a distance of 4,500 feet;

Thence West a distance of 10,700 feet;

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

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

Thence South a distance of 2,000 feet;

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Exhibit "C"

TABLE SHOWING BASE ANNUAL DIVERSION RIGHTS OF CERTAIN DIVERTERS

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

Exhibit "D"

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Pumper	Prescriptive Pumping Right Acre-feet	Pumper's Share %
Whittier, City of (Successor to:	7,620.23	3.85572
Grizzle, Lissa B.	184.00	0.09310
Pacific Rock and Gravel Co.)	208.00	0.10524
Security Pacific National Bank, Co-Trustee for the Estate of Winston F. Stoody	38.70	0.01958
El Monte Union High School District	16.20	0.00820
Gifford, Brooks, Jr.	198.25	0.10031
Birenbaum, Max)	6.00	0.00304
	8,271.38	4.18519
Wigodsky, Bernard (See Birenbaum, Max)	-	-
Wigodsky, Estera (See Birenbaum, Max)	-	-
Wilmott, Erma M. (Formerly Comby, Erma M.)	0.75	0.00038
Wilson, Harold R. (See Grizzle, Lissa B.)	-	-
Wilson, Sarah C. (See Grizzle, Lissa B.)	-	-
Woodland, Frederick G.	-	-
Woodland, Richard (Successor to: Bahnsen and Beckman Ind., Inc.)	840.50	0.42528
Totals for Exhibit "D"	155,800.68	78.83276
	41 833.75	21.16724
Totals from Exhibit "E"	~~38,626.25~~	~~19.54431~~
GRAND TOTALS	197,634.43	100.00000

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

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

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

TABLE SHOWING
SPECIAL CATAGORY RIGHTS

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

Exhibit "G"

TABLE SHOWING
NON-CONSUMPTIVE USERS

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

EXHIBIT "H"

WATERMASTER OPERATING CRITERIA

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

EXHIBIT "J"

PUENTE NARROWS AGREEMENT

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

A. RECITALS

1. Puente Agency. Puente Agency is a joint powers agency composed of Walnut Valley Water District, herein called "Walnut District", and Rowland Area County Water District, herein called "Rowland District". Puente Agency is formed for the purpose of developing and implementing a ground water basin management program for Puente Basin. Pursuant to said purpose, said Agency is acting as a representative of its member districts and of the water users and water right claimants therein in the defense and maintenance of their water rights within Puente Basin.

2. Upper District. Upper District is a municipal water district overlying a major portion of the Main San Gabriel Basin. Upper District is plaintiff in the San Gabriel Basin Case, wherein it seeks to adjudicate rights and implement a basin management plan for the Main San Gabriel Basin.

3. Puente Basin is a ground water basin tributary to the Main San Gabriel Basin. Said area was included within the scope of the San Gabriel Basin Case and substantially

all water rights claimants within Puente Basin were joined as defendants therein. The surface contribution to the Main San Gabriel Basin from Puente Basin is by way of the paved flood control channel of San Jose Creek, which passes through Puente Basin from the Pomona Valley area. Subsurface outflow is relatively limited and moves from the Puente Basin to the Main San Gabriel Basin through Puente Narrows.

4. Intent of Agreement. Puente Agency is prepared to assure Upper District that no activity within Puente Basin will hereafter be undertaken which will (1) interfere with surface flows in San Jose Creek, or (2) impair the subsurface flow from Puente Basin to the Main San Gabriel Basin. Walnut District and Rowland District, by operation of law and by express assumption endorsed hereon, assume the covenants of this agreement as a joint and several obligation. Based upon such assurances and the covenants hereinafter contained in support thereof, Upper District consents to the dismissal of all Puente Basin parties from the San Gabriel Basin Case. By reason of said dismissals, Puente Agency will be free to formulate a separate water management program for Puente Basin.

B. DEFINITIONS AND EXHIBITS

5. Definitions. As used in this Agreement, the following terms shall have the meanings herein set forth:

(a) Annual or Year refers to the fiscal year July 1 through June 30.

(b) Base Underflow. The underflow through

Puente Narrows which Puente Agency agrees to maintain, and on which accrued debits and credits shall be calculated.

(c) Make-up Payment. Make-up payments shall be an amount of money payable to the Watermaster appointed in the San Gabriel Basin Case, sufficient to allow said Watermaster to purchase replacement water on account of any accumulated deficit as provided in Paragraph 9 hereof.

(d) Puente Narrows. The subsurface geologic constriction at the downstream boundary of Puente Basin, located as shown on Appendix "B".

(e) Main San Gabriel Basin, the ground water basin shown and defined as such in Exhibit "A" to the Judgment in the San Gabriel Basin Case.

(f) San Gabriel Basin Case. Upper San Gabriel Valley Municipal Water District v. City of Alhambra, et al., L. A. Sup. Ct. No. 924128, filed January 2, 1968.

6. Appendices. Attached hereto and by this reference made a part hereof are the following appendices:

"A" -- Location Map of Puente Basin, showing major geographic, geologic, and hydrologic features.

"B" -- Map of Cross-Section Through Puente Narrows, showing major physical features and location of key wells.

"C" -- Engineering Criteria, being a description of a method of measurement of subsurface outflow to be utilized for Watermaster purposes.

C. COVENANTS

7. Watermaster. There is hereby created a two member Watermaster service to which each of the parties to this agreement shall select one consulting engineer. The respective representatives on said Watermaster shall serve at the pleasure of the governing body of each appointing party and each party shall bear its own Watermaster expense.

a. Organization. Watermaster shall perform the duties specified herein on an informal basis, by unanimous agreement. In the event the two representatives are unable to agree upon any finding or decision, they shall select a third member to act, pursuant to the applicable laws of the State of California. Thereafter, until said issue is resolved, said three shall sit formally as a board of arbitration. Upon resolution of the issue in dispute, the third member shall cease to function further.

b. Availability of Information. Each party hereto shall, for itself and its residents and water users, use its best efforts to furnish all appropriate information to the Watermaster in order that the required determination can be made.

c. Cooperation With Other Watermasters. Watermaster hereunder shall cooperate and coordinate activities with the Watermasters appointed in the San Gabriel Basin Case and in Long Beach v. San Gabriel Valley Water Company, et al.

d. Determination of Underflow. Watermaster shall annually determine the amount of underflow from Puente Basin to the San Gabriel Basin, pursuant to Engineering Criteria.

e. Perpetual Accounting. Watermaster shall maintain a perpetual account of accumulated base underflow, accumulated subsurface flow, any deficiencies by reason of interference with surface flows, and the offsetting credit for any make-up payments. Said account shall annually show the accumulated credit or debit in the obligation of Puente Agency to Upper District.

f. Report. Watermaster findings shall be incorporated in a brief written report to be filed with the parties and with the Watermaster in the San Gabriel Basin Case. Said report shall contain a statement of the perpetual account heretofore specified.

8. Base Underflow. On the basis of a study and review of historic underflow from Puente Basin to the Main San Gabriel Basin, adjusted for the effect of the paved flood control channel and other relevant considerations, it is

mutually agreed by the parties that the base underflow is and shall be 580 acre feet per year, calculated pursuant to Engineering Criteria.

9. Puente Agency's Obligation. Puente Agency covenants, agrees and assumes the following obligation hereunder:

a. Noninterference with Surface Flow. Neither Puente Agency nor any persons or entities within the corporate boundaries of Walnut District or Rowland District will divert or otherwise interfere with or utilize natural surface runoff now or hereafter flowing in the storm channel of San Jose Creek; provided, however, that this covenant shall not prevent the use, under Watermaster supervision, of said storm channel by the Puente Agency or Walnut District or Rowland District for transmission within Puente Agency of supplemental or reclaimed water owned by said entities and introduced into said channel solely for transmission purposes. In the event any unauthorized use of surface flow in said channel is made contrary to the covenant herein provided, Puente Agency shall compensate Upper District by utilizing any accumulated credit or by make-up payment in the same manner as is provided for deficiencies in subsurface outflow from Puente Basin.

b. Subsurface Outflow. To the extent that

the accumulated subsurface outflow falls below the accumulated base underflow and the result thereof is an accumulated deficit in the Watermaster's annual accounting, Puente Agency agrees to provide make-up payments during the next year in an amount not less than one-third of the accumulated deficit.

c. Purchase of Reclaimed Water. To the extent that Puente Agency or Walnut District or Rowland District may hereafter purchase reclaimed water from the facilities of Sanitation District 21 of Los Angeles County, such purchaser shall use its best efforts to obtain waters originating within San Gabriel River Watershed.

10. Puente Basin Parties Dismissal. In consideration of the assumption of the obligation hereinabove provided by Puente Agency, Upper District consents to entry of dismissals as to all Puente Basin parties in San Gabriel Basin Case. This agreement shall be submitted for specific approval by the Court and a finding that it shall operate as full satisfaction of any and all claims by the parties within Main San Gabriel Basin against Puente Basin parties by reason of historic surface and subsurface flow.

IN WITNESS WHEREOF the parties hereto have caused this Agreement to be executed as of the day and date first above written.

Approved as to form:
CLAYSON, STARK, ROTHROCK & MANN

By _____
Attorneys for Puente Agency

PUENTE BASIN AGENCY

By _____
EDWARD M. BIEDERMAN
President

Approved as to form:

By _____
Attorney for Upper District

UPPER SAN GABRIEL VALLEY
MUNICIPAL WATER DISTRICT

By _____
Howard H. Hawkins
President

The foregoing agreement is approved and accepted, and the same is acknowledged as the joint and several obligation of the undersigned.

Approved as to form:

_____
Attorney for Walnut District

WALNUT VALLEY WATER DISTRICT

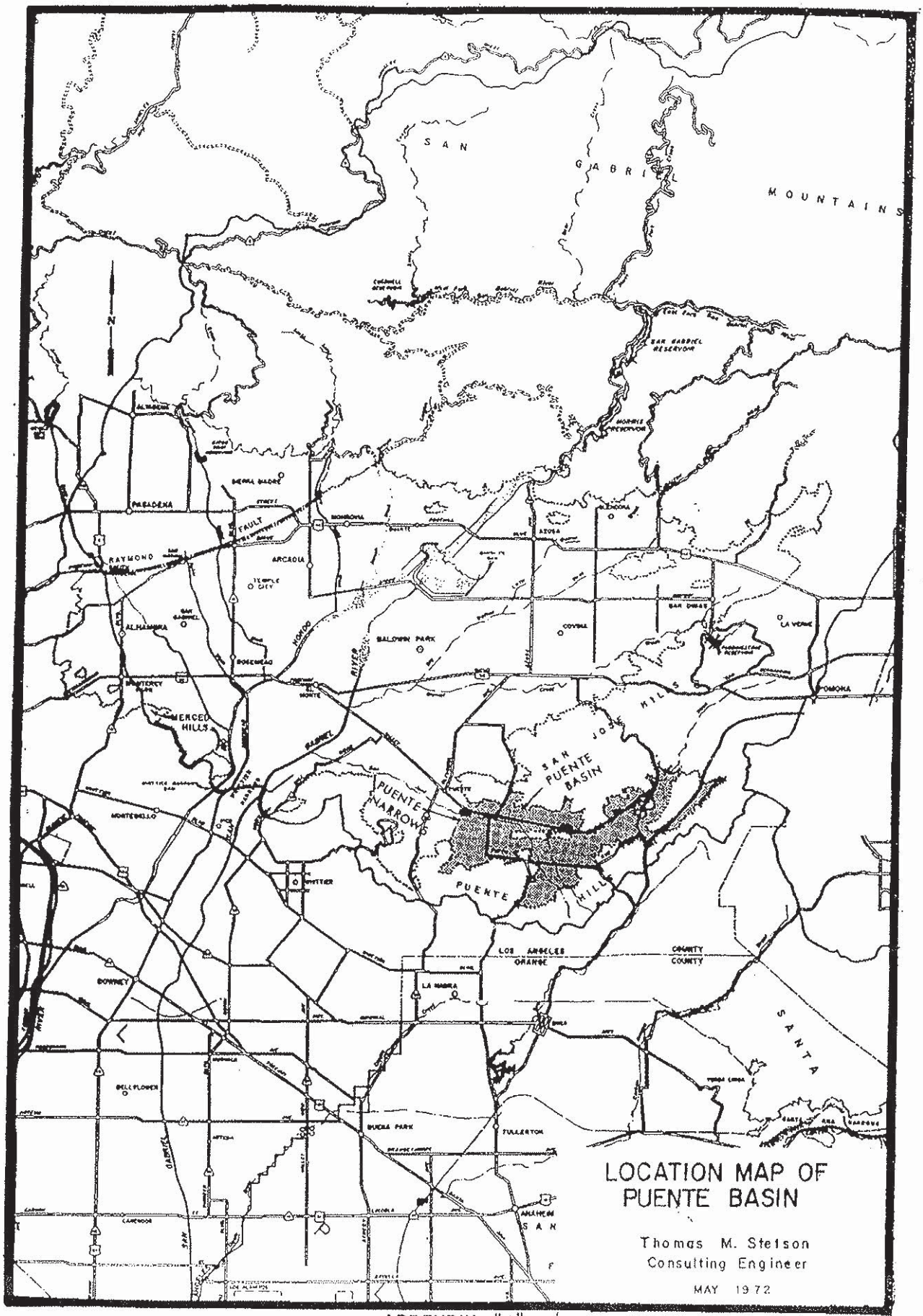
By _____
J. P. BOURDET
Vice President

Approved as to form:

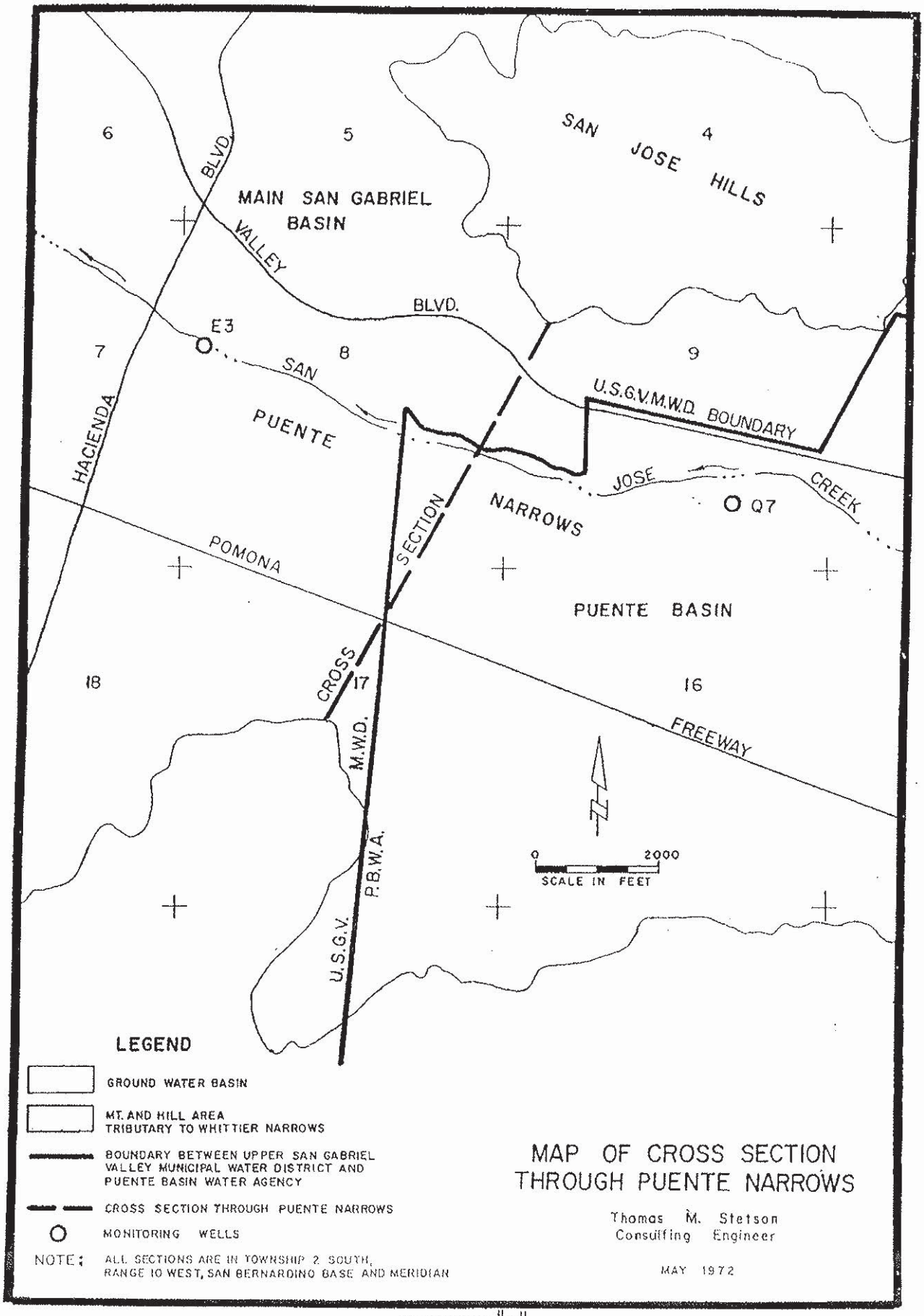
_____
Attorneys for Rowland District

ROWLAND AREA COUNTY WATER DISTRICT

By _____
President
Wm. A. Simmons



APPENDIX "A"
EXHIBIT "J"



MAP OF CROSS SECTION THROUGH PUENTE NARROWS

Thomas M. Stetson
Consulting Engineer

MAY 1972

ENGINEERING CRITERIA

APPENDIX "C"

1. Monitoring Wells. The wells designated as State Wells No. 2S/10W-9Q7 and 2S/10W-8E3 and Los Angeles County Flood Control District Nos. 3079M and 3048B, respectively, shall be used to measure applicable ground water elevations. In the event either monitoring well should fail or become unrepresentative, a substitute well shall be selected or drilled by Watermaster. The cost of drilling a replacement well shall be the obligation of the Puente Agency.

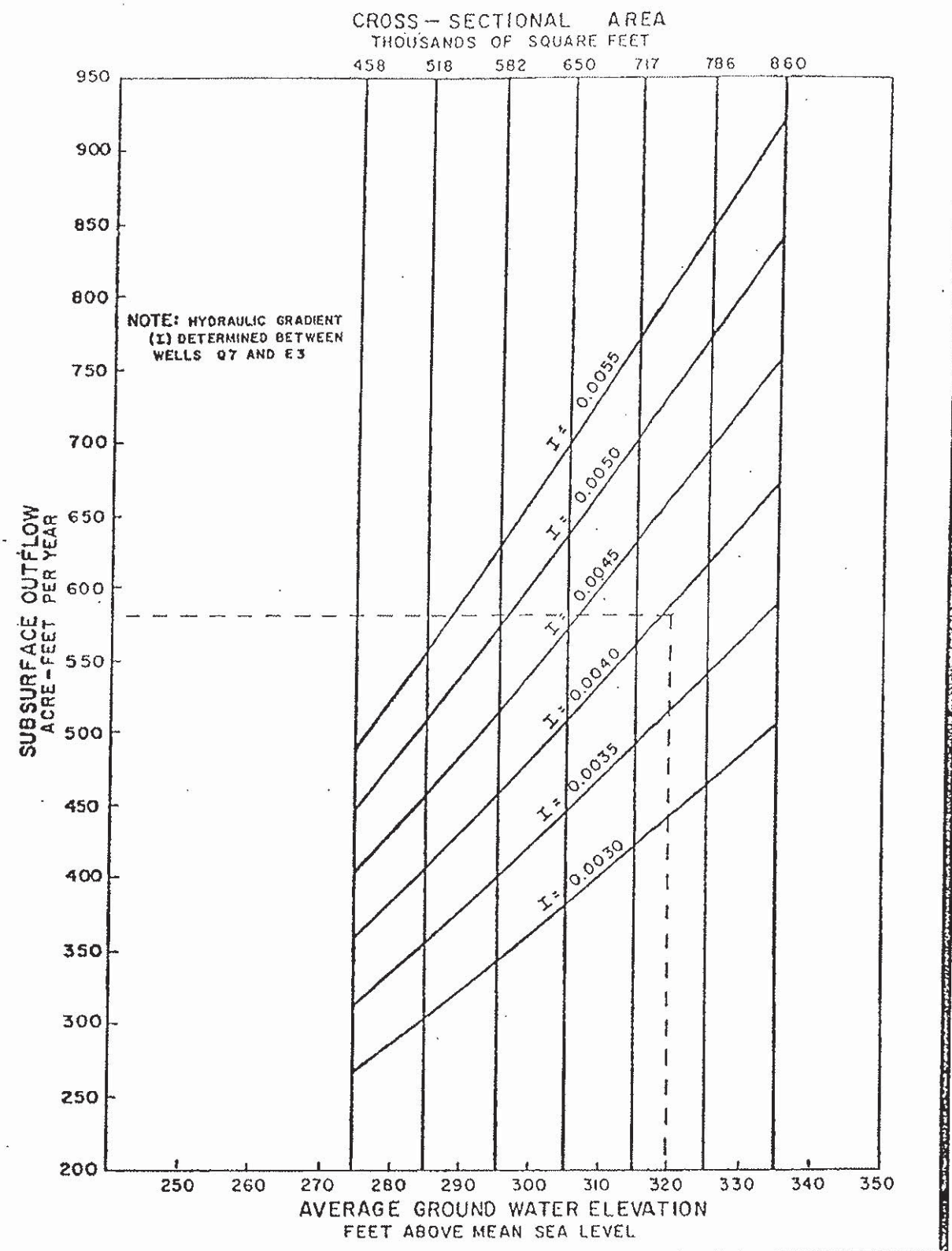
2. Measurement. Each monitoring well shall be measured and the ground water elevation determined semi-annually on or about April 1 and October 1 of each year. Prior to each measurement, the pump shall be turned off for a sufficient period to insure that the water table has recovered to a static or near equilibrium condition.

3. Hydraulic Gradient. The hydraulic gradient, or slope of the water surface through Puente Narrows, shall be calculated between the monitoring wells as the difference in water surface elevation divided by the distance, approximately 9,000 feet, between the wells. The hydraulic gradient shall be determined for the spring and fall and the average hydraulic gradient calculated for the year.

4. Ground Water Elevation at Puente Narrows Cross Section. The ground water elevation at the Puente Narrows

cross section midway between the monitoring wells shall be the average of the ground water elevation at the two wells. This shall be determined for the spring and fall and the average annual ground water elevation calculated for the year.

5. Determination of Underflow. The chart attached is a photo-reduction of a full scale chart on file with the Watermaster. By applying the appropriate average annual hydraulic gradient (I) to the average annual ground water elevation at the Puente Narrows cross section (involving the appropriate cross-sectional area [A]), it is possible to read on the vertical scale the annual acre feet of underflow.



RELATIONSHIP OF AVERAGE GROUND WATER ELEVATION AT PUENTE NARROWS AND APPLICABLE CROSS-SECTIONAL AREA WITH SUBSURFACE OUTFLOW THROUGH PUENTE NARROWS FOR VARIOUS HYDRAULIC GRADIENTS

Thomas M. Stetson
Consulting Engineer
MAY 1972

EXHIBIT "K"

OVERLYING RIGHTS

I. NATURE OF OVERLYING RIGHT

An "Overlying Right" is the right to Produce water from the Main San Gabriel Basin for use on the overlying lands hereinafter described. Such rights are exercisable without quantitative limit only on said overlying land and cannot be separately conveyed or transferred apart therefrom. The exerciser of such right is assessable by Watermaster as provided in Paragraph 21 of the Amended Judgment herein (prior Paragraph 14.5 of the Judgment herein) and is subject to the other provisions of said Paragraph.

II. OVERLYING LANDS (Description)

The overlying lands to which Overlying Rights are appurtenant are described as follows:

> "Those portions of Lots 1 and 2 of the lands formerly owned by W.A. Church, in the Rancho San Francisquito, in the City of Irwindale, County of Los Angeles, State of California, as shown on recorder's filed map No. 509, in the office of the County Recorder of said County, lying northeasterly of the northeasterly line and its southeasterly prolongation of Tract 1888, as shown on map recorded in Book 21 page 183 of Maps, in the office of the County Recorder of said County.
>
> "EXCEPT the portions thereof lying northerly and northwesterly of the center line of Arrow Highway described 'Sixth' and the center line of Live Oak Avenue described 'Third' in a final decree of condemnation, a certified copy of which was recorded August 18, 1933 as Instrument No. 354, in Book 12289, Page 277, Official Records.
>
> "ALSO EXCEPT that portion of said land described in the final decree of condemnation entered in Los Angeles County Superior Court Case No. 805008, a certified copy of which was recorded September 21, 1964, as Instrument No. 3730, in Book D-2634, Page 648, Official Records."

III. PRODUCERS ENTITLED TO EXERCISE OVERLYING RIGHTS AND THEIR RESPECTIVE CONSUMPTIVE USE PORTIONS

The persons entitled to exercise Overlying Rights are both the owners of Overlying Rights and persons and entities licensed by such owners to exercise such Overlying Rights. The persons entitled to exercise Overlying Rights and their respective Consumptive Use portions are as follows:

OWNER PRODUCERS	CONSUMPTIVE USE PORTION
BROOKS GIFFORD, SR. BROOKS GIFFORD, JR. PAUL MNOIAN JOHN MGRDICHIAN J. EARL GARRETT	3.5 acre-feet per year
Present User: Nu-Way Industries	

PRODUCERS UNDER LICENSE

A.	WILLIAM C. THOMAS and EVELYN F. THOMAS, husband and wife, and MALCOLM K. GATHERER and JACQUELINE GATHERER, husband and wife, doing business by and through B & B REDI-I-MIX CONCRETE, INC., a corporation	45.6 acre-feet per year
B.	PRE-STRESS CRANE RIGGING & TRUCK CO., INC., a corporation	1.0 acre-foot per year
	Present Users: Pre-Stress Crane Rigging & Truck Co., Inc., a corporation	
	Total	50.1 acre-feet per year

IV. ANNUAL GROSS AMOUNT OF PRODUCTION FROM WHICH CONSUMPTIVE USE PORTIONS WERE DERIVED — 183.65 acre-feet

LIST OF PRODUCERS AND THEIR DESIGNEES
June, 1989

Producer Name	Designee
A	
Adams Ranch Mutual Water Company	Goji Iwakiri
Alhambra, City of	T. E. Shollenberger
Amarillo Mutual Water Company	Ester Guadagnolo
Anderson, Ray	Ray Anderson
Andrade, Macario, et al.	Macario R. Andrade
Arcadia, City of	Eldon Davidson
AZ-Two, Inc.	R. S. Chamberlain
Azusa, City of	William H. Redcay
Azusa Ag. Water Company	Robert E. Talley
Azusa Valley Water Company	Edward Heck
B	
Baldwin Park County Water District (See Valley County Water District)	-
Banks, Gale C.	Gale C. Banks
Base Line Water Company	Everett W. Hughes, Jr.
Beverly Acres Mutual Water User's Assn. (Formerly Beverly Acres Mutual Water Co.)	Eloise A. Moore
Burbank Development Company	Darrell A. Wright
C	
Cadway, Inc.	P. Geoffrey Nunn
California-American Water Company (San Marino System)	Andrew A. Krueger
California-American Water Company (Duarte System)	Andrew A. Krueger
California Country Club	Henri F. Pellissier
California Domestic Water Company	P. Geoffrey Nunn
Cedar Avenue Mutual Water Company	Austin L. Knapp

Producer Name	Designee
Champion Mutual Water Company	Margaret Bauwens
Chevron, USA, Inc.	Ms. Margo Bart
Clayton Manufacturing Company	Don Jones
Conrock Company	Gene R.Block
Corcoran Brothers	Ray Corcoran
County Sanitation District No. 18	Charles W. Curry
Covell, et al.	Darr Jobe
Covell, Ralph	Ralph Covell
Covina, City of	Wayne B. Dowdey
Covina Irrigating Company	William R. Temple
Crevolin, A. J.	A. J. Crevolin
Crown City Plating Company	N. G. Gardner
D	
Davidson Optronics, Inc.	James McBride
Dawes, Mary Kay	Mary Kay Dawes
Del Rio Mutual Water Company	Gonzalo Galindo
Driftwood Dairy	James E. Dolan
Dunning, George	George Dunning
E	
East Pasadena Water Company	Robert D. Mraz
El Monte, City of	Robert J. Pinniger
El Monte Cemetery Association	Linn E. Magoffin
F	
Faix, Ltd.	Henri F. Pellissier
G	
Glendora, City of	Arthur E. Cook
Green, Walter	Dr. Walter Green
H	
Hansen, Alice	Alice Hansen

Producer Name	Designee
Hartley, David	David Hartley
Hemlock Mutual Water Company	Bud Selander
Hunter, Lloyd F.	Lloyd F. Hunter
I	
Industry Waterworks System, City of	Mary L. Jaureguy
K	
Kiyan Farm Kiyan, Hideo	Mrs. Hideo Kiyan
Kirklen Family Trust	Dawn Kirklen
Knight, Kathryn M.	William J. Knight
L	
Landeros, John	John Landeros
La Puente Valley County Water District	Mary L. Jaureguy
La Verne, City of	N. Kathleen Hamm
Livingston-Graham	Gary O. Tompkins
Los Angeles, County of	Robert L. Larson
Loucks, David	David Loucks
M	
Maddock, A. G.	Ranney Draper, Esq.
Maechtlen, Trust of J. J.	Jack F. Maechtlen
Maple Water Company, Inc.	Charles King
Martinez, Francis Mercy	Francis Mercy Martinez
Metropolitan Water District of Southern California	Fred Vendig, Esq.
Miller Brewing Company	Dennis B. Puffer
Mnoian, Paul, et al.	Mal Gatherer
Monrovia, City of	Robert K. Sandwick
Monrovia Nursery	Miles R. Rosedale
Monterey Park, City of	Nels Palm

Producer Name	Designee
N	
Nick Tomovich & Sons	Nick Tomovich
O	
Owl Rock Products Company	Peter L. Chiu
P	
Phillips, Alice B., et al.	Jack F. Maechtlen
Pico County Water District	Robert P. Fuller
Polopolus, et al.	Christine Chronis
R	
Rados Brothers	Alexander S. Rados
Richwood Mutual Water Company	Bonnie Pool
Rincon Ditch Company	K. E. Nungesser
Rincon Irrigation Company	K. E. Nungesser
Rose Hills Memorial Park Association	Allan D. Smith
Rosemead Development, Ltd.	John W. Lloyd
Rurban Homes Mutual Water Company	George W. Bucey
Ruth, Roy	Roy Ruth
S	
San Dimas - La Verne Recreational Facilities Authority	R. F. Griszka
San Gabriel Country Club	Fran Wolfe
San Gabriel County Water District	Philip G. Crocker
San Gabriel Valley Municipal Water District	Bob Stallings
San Gabriel Valley Water Company	Robert H. Nicholson, Jr.
Sloan Ranches	Larry R. Sloan
Sonoco Products Company	Elaine Corboy
South Covina Water Service	Anton C. Garnier
Southern California Edison Company	S. R. Shermoen

Producer Name	Designee
Southern California Water Company -San Dimas District	J. F. Young
Southern California Water Company -San Gabriel Valley District	J. F. Young
South Pasadena, City of	John Bernardi
Southwestern Portland Cement Company	Dale W. Heineck
Standard Oil Company of California	John A. Wild
Sterling Mutual Water Company	Bennie L. Prowett
Suburban Water Systems	Anton C. Garnier
Sully-Miller Contracting Company	R. R. Munro
Sunny Slope Water Company	Michael J. Hart
T	
Taylor Herb Garden	Paul S. Taylor
Texaco, Inc.	E. O. Wakefield
Tyler Nursery	James K. Mitsumori, Esq.
U	
United Concrete Pipe Corporation	Doyle H. Wadley
United Rock Products Corporation	William S. Capps, Esq.
V	
Valencia Heights Water Company	Herman Weskamp
Valley County Water District (Formerly Baldwin Park County Water District)	Stanley D. Yarbrough
Valley View Mutual Water Company	Robert T. Navarre
Via, H., Trust of	Marverna Parton
W	
Ward Duck Company	Richard J. Woodland
W. E. Hall Company	Thomas S. Bunn, Jr., Esq.
White, June G., Trustee	June G. Lovelady
Whittier, City of	Neil Hudson
Wilmott, Erma M.	Erma M. Wilmott

Exhibit "M"

WATERMASTER MEMBERS

FOR CALENDAR YEAR 1973

ROBERT T. BALCH (Producer Member), Chairman

LINN E. MAGOFFIN (Producer Member), Vice Chairman

RICHARD L. ROWLAND (Producer Member), Secretary

BOYD KERN (Public Member), Treasurer

WALKER HANNON (Producer Member)

HOWARD H. HAWKINS (Public Member)

M. E. MOSLEY (Producer Member)

CONRAD T. REIBOLD (Public Member)

HARRY C. WILLS (Producer Member)

STAFF

Carl Fossette, Assistant Secretary-Assistant Treasurer
Ralph B. Helm, Attorney
Thomas M. Stetson, Engineer

FOR CALENDAR YEAR 1974

ROBERT T. BALCH (Producer Member), Chairman

LINN E. MAGOFFIN (Producer Member), Vice Chairman

RICHARD L. ROWLAND (Producer Member), Secretary

BOYD KERN (Public Member), Treasurer

WALKER HANNON (Producer Member)

BURTON E. JONES (Public Member)

M. E. MOSLEY (Producer Member)

CONRAD T. REIBOLD (Public Member)

HARRY C. WILLS (Producer Member)

STAFF

Carl Fossette, Assistant Secretary-Assistant Treasurer
Ralph B. Helm, Attorney
Thomas M. Stetson, Engineer

FOR CALENDAR YEAR 1975

ROBERT T. BALCH (Producer Member), Chairman

LINN E. MAGOFFIN (Producer Member), Vice Chairman

HARRY C. WILLS (Producer Member), Secretary

BOYD KERN (Public Member), Treasurer

WALKER HANNON (Producer Member)

BURTON E. JONES (Public Member)

D. J. LAUGHLIN (Producer Member)

M. E. MOSLEY (Producer Member)

CONRAD T. REIBOLD (Public Member)

STAFF

Carl Fossette, Assistant Secretary-Assistant Treasurer
Ralph B. Helm, Attorney
Thomas M. Stetson, Engineer

FOR CALENDAR YEAR 1976

ROBERT T. BALCH (Producer Member), Chairman

LINN E. MAGOFFIN (Producer Member), Vice Chairman

HARRY C. WILLS (Producer Member), Secretary

BOYD KERN (Public Member), Treasurer

WALKER HANNON (Producer Member)

BURTON E. JONES (Public Member)

D. J. LAUGHLIN (Producer Member)

M. E. MOSLEY (Producer Member)

CONRAD T. REIBOLD (Public Member)

STAFF

Jane M. Bray, Assistant Secretary-Assistant Treasurer
Ralph B. Helm, Attorney
Thomas M. Stetson, Engineer

FOR CALENDAR YEAR 1977

ROBERT T. BALCH (Producer Member), Chairman

LINN E. MAGOFFIN (Producer Member), Vice Chairman

HARRY C. WILLS (Producer Member), Secretary

CONRAD T. REIBOLD (Public Member), Treasurer

WALKER HANNON (Producer Member)

BURTON E. JONES (Public Member)

BOYD KERN (Public Member)

D. J. LAUGHLIN (Producer Member)

R. H. NICHOLSON, JR. (Producer Member)

STAFF

Jane M. Bray, Assistant Secretary-Assistant Treasurer)
Ralph B. Helm, Attorney
Thomas M. Stetson, Engineer

FOR CALENDAR YEAR 1978

ROBERT T. BALCH (Producer Member), Chairman

LINN E. MAGOFFIN (Producer Member), Vice Chairman

D. J. LAUGHLIN (Producer Member), Secretary

CONRAD T. REIBOLD (Public Member), Treasurer

WALKER HANNON (Producer Member)

BURTON E. JONES (Public Member)

L. E. MOELLER (Producer Member)

R. H. NICHOLSON, JR. (Producer Member)

WILLIAM M. WHITESIDE (Public Member)

STAFF

Jane M. Bray, Assistant Secrretary-Assistant Treasurer
Ralph B. Helm, Attorney
Thomas M. Stetson, Engineer

FOR CALENDAR YEAR 1979

LINN E. MAGOFFIN (Producer Member), Chairman

D. J. LAUGHLIN (Producer Member), Vice Chairman

R. H. NICHOLSON, JR. (Producer Member), Secretary

CONRAD T. REIBOLD (Public Member), Treasurer

WALKER HANNON (Producer Member)

BURTON E. JONES (Public Member)

L. E. MOELLER (Producer Member)

WILLIAM M. WHITESIDE (Public Member)

STAFF

Jane M. Bray, Assistant Secretary-Assistant Treasurer
Ralph B. Helm, Attorney
Thomas M. Stetson, Engineer

FOR CALENDAR YEAR 1980

LINN E. MAGOFFIN (Producer Member), Chairman

R. H. NICHOLSON, JR. (Producer Member), Vice Chairman

WILLIAM M. WHITESIDE (Pulic Member), Secretary

CONRAD T. REIBOLD (Public Member), Treasurer

ROBERT T. BALCH (Producer Member)

ROBERT G. BERLIEN (Producer Member)

ANTON C. GARNIER (Producer Member)

TRAVIS L. MANNING (Public Member)

L. E. MOELLER (Producer Member)

STAFF

Jane M. Bray, Assistant Secretary-Assistant Treasurer
Ralph B. Helm, Attorney
Thomas M. Stetson. Engineer

FOR CALENDAR YEAR 1981

LINN E. MAGOFFIN (Producer Member), Chairman

R. H. NICHOLSON, JR. (Producer Member), Vice Chairman

WILLIAM M. WHITESIDE (Public Member), Secretary

CONRAD T. REIBOLD (Public Member), Treasurer

ROBERT T. BALCH (Producer Member)

ROBERT G. BERLIEN (Producer Member)

ANTON C. GARNIER (Producer Member)

TRAVIS L. MANNING (Public Member)

L. E. MOELLER (Producer Member)

STAFF

Jane M. Bray, Assistant Secretary-Assistant Treasurer
Ralph B. Helm, Attorney
Thomas M. Stetson, Engineer

FOR CALENDAR YEAR 1982

LINN E. MAGOFFIN (Producer Member), Chairman

R. H. NICHOLSON, JR. (Producer Member), Vice Chairman

WILLIAM M. WHITESIDE (Public Member), Secretary

CONRAD T. REIBOLD (Public Member), Treasurer

ROBERT T. BALCH (Producer Member)

ROBERT G. BERLIEN (Producer Member)

ANTON C. GARNIER (Producer Member)

L. E. MOELLER (Producer Member)

ALFRED F. WITTIG (Public Member)

STAFF

Jane M. Bray, Assistant Secrretary-Assistant Treasurer
Ralph B. Helm, Attorney
Thomas M. Stetson, Engineer

FOR CALENDAR YEAR 1983

LINN E, MAGOFFIN (Producer Member), Chairman

R. H. NICHOLSON, JR. (Producer Member), Vice Chairman

ROBERT G. BERLIEN (Producer Member), Secretary

CONRAD T. REIBOLD (Public Member), Treasurer

ROBERT T. BALCH (Producer Member)

DONALD F. CLARK (Public Member)

ANTON C. GARNIER (Producer Member)

L. E. MOELLER (Producer Member)

ALFRED R. WITTIG (Public Member)

STAFF

Jane M. Bray, Assistant Secretary-Assistant Treasurer
Ralph B. Helm, Attorney
Thomas M. Stetson, Engineer

FOR CALENDAR YEAR 1984

LINN E. MAGOFFIN (Producer Member), Chairman

R. H. NICHOLSON, JR. (Producer Member), Vice Chairman

ROBERT G. BERLIEN (Producer Member), Secretary

CONRAD T. REIBOLD (Public Member), Treasurer

ROBERT T. BALCH (Producer Member)

DONALD F. CLARK (Public Member)

ANTON C. GARNIER (Producer Member)

L. E. MOELLER (Producer Member)

ALFRED R. WITTIG (Public Member)

STAFF

Jane M. Bray, Assistant Secretary-Assistant Treasurer
Ralph B. Helm, Attorney
Thomas M. Stetson, Engineer

FOR CALENDAR YEAR 1985

LINN E. MAGOFFIN (Producer Member), Chairman

R. H. NICHOLSON, JR. (Producer Member), Vice Chairman

ROBERT G. BERLIEN (Producer Member), Secretary

CONRAD T. REIBOLD (Public Member), Treasurer

ROBERT T. BALCH (Producr Member)

DONALD F. CLARK (Public Member)

ANTON C. GARNIER (Producer Member)

L. E. MOELLER (Producer Member)

ALFRED R. WITTIG (Public Member)

STAFF

Jane M. Bray, Assistant Secretary-Assistant Treasurer
Ralph B. Helm, Attorney
Thomas M. Stetson, Engineer

FOR CALENDAR YEAR 1986

LINN E. MAGOFFIN (Producer Member), Chairman

R. H. NICHOLSON, JR. (Producer Member), Vice Chairman

ROBERT G. BERLIEN (Producer Member), Secretary

CONRAD T. REIBOLD (Public Member), Treasurer

ROBERT T. BALCH (Producer Member)

DONALD F. CLARK (Public Member)

L. E. MOELLER (Producer Member)

REGINOLD A. STONE (Producer Member)

ALFRED R. WITTIG (Public Member)

STAFF

Jane M. Bray, Assistant Secretary-Assistant Treasurer
Ralph B. Helm, Attorney
Thomas M. Stetson, Engineer

FOR CALENDAR YEAR 1987

LINN E. MAGOFFIN (Producer Member), Chairman

REGINALD A. STONE (Producer Member), Vice Chairman

L. E. MOELLER (Producer Member), Secretary

ALFRED R. WITTIG (Public Member), Treasurer

ROBERT T. BALCH (Producer Member)

GERALD J. BLACK (Producer Member)

DONALD F. CLARK (Public Member)

EDWARD R. HECK (Producer Member)

JOHN E. MAULDING (Public Member)

STAFF

Robert G. Berlien, Assistant Secretary-Assistant Treasurer
Ralph B. Helm, Attorney
Thomas M. Stetson, Engineer

FOR CALENDAR YEAR 1988

LINN E. MAGOFFIN (Producer Member), Chairman

REGINALD A. STONE (Producer Member), Vice Chairman

L. E. MOELLER (Producer Member), Secretary

ALFRED R. WITTIG (Public Member), Treasurer

ROBERT T. BALCH (Producer Member)

GERALD J. BLACK (Producer Member)

DONALD F. CLARK (Public Member)

EDWARD R. HECK (Producer Member)

JOHN E. MAULDING (Public Member)

STAFF

Robert G. Berlien, Assistant Secretary-Assistant Treasurer
Ralph B. Helm, Attorney
Thomas M. Stetson, Engineer

FOR CALENDAR YEAR 1989

LINN E. MAGOFFIN (Producer Member), Chairman

REGINALD A. STONE (Producer Member), Vice Chairman

GERALD G. BLACK (Producer Member), Secretary

ALFRED R. WITTIG (Public Member), Treasurer

ROBERT T. BALCH (Producer Member) *

DONALD F. CLARK (Public Member)

EDWARD R. HECK (Producer Member)

BURTON E. JONES (Public Member)

NELS PALM (Producer Member) **

THOMAS E. SCHOLLENBERGER (Producer Member)

STAFF

Robert G. Berlien, Assistant Secretary-Assistant Treasurer
Ralph B. Helm, Attorney
Thomas M. Stetson, Engineer

* DECEASED APRIL 25, 1989

** Appointed August 24, 1989, for the balance of the calendar year term, to replace deceased member, Robert T. Balch.

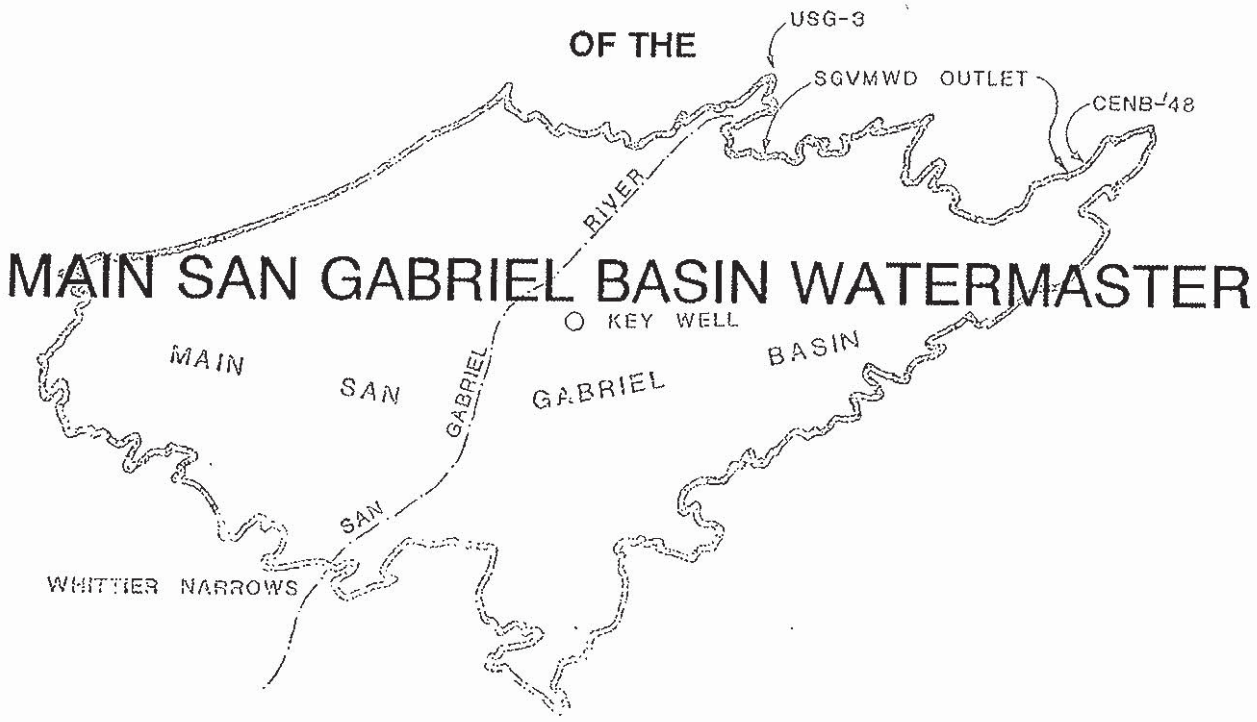
Suburban
Water Systems
A SouthWest Water Company

Appendix H: Rules & Regulations of Main Basin Watermaster

Suburban Water Systems | 2020 Urban Water Management Plan

RULES AND REGULATIONS

OF THE



MAIN SAN GABRIEL BASIN WATERMASTER

UPPER SAN GABRIEL VALLEY MUNICIPAL WATER DISTRICT VS. CITY OF ALHAMBRA, ET AL.
CASE NO. 924128 -- LOS ANGELES COUNTY

AS AMENDED
OCTOBER 7, 1992
RESOLUTION NO. 10-92-99

TABLE OF CONTENTS

TABLE OF CONTENTS

TABLE OF CONTENTS

TABLE OF CONTENTS

TABLE OF CONTENTS

RULES AND REGULATIONS OF

MAIN SAN GABRIEL BASIN WATERMASTER

(As Revised, Amended, and Readopted by Resolution No. -92- , Adopted , 1992)

The definitions set forth in the Judgment in Los Angeles County Superior Court Civil Action No. 924128, entitled, "Upper San Gabriel Valley Municipal Water District v. City Alhambra, et al," as amended (Judgment herein), as well as additional definitions relating specifically to Section 28 of these Rules and Regulations, are used herein with the same meanings and are listed in Appendix "A" hereof.

1. Offices and Records. Watermaster's offices and records shall be maintained at:

425 East Huntington Drive, Suite 200

Monrovia, California 91016,

Telephone (818) 305-1500

Telefax (818) 305-1506

Said records shall be available for inspection by any Party during regular business hours. Copies of said records may be had upon payment of the costs of the duplication thereof and of any preparation costs pertaining thereto.

2. Watermaster Meetings and Holidays. Regular meetings of Watermaster shall be held at 1:30 P.M. on the first Wednesday of each and every month in the Council Chambers of the City of Monrovia, 415 South Ivy Avenue, Monrovia, California 91016.

(a) Holidays. The following holidays shall be observed by

Watermaster:

- January 1 (New Year's Day);

- The third Monday in January (Martin Luther King's Birthday);

- The third Monday in February (Presidents' Day);

- The last Monday in May (Memorial Day);

- July 4 (Independence Day);

- The first Monday in September (Labor Day);

- The second Monday in October (Columbus Day);

- November 11 (Veterans' Day);

-The fourth Thursday and the following Friday in November Thanksgiving);

- December 25 (Christmas Day);

- Each employee's individual birthday, to be taken as a holiday during the month of such birthday as approved by the Executive Officer; and one floating holiday each year, to be designated by the Executive Officer.

(1) If January 1, July 4, November 11, or December 25, fall on a Sunday, the Monday following shall be that holiday and if any of said dates fall on a Saturday, the preceding Friday shall be that holiday.

(2) When any regular meeting of Watermaster shall fall on a hereinabove designated Watermaster holiday (excepting employees' birthdays and said floating holiday), said regular meeting shall be held on the next succeeding regular business day

at the same time and at the same place as the said regularly scheduled meeting.

(b) Meeting Changes. Any changes in the time or place of said regular meeting shall be in compliance with the Judgment.

(c) Special Meetings. Special meetings of Watermaster may be called at any time by the Chairman or Vice-Chairman or by any three (3) members of Watermaster, by written notice in compliance with the Judgment. The calling notice shall specify the time and place of the special meeting and the business to be transacted. No other business shall be considered at such meetings.

(d) Adjournment. Any meeting of Watermaster may be adjourned to a time and place specified in the Order of Adjournment. Less than a quorum of Watermaster, or Watermaster's Secretary or Executive Officer, may so adjourn from time to time. A copy of the Order or Notice of Adjournment shall be conspicuously posted on or near the door of the place where the meeting was held or to be held, within twenty-four (24) hours after the adoption of the Order of Adjournment.

3. Quorum of Watermaster, Necessary Votes for Action and Roll Call of Votes. Five (5) members of Watermaster shall constitute a quorum for the transaction of its affairs. Action by the affirmative vote of five (5) members shall constitute action by the Watermaster, except that the affirmative vote of six (6) members shall be required: (a) to enter into any Cyclic Storage Agreement; or (b) to approve the purchase, spreading or injection of Supplemental Water for Ground Water recharge.

Any member of Watermaster may request a roll call vote on any question or motion considered and the ayes and noes thereon shall be recorded in the minutes of

the meeting.

4. Agenda of Watermaster Meetings. Any person requesting that a matter be considered by Watermaster for action thereon, shall request the same in writing directed to Watermaster's Executive Officer for inclusion on the Agenda of the next scheduled meeting to be held at least ten (10) days after receipt of said request.

5. Conduct of Meetings -- Roberts' Rules of Order. For the conduct of Watermaster meetings, Roberts' Rules of Order shall be followed and, without consent of Watermaster, the priorities of Watermaster business shall be that stated in the Agenda for a particular meeting.

6. Organization of Watermaster. At its first meeting each year, Watermaster shall elect a Chairman and Vice Chairman from its membership. It shall also select a Secretary and a Treasurer and may select such assistants as may be appropriate, any of whom may, but need not be, members of Watermaster.

7. Minutes. Minutes of all Watermaster meetings shall be kept, which shall reflect all actions taken. Draft copies thereof shall be furnished to any Party who files a request therefor in writing with Watermaster. Said draft copies of minutes shall constitute notice of any Watermaster action therein reported and failure of a Party herein to request copies thereof shall constitute his waiver of notice.

8. Designee to Receive Future Notices. Each Party who has not heretofore made a designation of the name and address of the person who shall receive service upon and delivery to Parties of various papers shall file with the Court, with proof of service of a copy thereof upon Watermaster, a written designation of the person to whom and the address at which all future notices, determinations, requests, demands, objections, reports and other papers and processes to be served upon that Party or delivered to the Party are

to be so served or delivered.

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

(b) Service upon Designee. Delivery to or service upon any Party by Watermaster, by any other Party, or by the Court, of any item required to be served upon or delivered to a Party under or pursuant to the Judgment herein may be by deposit in the mail, first class, postage prepaid, addressed to the latest Designee of the Party to be served and at the address of said latest designation filed by that Party.

(c) List of Designees. Watermaster shall maintain a current list of Party Designees to receive notices under the Judgment.

9. Election of Producer Representatives.

(a) Notice of Nomination Election. Watermaster shall annually give thirty (30) days notice to all Parties that an election shall be held at Watermaster's regularly scheduled meeting in November of each year, for the purpose of nominating Producer representatives to Watermaster.

(b) Voting. Nominations of six (6) Producer representatives shall be by cumulative voting in person or by proxy, with each Producer entitled to one (1) vote for each one hundred (100) acre-feet, or portion thereof, owned by him, of Base Annual Diversion Right, Prescriptive Pumping Right or Integrated Production Right, as defined in the Judgment. When the names placed in nomination exceed the number of representatives to be elected, votes shall be cast by ballot using

official ballot forms provided by Watermaster. Each ballot form must list the Producer and Designee or proxy holder casting the vote, the Producer's voting entitlement, the names of the nominees for whom the votes have been cast, and the number of votes cast for each nominee.

(c) Conduct of Elections. Prior to the nomination of Producer representatives, the Chairman shall appoint tellers to conduct the election. Such tellers may include any member of Watermaster staff to monitor the canvassing and counting of votes. The tellers shall distribute the ballots, and, at the conclusion of the balloting, collect the ballots, retire to tabulate the votes, and promptly report the results of the election to the Parties present at the election.

(1) In the event there is a challenge to the declared election results, the Chairman shall appoint three (3) Producer Parties as election inspectors who shall recount the election ballots and immediately certify the results of such election to Watermaster and others present at the election.

(2) All ballots shall be considered confidential, and no ballot or information thereon shall be disclosed except to the appointed tellers and election inspectors, without the express permission of the Producer casting the ballot.

10. Vacancy on Watermaster and Replacement. In the event of a vacancy on Watermaster, a successor shall be nominated at a special meeting of Watermaster and Producers to be called by Watermaster within ninety (90) days in the case of a Producer representative or by the action of the appropriate District Board of Directors in the case of a Public Representative. Subject to approval and appointment by the Court, such

successor Watermaster shall fill the unexpired term of the Watermaster member replaced.

11. Watermaster Action Subject to Court Review. Any action, decision, rule or procedure of Watermaster shall be subject to review by the Court on its own motion or on timely petition or motion for an Order to Show Cause by any Party, as follows:

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

(b) Notice of Motion. Any Party may, by a regularly noticed motion, petition the Court for a review of any Watermaster action or decision. Notice of such motion shall be mailed to Watermaster and to the Designees of all Parties. Unless ordered by the Court, such petition shall not operate to stay the effect of such Watermaster action.

(c) Time for Motion. Within thirty (30) days of mailing of Notice of Watermaster Determination of Operating Safe Yield together with a statement of each Producer's entitlement thereunder, any affected Party may, by a regularly noticed motion, Petition the Court for an Order to Show Cause for review of said Watermaster findings, determination or entitlement and thereupon the Court shall hear Objections thereto and settle such dispute.

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

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

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

12. Water Measuring Devices and Meter Test Program. Parties producing in excess of five (5) acre-feet per year shall, pursuant to these uniform rules, install and maintain in good operating condition, at the cost of each such Party, such necessary water measuring devices or meters as may be appropriate. Any such measuring device is subject to such inspection and testing as Watermaster may, from time to time, deem necessary. Upon testing, the meters shall be sealed by Watermaster and remain so sealed.

Watermaster will conduct a formal meter-testing program to help the Parties accurately report their Production. Watermaster intends to test every meter under its jurisdiction at least once every two (2) years.

(a) Tests of Meters Which Supply Watermaster. At least once every two (2) years, Watermaster shall request certified meter tests of all meters of Responsible Agencies through which Supplemental Water is furnished to Watermaster and of the meters which measure all Cyclic Storage deliveries authorized by Watermaster.

(b) Wells. Water wells shall be equipped with a positive displacement, velocity impeller, venturi or orifice-type meter with a totalizer. The totalizer shall

be correctable only by changing mechanical gear equipment. The meter shall be accessible and installed according to good design practices. Watermaster personnel shall assist any Party having any question as to installation requirements.

(c) Calibrated Test Equipment. Watermaster or its approved meter tester will maintain a complete line of carefully calibrated test equipment. This equipment is the standard with which all water meters must be compared. The tolerance for each meter is plus (+) or minus (-) five percent (5%) of the standard. Watermaster may require an aggregate accuracy of plus (+) or minus (-) two percent (2%).

(d) Repair or Replacement of Inaccurate Meters. Defective or inaccurate meters must be repaired within thirty (30) days of receipt of notice thereof from Watermaster.

(e) Surface Diversions. Surface Water Diversions shall be measured with a weir and recorder or meter capable of accurately measuring and recording such Diversions.

(f) Interim Meter Tests. Should a Producer discover that the meter which measures the water Production from his well is measuring inaccurately, he shall first notify Watermaster thereof, have the meter retested and, if measuring inaccurately, then have the same repaired at the earliest practical and reasonable time. Upon the completion of such repair, such Producer shall immediately have such meter tested and sealed by Watermaster and it shall remain so sealed. Such testing and sealing will be accomplished by Watermaster upon request therefor by said Producer or said repaired meter may be tested and sealed by any meter tester authorized by Watermaster, as provided in Subsection (g) of this Section 12.

Results of such meter tests shall be furnished to Watermaster within ten (10) days of testing, on forms provided by Watermaster.

(g) Watermaster Approved Meter Testers. Persons, firms or corporations in the business of repairing and/or testing water measuring devices may be approved by Watermaster to test and seal meters on behalf of Watermaster by submitting their qualifications therefor to Watermaster and obtaining Watermaster's approval to perform meter tests and seal such meters as agents of Watermaster. The name, address and telephone number of all such Watermaster approved meter testers shall be maintained at and be available from the office of Watermaster.

(h) Meter Seal by Watermaster and Notification of Meter Maintenance. At the completion of all meter tests Watermaster's seal shall be placed on the meter, if the meter test demonstrates that the meter is within the accuracy standard of five percent (5%).

Such sealing then requires that Watermaster be notified in writing within seven (7) days if Watermaster's seal has been broken or if any of the following events occur: (a) the meter is to be repaired or recalibrated; (b) there is any other interference affecting the meter or Watermaster's seal; (c) the meter is to be relocated even if Watermaster's seal is still intact; or (d) a new meter is to be installed.

(i) Estimation of Production Due to Meter Maintenance. When a Producer must estimate Production due to meter maintenance, he shall consult with Watermaster or its engineer for approval of the method of estimation. A copy of the estimate calculations shall be supplied to Watermaster with the corresponding

Quarterly Production Report.

13. Reports of Producers to Watermaster. Each Producer with an adjudicated right in excess of five (5) acre-feet per year and each Producer with an Overlying Right in any amount shall file with Watermaster a quarterly report of water Produced from the Basin or Relevant Watershed, on forms provided by Watermaster. Quarterly Production Reports shall be so filed no later than the last day of the month next succeeding the end of the relevant quarter, i.e. April 30, July 31, October 31 and January 31.

(a) Adjudicated Right in Excess of Five (5) Acre-Feet Not to be Reduced to Minimal Producer by Transfer. Any portion of: (1) the Base Annual Diversion Right of a Diverter; (2) the Prescriptive Pumping Right of a Pumper; or (3) the Diversion Component and Prescriptive Pumping Component of an Integrated Producer, adjudicated in any amount in excess of five (5) acre-feet per year [at the time that Judgment herein was entered, January 4, 1973], that is or may be reduced to five (5) acre-feet or less by assignment or transfer of rights, as permitted by Section 55 of the Judgment, shall not enjoy the status of a Minimal Producer as defined in Section 10 (o) of the Judgment.

(b) Notice to Watermaster of Transfers of Water Rights. Within fifteen (15) days thereof all Parties shall notify Watermaster of any transfer, assignment, license or lease of any water right, or portion thereof, not shown in the Judgment or previously filed with Watermaster and such transferee must be or become a Party to the action (as provided in Section 57 of the Judgment). All Parties are required to notify Watermaster of any subsequent assignment, transfer, license or lease of water rights granted or acquired by them and they shall file a duly acknowledged copy of the document(s) therefor with Watermaster, within fifteen

(15) days after execution and acknowledgement of such document(s).

For such assignment, transfer, license or lease of water rights to be effective for, or be deemed by Watermaster to apply to, Production in a particular Fiscal Year (July 1 - June 30), the document(s) therefor shall be executed and acknowledged prior to the end of said Fiscal Year (June 30) and copies thereof showing such acknowledgement must be received by Watermaster prior to July 15, following the end of said particular Fiscal Year. The transferee must be, or petition to become, a Party to the action within ninety (90) days following such assignment, transfer, license or lease of water rights.

When the term of a temporary assignment, transfer, license or lease of water rights extends beyond the end of the current Fiscal Year, it shall be the obligation of the transferee thereof to annually, during the month of July of each Fiscal Year during said term, notify Watermaster of said transferee's intention to exercise said water right during the then current applicable Fiscal Year.

(c) Conveyance of Water Right with Conveyance of Property. Parties are advised that when a water right owner conveys the property where a water right was developed, the said water right shall not be conveyed with such property unless and until the appropriate notice procedures established by Watermaster have been complied with. When it is intended to transfer or acquire adjudicated water rights in the Basin or Relevant Watershed, the Parties thereto are advised to use the appropriate forms contained in exhibits to these Rules and Regulations and to notify Watermaster of such transfers by furnishing a copy of such transfer documents(s) within fifteen (15) days of execution and acknowledgement thereof.

(d) Conveyance of Water Right without Conveyance of Property.

Replacement Water Assessment hereunder, to pay all necessary costs of administration and satisfaction of the Make-up Obligation. Such Assessment shall not be applicable to water Production of an Overlying Right.

(d) In-Lieu Water Cost. An Assessment may be levied against all Pumping to pay reimbursement for In-Lieu Water Cost except that such Assessments shall not be applicable to the non-consumptive use portion of Overlying Rights.

(e) Waivers Possible for Water Quality Improvement or Protection. In accordance with Section 45 (e) of the Judgment, a Producer of water from the Basin for the purpose of testing, protecting, or improving water quality, may apply in writing by verified petition or application (hereinafter "Application") to Watermaster, for approval of such water Production free of all or any part of Watermaster Assessments thereon, and for waiver of one or more of the provisions of Sections 25, 26, and 57 of said Judgment, where appropriate, upon terms and conditions to be established by Watermaster after a noticed hearing on such Application.

A waiver of Assessment shall not be granted for the purpose of removal of contamination or improvement of the quality of Basin water which has, or could have, resulted from the activity of the Applicant for such waiver.

In the event cleanup or Treatment Facilities are installed in the Basin by or for the benefit of a Producer, and the Basin water receiving treatment from said Treatment Facilities is subsequently delivered by or used for beneficial purposes of such Producer, the Production of such water shall not be entitled to waiver or modification of Watermaster Assessments thereon.

the succeeding Fiscal Year shall be deemed Produced pursuant to such Producer's Carry-over Rights.

16. Special Hearings. Watermaster shall conduct such special hearings as deemed appropriate upon thirty (30) days notice to the Parties hereto.

17. Policy Decisions. No policy decision shall be made by Watermaster until its next regular meeting after the question involved has been raised for discussion at a Watermaster meeting and noted in the draft of minutes thereof.

18. Assessments. Watermaster may levy and collect Assessments from the Producer Parties based upon Production during the preceding Fiscal Year. Said Assessments may be for one or more of the following purposes:

(a) Administration Costs. At its regular May meeting Watermaster shall adopt a proposed budget for the succeeding Fiscal Year and within fifteen (15) days shall mail a copy thereof to each Party, together with a statement of the level of Administration Assessment levied by Watermaster and which will be collected for purposes of raising funds for said budget. Said Assessments shall be uniformly applicable to each acre-foot of Production.

(b) Replacement Water Costs. Replacement Water Assessments shall be collected from each Producer on account of such Party's Production in excess of its Diversion Rights, Pumper's Share or Integrated Production Right, and on account of the consumptive use portion of Overlying Rights, computed at the applicable rates established by Watermaster, consistent with Watermaster's Operating Criteria (Exhibit "H" to the Judgment).

(c) Make-up Obligation. An Assessment shall be levied and collected equally on account of each acre-foot of Production, which does not bear a

Report shall be mailed to all Parties at least ten (10) days prior to a hearing thereon to be commenced at Watermaster's regular meeting in May of each year, at which time objections or suggested corrections or modifications of said determination shall be considered.

(c) Watermaster Final Determination and Review Thereof. Within thirty (30) days after completion of said hearing, Watermaster shall mail to each Pumper, Diverter, Overlying User and Integrated Producer a Final Report and Determination of said Operating Safe Yield for each such Fiscal Year, together with a statement of the Producer's entitlement in each such Fiscal Year stated in acre-feet. Any affected Party, within thirty (30) days of mailing of notice of said Watermaster determination, may petition the Court for an Order to Show Cause for Review of said determination in accordance with Section 11 hereof.

15. Carry-over Rights.

(a) Pumping. Any Pumper's Share of Operating Safe Yield, and the Production right of any Integrated Producer which is not Produced in a given year may be carried over and accumulated for one (1) year.

(b) Diversions. Diverters shall be entitled to Divert for direct use up to two hundred percent (200%) of their Base Annual Diversion Right in any Fiscal Year, provided, that the aggregate quantities of water Diverted in any consecutive ten (10) Fiscal Year period shall not exceed ten (10) times such Diverter's Base Annual Diversion Right.

(c) Overlying Rights. By definition, there is no carry-over of Overlying Rights.

(d) Presumption as to Carry-over Rights. The first water Produced in

thereunder, including authorized carry-over of unused rights.

14. Operating Safe Yield. Watermaster shall annually determine the Operating Safe Yield applicable to the succeeding Fiscal Year and estimate the same for the next succeeding four (4) Fiscal Years. Said determination shall be made at the close of the hearing thereon, which shall be commenced at Watermaster's regular meeting in May of each year. Watermaster shall notify each Pumper and Integrated Producer of his share thereof, stated in acre-feet per Fiscal Year. Thereafter, no Party may produce in any Fiscal Year any Consumptive Use Portion of any Overlying Right, or an amount in excess of the sum of his Diversion Right, if any, plus his Pumper's Share of such Operating Safe Yield, or his Integrated Production Right, or the terms of any Cyclic Storage Agreement, without being subject to Assessment for the purpose of purchasing Replacement Water. The rate of such Assessment shall be established at the same meeting at which the Operating Safe Yield is established, and it may be estimated for the years for which Operating Safe Yield is estimated. In establishing the Operating Safe Yield, the Watermaster shall follow all physical, economic, and other relevant parameters provided in the Judgment herein. Said determination shall be made in accordance with the following:

(a) Preliminary Determination. At Watermaster's regular meeting in April of each year, Watermaster shall make a Preliminary Determination of the Operating Safe Yield of the Basin for each of the succeeding five (5) Fiscal Years. Said determination shall be made in the form of a report containing a summary statement of the considerations, calculations and factors utilized by Watermaster in arriving at the said Operating Safe Yield.

(b) Notice of Hearing. A copy of said Preliminary Determination

(6) Is accompanied by a map of the service area where the water was used by transferor(s) (assignors) and a map of the service area where the water is intended to be used by the transferee(s) (assignees). Maps need not be furnished for temporary transfers of water rights unless specifically requested by Watermaster.

(h) Approved Forms of Transfer Documents and Other Forms. Approved forms of such transfer documents and other approved Watermaster forms are attached hereto, marked and identified as follows:

Exhibit "A" - Permanent Transfer of Water Rights--Prescriptive Pumping Right

Exhibit "B" - Permanent Transfer of Water Rights--Base Annual Diversion Right

Exhibit "C" - Permanent Transfer of Water Rights--Integrated Production Right

Exhibit "D" - Temporary Assignment or Lease of Water Right

Exhibit "E" - Stipulation Re Intervention After Judgment

Exhibit "F" - Designee to Receive Future Notices for and on Behalf of Defendant(s)

Exhibit "G" - Notice of Transfer of Overlying Rights With Property to Which They are Appurtenant.

Exhibit "H" - Application To Drill Water Well

Exhibit "I" - Application To Modify Existing Water Well

Exhibit "J" - Application To Destroy Water Well

Exhibit "K" - Application For Water Treatment Facility

(i) Presumption as to Unexercised Rights. Unless otherwise noted on the above mentioned transfer documents(s), it will be presumed by Watermaster that the permanent transfer of water rights will include all unexercised rights

Parties are also advised that the owner of an adjudicated water right herein (except an Overlying Right) may transfer the same (temporarily or permanently) without conveyance of the property where the water right was developed.

(e) Transfer of Overlying Right. The transfer and use of Overlying Rights shall be limited (as provided in Section 21 of the Judgment) as exercisable only on specifically defined Overlying Lands and they cannot be separately conveyed or transferred apart therefrom.

(f) Intervention Stipulation Required. No conveyance of water rights to a person who is not a Party to the subject action shall be recognized by Watermaster unless the transferee thereof files with Watermaster a Stipulation in Intervention to the subject action (Exhibit "E") agreeing to be bound by the Judgment herein, and until the Court approves said Stipulation and Intervention.

(g) Notice Required. Any transfer of water rights shall be effective only when the requirements of this Section 13 are met and when the Parties file with Watermaster, within fifteen (15) days of such transfer, a copy of the transfer document(s) which:

(1) Identifies both the transferee(s) and the transferor(s);

(2) Accurately recites the total quantity (in acre-feet) of water rights transferred;

(3) Is executed by both the transferee(s) and the transferor(s);

(4) Is acknowledged by both transferee(s) and transferor(s) in a form sufficient for recordation;

(5) Lists the Designee(s) of both the transferor(s) and transferee(s) to receive future service and notice of papers and process; and

Notwithstanding the above, if Basin water is treated and immediately percolated or reintroduced to the Basin by way of spreading, injection, or otherwise, for purposes of this Section 18 (e), its Production may, upon Watermaster's approval of an Application to waive or modify its Assessments on the same, be entitled thereto. In any event, such water shall only be percolated or reintroduced to the Basin with the consent of Watermaster and said water shall be of a quality acceptable to Watermaster.

Although all Production from the Basin must be reported to Watermaster on a timely basis in accordance with these Rules and Regulations, Production which is granted a waiver of Assessment hereunder may, by reason of certain circumstances as specifically determined by Watermaster, be deemed an unused right and entitled to carry-over, in accordance with Section 49 of the Judgment.

(f) Application for Waiver of Assessment. An Application for Waiver of Assessment, as above set forth, shall contain all relevant information relied upon by Applicant which he believes justifies the granting of said Application. All such Applications shall explain the special needs and circumstances for such Production and specify the approximate amounts to be Produced, the time frame of such Production, the specific location(s) of the points(s) of extraction(s), and the place of intended disposal of such water, as well as any supplemental or additional information requested by Watermaster. All such extractions shall be metered and reported quarterly to Watermaster, along with all other Basin Production, in accordance with these Rules and Regulations.

Should an Application contain incomplete information or should

Watermaster desire additional, other, or further information in relation thereto, the same shall also be furnished and verified by Applicant.

(g) Public Hearing and Effective Date. Within thirty (30) days of the filing of any such Watermaster accepted Application, Watermaster shall give at least thirty (30) days notice to the Designees of all Parties that it will hold a public hearing on said Application. Watermaster may, after the conclusion of said hearing, under then existing conditions, waive all or any part of its Assessments on such Production, such waiver shall not be effective prior to the date of the filing of said accepted Application, and may also waive the provisions of Sections 25, 26, and 57 of the Judgment herein.

The effective date for the granting of an Application to waive or modify Watermaster Assessments shall be no later than ten (10) days after approval thereof by Watermaster and it shall continue for the period of time specified therein, unless sooner terminated or extended by Watermaster.

Nothing herein is intended to allow an increase in any Producer's annual entitlement under the Judgment.

19. Levy, Notice and Adjustment of Assessments. At its regular May meeting Watermaster shall also fix the rate(s) of or levy applicable Administration Assessments, Replacement Water Assessments, Make-up Obligation Assessments, and In-Lieu Water Cost Assessments, if any. Watermaster shall give written notice of all applicable Assessments to each Party on or before August 15 of each year.

(a) Payment. All Watermaster Assessments shall be due and payable on or before September 20, following such Assessment levy or Assessment rate fixing, subject to the rights reserved in Section 37 of the Judgment, and such

Assessment shall be paid or become delinquent after September 20.

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

(c) Adjustments. By reason of Watermaster's inability to control the direct costs and other charges incurred for Supplemental Water obtained from Responsible Agencies, it may be necessary from time to time for Watermaster to adjust the foregoing Assessments. Such Assessments may only be adjusted after giving at least 15 days Notice to all Parties of the meeting at which such adjustments will be considered by Watermaster.

20. Responsibility for Watermaster Assessments. Parties Producing water from the Relevant Watershed and Party lessors or assignors of water rights shall be responsible for Watermaster Assessments levied upon all Production. The temporary lessor or assignor of water rights shall be ultimately responsible for all Watermaster Assessments of non-party lessees or assignees; such non-party lessees or assignees act as the

Production agent of the lessor or assignor to the extent of the amount of such temporary lease or assignment.

21. Over and/or Under Reporting.

(a) Over Reporting. Watermaster shall make refunds, in whole or in part, of Assessments theretofore paid, to any Producer who has erroneously overstated his Production in any sworn statement for a quarterly period required hereunder and who has overpaid any Assessment for that quarter, but only upon compliance by the Producer with the procedure hereinafter set forth and within the time hereinafter provided.

Any such Producer, within one (1) year of the last day for filing of the said sworn statement for the quarterly period in question, may file a verified application with Watermaster requesting a refund of that portion of any Assessment claimed to have been paid by reason of that Producer's erroneous overstatement of Production. If incomplete information is contained in said application, or if Watermaster desires other, further, or additional information than that set forth in said application, the same shall also be furnished by a verified statement mailed to Watermaster on behalf of Applicant within thirty (30) days of the mailing of the written notice or request therefor from Watermaster to the Producer's Designee, at his address as shown by Watermaster records, or the application shall be deemed abandoned. Such request by Watermaster shall not cause any application otherwise timely filed to be considered as not filed within said one (1) year period. The Watermaster may pay any refund claimed without a hearing thereon, but no application shall be denied, in whole or in part, without a hearing being accorded to the Applicant, in which said hearing the Applicant

shall have the burden of proof. Any determination by Watermaster on any matter in connection with said application shall be final and conclusive upon the said Producer.

Any refund authorized to be paid under the provisions of this Section may be paid only out of moneys realized from the appropriate Watermaster Assessment levied or thereafter raised. Under election of the Producer, any refund determined by Watermaster to be owing may be credited to the Producer against any subsequent Assessments which might become due and owing from him to Watermaster. No refunds shall be made except as authorized by this section and this section may not apply to over reporting unless there has been compliance with the provisions of Section 12 hereof.

(b) Under Reporting. If Watermaster shall have probable cause to believe that the Production of water from any water Producing facility is in excess of that disclosed by the sworn statements covering such water Producing facility, Watermaster may cause an investigation and report to be made concerning the same. Watermaster may fix the amount of water Production from such facility at an amount not to exceed the maximum Production capacity thereof, provided, however, where a Watermaster tested water measuring device is permanently attached to such facility, the record of Production as so disclosed by such measuring device shall be presumed to be accurate and the burden of proof shall be upon Watermaster to establish the contrary.

A determination by Watermaster that a Producer has under reported Production shall require Watermaster to give written notice thereof to such Producer by mailing such notice to his Designee, at the address shown by

Watermaster records. A determination of under reporting made by Watermaster shall be conclusive on any Producer who has Produced water from the facility in question and the Watermaster Assessments based thereon, together with interest as set forth in Section 19 (b) hereof, shall be payable forthwith, unless such Producer shall file with Watermaster within ten (10) days after the mailing of such notice, a written protest setting forth the ground or grounds for protesting the amount of Production so fixed or the Assessments and interest thereon.

Upon the filing of such protest, Watermaster shall hold a hearing at which time the total amount of water Production and the Assessments and interest thereon shall be determined, which action shall be conclusive if based upon substantial evidence. A notice of such hearing shall be mailed to protestant at least ten (10) days before the date fixed for the hearing. Notice of the determination by the Watermaster at the close of such hearing shall be mailed to the protestant. The Producer shall have twenty (20) days from the date of mailing of such notice to pay the Assessments fixed by Watermaster and interest thereon, as fixed herein, before the same becomes delinquent.

(c) Delinquent Assessments; Interest; Costs; and Attorney's Fees. Watermaster may bring suit in the Court having jurisdiction against any Producer of water from the Basin or Relevant Watershed for the collection of any delinquent Assessment and interest thereon. The Court having jurisdiction of the suit may, in addition to any delinquent Assessment, award interest and reasonable costs, including attorney's fees.

22. Information Concerning Offers to Purchase, Sell or Lease Water Rights. Watermaster shall maintain a record of any offer to purchase, sell or lease water rights

reported to Watermaster, for the purpose of encouraging the orderly transfer of such rights by acting as a clearing house for such information. Any person desiring to purchase, sell, or lease such rights may examine such Watermaster records.

23. Watermaster Control of Spreading and Ground Water Storage. Except for the exercise of non-consumptive uses and performance of Cyclic Storage Agreements with Watermaster, no Party shall spread water within the Basin or Relevant Watershed for subsequent recovery or Watermaster credit without prior Watermaster written permission to do so because Watermaster has sole custody and control of all Ground Water storage rights in the Basin.

24. Watermaster Annual Report. Watermaster shall annually file with the Court and mail to the Parties a report of all Watermaster activities during the preceding Fiscal Year, including an audited statement of all accounts and financial activities of Watermaster, summaries of Diversions and Pumping, and all other pertinent information. To the extent practical, said report shall be mailed to all Parties and filed with the Court on or before November 1 of each Year.

25. Watermaster Stipulation Re Intervention After Judgment. Attached hereto and marked "Exhibit E" is a form of Stipulation for Intervention After Judgment which Watermaster will execute, file with the Court if accompanied by the necessary filing fee, obtain a Court hearing date thereon, give Notice thereof and attempt to obtain an approving Court Order thereon.

26. Uniform Rules and Conditions of Cyclic Storage Agreements.

(a) Application for Cyclic Storage Agreements. Any person or entity, private or public, desiring to spread and store Supplemental Water within the Basin for subsequent recovery and use or for Watermaster credit shall make

application to Watermaster for a Cyclic Storage Agreement pursuant to these Uniform Rules and Conditions. Watermaster shall have first call on Supplemental Water for Replacement Water, Make-up Water and for the "Alhambra Exchange" before such water is made available for Cyclic Storage Agreements.

(b) Purpose of Cyclic Storage Agreements. All Cyclic Storage Agreements shall be for the utilization of Ground Water storage capacity of the Basin and for cyclic or regulatory storage of Supplemental Water.

(c) Available Storage Capacity. In considering the available Ground Water storage capacity of the Basin for such Agreements, Watermaster shall take into account the operation of the Basin under the Physical Solution provisions of the Judgment.

(d) Provisions of Cyclic Storage Agreements. Any such Agreement shall include provisions for:

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

a) The time, place, and amount of said spreading shall be approved in advance by Watermaster provided, however, that when the water level of the Baldwin Park Key Well is at or above elevation two-hundred fifty (250) feet, spreading activities shall be restricted to the easterly portion of the Basin at water spreading facilities designated in advance by Watermaster, unless otherwise approved by the Court;

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

(3) Priorities for Cyclic Storage Agreements in the following order:

a) Responsible Agencies on the basis of their relative requirements for Replacement Water within their respective corporate boundaries,

b) Other Parties on the basis of priority of application to Watermaster for such Agreements, and

c) Non-parties;

(4) Determinations by Watermaster of, and accounting for, all losses in stored water, assuming that such stored water floats on top of the Ground Water supplies, and accounting for all losses of water which otherwise would have replenished the Basin. Such losses of stored water shall be assigned by Watermaster as follows:

a) First losses by non-parties in the reverse priority of the earliest original dates of their respective Cyclic Storage Agreements, to the whole of such non-parties' stored water,

b) The next losses by Parties who are not Responsible Agencies in reverse priority of the earliest original dates of their respective Cyclic Storage Agreements, to the whole of their stored water, and

c) The last losses by Responsible Agencies to be shared on the basis of water actually in storage in the Basin at the time of the loss of such stored water;

(5) The priorities for spreading of Supplemental Water are

hereby established as follows, in the order of their priority:

First: Supplemental Water ordered by Watermaster from Responsible Agencies for direct delivery to the Basin as Replacement Water,

Second: Supplemental Water for delivery to the Basin for storage under Cyclic Storage Agreements between Watermaster and Responsible Agencies. In the event that more than one Responsible Agency wishes to deliver water to Cyclic Storage simultaneously and there is inadequate spreading capacity available, deliveries by each Responsible Agency so desiring to deliver Supplemental Water shall be scheduled so that the total quantity of water in Cyclic Storage of those Agencies can be increased proportionately in percent of their maximum allowed Cyclic Storage,

Third: Supplemental Water for delivery to Individual Cyclic Storage accounts of Parties to the Judgment. In the event that more than one Party wishes to deliver water to such Cyclic Storage accounts simultaneously and there is inadequate spreading capacity available, deliveries for each such Party shall be scheduled so that the total quantity of water in such Parties' Individual Cyclic Storage accounts can be increased proportionately in percent of their maximum allowed Cyclic Storage, and

Fourth: Non-Parties as established by Watermaster at the time; and

(6) Payment to Watermaster for the benefit of Parties in said action of all special costs, damages or burdens incurred (without any

charge, rent, assessment or expense as to Parties to said action by reason of the adjudicated proprietary character of said storage rights, nor credit for offset for benefits resulting from such storage); provided, no Party shall have any direct interest in or control over such contracts or the operation thereof by reason of the adjudicated right of such Party. Watermaster has sole custody and control of all Ground Water storage rights in the Basin pursuant to the Physical Solution in the Judgment and all said Agreements are subject to review and approval of the Court.

(e) Terms of Cyclic Storage Agreements and Extensions. The term of such Agreements shall not exceed five (5) years but may be extended for additional terms, not to exceed five (5) years each, provided Watermaster shall report its intention to consider an extension of any such Agreement in minutes of its meeting held prior to its meeting when any such extension request shall be acted upon.

(f) Maximum Storage. Such Agreements shall fix the maximum amount of Supplemental Water to be stored in the Basin at any point in time by a particular storing entity.

(g) Watermaster to be Held Harmless. The storing entity of such Agreement shall save and hold harmless Watermaster, its officers, agents and employees from any and all costs, damages or liability resulting from said Agreement and shall provide Watermaster with the defense or costs of the defense of any action brought against Watermaster, its officers, agents or employees arising or alleged to arise by reason of such Agreement for storage of Supplemental Water in the Basin.

(h) Reports to Watermaster. The storing entity shall quarterly report to Watermaster the amount of Supplemental Water which it spreads and withdraws each quarter under such Agreement. Such reports shall be due on the last day of the month next succeeding the end of the relevant quarter, i.e. April 30, July 31, October 31, and January 31. Such reports shall be cumulative and shall indicate the credit balance of the relevant quarter.

(i) Court Approval of Cyclic Storage Agreements. Upon its approval of a Cyclic Storage Agreement, Watermaster shall Petition the Court for approval thereof and said Agreement shall become effective only upon such Court approval.

27. Responsible Agency from Whom Watermaster Shall Purchase Replacement Water.

(a) Responsible Agencies. There are three Responsible Agencies within or partially within the Basin. Two of such Agencies, Upper San Gabriel Valley Municipal Water District (Upper District) and Three Valleys Municipal Water District (Three Valleys District) are member agencies of The Metropolitan Water District of Southern California (Metropolitan) and supply Watermaster with Replacement Water purchased from Metropolitan. The third Responsible Agency is San Gabriel Valley Municipal Water District (San Gabriel District) which has contracted with the State of California and has constructed facilities to deliver water from the State Water Project and, thus, can directly supply Watermaster with Replacement Water.

(b) Water Used Within the Basin. For water used within the Basin, the Responsible Agency within whose boundaries is located the place of use of water Produced from the Basin will determine the Responsible Agency from whom

Watermaster shall purchase Replacement Water.

(c) Water Exported from the Basin. Except for water Produced from the Basin and used within the City of Sierra Madre (for which San Gabriel District shall be the Responsible Agency), the place of such Production of water exported from the Basin shall determine the Responsible Agency from whom Watermaster shall purchase Replacement Water.

(d) Computations of the Amount of Replacement Water to be Purchased from Responsible Agencies. In computing the amount of Replacement Water to be provided by a Responsible Agency, Watermaster shall:

(1) Determine the Replacement Water requirement of each Party to the Judgment and apportion such Replacement Water requirement as required in (b) and (c) above;

(2) Calculate the total Replacement Water requirement for each Responsible Agency as determined in (1) above;

(3) Tabulate Interagency Transfers of water rights as described in (e) (1) below;

(4) Calculate the Net Interagency Transfer adjustment as described in (e) (2) below;

(5) Determine the adjusted Replacement Water requirements, calculated for each Responsible Agency as required in (e) below; and

(6) Determine the effect of deferred Replacement Water requirements as calculated in (h) below.

(e) Net Interagency Transfer Adjustment and Replacement Water Requirement. Replacement Water requirements as heretofore calculated shall be

modified by a "Net Interagency Transfer Adjustment." "Interagency Transfer" shall mean the aggregate amount of Production Right resulting from the transfer (by sale or lease) of all or a portion of a Pumper's Share of Operating Safe Yield, or a Base Annual Diversion Right, or the Diversion Component or Pumping Component of an Integrated Production Right for use within the boundaries of a Responsible Agency other than the Responsible Agency within which such water rights were developed and adjudicated.

The annual Replacement Water requirement resulting from Net Interagency Transfers for each Responsible Agency shall be calculated as follows:

(1) Net Interagency Transfers shall be calculated for each Responsible Agency as the difference between such rights transferred for use outside or partially outside that Responsible Agency and such rights transferred for use within or partially within that Responsible Agency.

(2) Tabulate the total Interagency Transfers of water rights, calculated for each of the Responsible Agencies in (1) above. The sum of said total Interagency Transfers for each of the three Responsible Agencies is that Responsible Agency's Net Interagency Transfer Adjustment. The total of such adjustments for all Responsible Agencies shall equal zero. The Responsible Agency(s) having a positive amount shall have this Net Interagency Transfer Adjustment added to the Replacement Water requirement computed for it in (d) (2) above. The Responsible Agency(s) having a negative amount shall have this Net Interagency Transfer Adjustment subtracted from the Replacement Water requirement calculated for it in (d) (2) above.

(f) Special Provisions.

(1) The Replacement Water requirement calculated for each of the Responsible Agencies in (e) (2) above cannot exceed the total quantity of Replacement Water obligation calculated for all Responsible Agencies, and/or;

(2) If the Replacement Water requirement calculated in (e) (2) above results in a negative value, that negative value shall be adjusted to zero, as described in (h) below.

(g) Special Provisions Re Alhambra Exchange. An adjustment shall be made to San Gabriel District's calculated Replacement Water requirement, if necessary, to allow Upper District to deliver an amount of Replacement Water to the City of Alhambra equal to the quantity delivered through connection USG-5 for the previous year, the year in which the Replacement Water requirement was incurred.

(h) Adjustments to Calculated Replacement Water Requirements. Adjustments to Replacement Water requirements resulting from the calculations in (f) (2) or (g) above shall be apportioned as follows:

(1) As between Upper District and Three Valleys District, the district with a negative value shall have added to it an amount sufficient to equal zero, that amount shall be subtracted from the Replacement Water requirement of the other Responsible Agency, but it shall not be reduced to less than zero. If a negative balance still exists, then it shall be subtracted from San Gabriel District.

(2) If San Gabriel District's Replacement Water requirement is

less than zero, it shall be adjusted to zero by deducting equal amounts of San Gabriel District's adjustment from both Upper District and Three Valleys District.

(3) All adjustments shall be accumulated in a Deferred Replacement Water Requirement Account for each of the Responsible Agencies. In future years when deliveries of Replacement Water may be made by a Responsible Agency, up to the amount, or any portion of the amount, in the Deferred Replacement Water Requirement Account, such deliveries will be equally subtracted from the Replacement Water requirement of the Responsible Agency(s) from which it was derived in (1) and/or (2) above for that year so long as such deliveries shall not cause total deliveries of all Responsible Agencies to exceed the amounts provided for in paragraph (f) (1) and/or paragraph (f) (2) above. At the time that deliveries are made by a Responsible Agency from its Deferred Replacement Water Requirement Account, Watermaster shall pay to that Responsible Agency its price prevailing at that time for Replacement Water.

(i) Advanced Delivery Account. Whenever the total quantity calculated in (e) (1) above, is less than that delivered to the City of Alhambra through USG-5 for the previous year, an accounting of the difference shall be maintained in an "Advanced Delivery Account" and such difference, or as much as possible thereof, shall be subtracted from the Replacement Water Requirement of Upper District in the next year when an obligation to deliver Replacement Water exists for Upper District.

28. Ground Water Quality Management. The Watermaster, Upper District, San Gabriel District, and San Gabriel Valley Water Association, through a Joint Resolution dated February-March 1989, affirmed their commitment to participate in a coordinated federal, state and local response to contamination of Ground Water supplies of the Basin for both the purpose of preventing additional contamination and the purpose of cleaning up and limiting the spread of existing contamination. The entities adopting that Joint Resolution designated and accepted Watermaster as the entity to coordinate local involvement in the efforts to preserve and restore the quality of Ground Water within the Basin. Watermaster sought and received additional powers from the Court to regulate extractions of water from the Basin for water quality control purposes, and this Section 28 is to implement the same. These efforts shall be that any New or Increased Extraction to meet water needs from the Basin shall include planned treatment in existing areas of High Level Degradation or Contamination. An important part of exercising these additional powers and coordinating federal, state and local responses to contamination of the Basin's water supplies, is the collection and compilation of essential data from Producers and the expeditious distribution of such data to the proper state and federal regulatory agencies involved in water quality matters in the Basin.

(a) Watermaster Approvals. Each Producer shall, after the effective date of this amendment to these Rules and Regulations (June 28, 1991), apply to Watermaster, on forms provided by Watermaster, for a permit to do any of the following:

- Construct any well;
- Deepen any existing well;
- Modify the perforations of the casing of any existing well;
- Notwithstanding natural fluctuations in Basin water levels, physically increase or decrease the Effective Extraction Capacity of any existing well, including that which may occur

due to installation or modification of pipelines, booster pumps or other distribution system components, as of said effective date of these Rules and Regulations;

- Abandon any existing well; or
- Construct, relocate or abandon Ground Water Treatment Facilities.

Such application will be acted upon by Watermaster no later than at its first regular meeting following sixty (60) days after receipt of the complete application. If an emergency exists, Watermaster shall expedite its actions to the maximum extent practicable.

(b) Watermaster Directed Change in Water Production.

(1) Based on available data, Watermaster's Five-Year Plan, and/or Ground Water modeling, Watermaster will, for water quality protection purposes, direct any Producer to increase, decrease or cease Production from existing wells, initiate new well Production or deliver water to or accept water from another water system or direct a Producer to obtain water from another source in-lieu of Pumping from its own wells, or take other appropriate actions in compliance with an approved Watermaster plan by giving such Producer advanced written notice thereof, specifying a time certain for compliance.

(2) The increase in cost to a Producer resulting from a Watermaster directed change in water Production shall not be borne by the Producer, but will be reimbursed to the Producer by Watermaster through In-Lieu Water Assessments levied by Watermaster, unless such funding is made available from other sources such as federal, state or local governmental entities or by those found to be responsible for the contamination in the Basin which caused Watermaster to direct the change

in Production by the Producer.

(c) Producer Data, Initial Submittal. After June 28, 1991, Producers shall submit, within sixty (60) days of Watermaster's request, initial data in a form acceptable to Watermaster, to update and ensure the accuracy of the existing Basin database. The data shall include:

(1) Identification and location of all Active, Inactive or Abandoned Wells;

(2) Water quality data concerning organic compounds, nitrates and any other water quality parameters as specified by Watermaster, including all data from other sampling Producers may conduct in addition to governmental requirements;

(3) Available construction details of each well owned or operated by Producer, as well as all logs (driller's, electric, etc.);

(4) Depths or zones from which water is extracted from each well, if available; and

(5) A current map of the main water transmission system of Producer's distribution system showing the location and sizes of transmission mains and storage reservoirs, all interconnections with other systems and their sizes and capacities, and any other data pertinent to the transmission (but not distribution to customers) of water through the Producer's system.

(d) Quarterly Reports. After the initial submittal of data per subparagraph (c) above, the following data shall be submitted by all Producers to Watermaster quarterly, on or before the last day of January, April, July and

October:

(1) Chemical water quality data collected during the quarter and provided to any state, federal or local public agency;

(2) Data described under Section 28 (c) (3), (4) and (5) hereof which supplement, amend or change the data previously submitted by a Producer; and

(3) All data from other sampling which Producers may conduct in addition to governmental requirements.

(e) Operating Principles. Any New or Increased Extraction by a Producer in the Basin to meet water supply needs shall have prior Watermaster approval, shall not contribute to contaminant migration, and shall include planned treatment in existing areas of High-level Degradation and Contamination. In giving such approval, Watermaster shall consider the cumulative effects of multiple actions by all Producers in the area of concern by using available information, the Five-Year Plan, and Ground Water modeling.

(f) Emergency Exemptions. Where a Producer's water supply or water quality problem is so urgent that the viable option for maintaining an adequate short-term supply that meets drinking water standards involves an action in conflict with the operating principles outlined in Section 28 (e) hereof, Watermaster may approve a short-term action contingent upon the Applicant Producer concurrently submitting an acceptable long-term action plan with acceptable deadlines for implementation. In general, the long-term action plan must be approved prior to or concurrently with the short-term action.

(g) Water Quality and Supply Plans. To assure that Pumping does not

lead to further degradation of water quality in the Basin, a Five-Year Water Quality and Supply Plan must be prepared and updated annually by Watermaster, projecting water supply requirements and water quality conditions for each period of five (5) calendar years beginning November 1, 1991, and each November 1 thereafter. This Plan will also include a water quality monitoring element to obtain supplemental information as needed to assist in projecting contamination levels. Watermaster will supply the Producers with projections of contaminant migration by June 1 of each year for the preparation of these Water Quality and Supply Plans.

Each purveyor of potable water produced from the Basin shall submit the following information to Watermaster by July 31 of each year:

(1) Projected quarterly water supply requirements for each of the following five calendar years and the proposed pumping rates, in gallons per minute, for each well;

(2) Identification of each Production well known to contain contaminants and the contaminant levels;

(3) Proposed methods for meeting the water supply requirements of the system if contaminant levels are, or are projected by Watermaster to become, greater than drinking water standards; and

(4) Any intended treatment facility.

Watermaster shall analyze the information submitted by Producers and develop an overall draft Basin Water Quality and Supply Plan. A draft Plan will be submitted by Watermaster to the Los Angeles Regional Water Quality Control Board, and for public review and comment per Section 28 (i) hereof, by November

1. Appropriate modifications resulting from comments received will be reflected in the final draft, and a staff report providing an explanation of decisions will be made available.

(h) Ground Water Treatment Facilities.

(1) Producers in the Basin shall notify Watermaster in advance at the initial stages of planning of their intent to construct any Facility to remove volatile organic compounds (VOCs) and/or nitrates from water Produced from the Basin. Such notice shall include the following information:

- the intended location and a description of the Treatment Facility;
- the water production capacity;
- the rate of contaminant removal capacity;
- the expected concentration of all identified contaminants in the water to be treated;
- the expected concentration of all identified contaminants in the water after treatment;
- the intended disposition of all water to be treated;
- the expected initiation date and period of time over which the Treatment Facility will operate; and
- the expected capital and operating costs of the Treatment Facility.

(2) In addition, the Producer shall describe all necessary permits and/or all permits for which it has applied or has received from all regulatory agencies with regard to such Treatment Facility and shall supply to Watermaster copies of all environmental documents required under the California Environmental Quality Act and/or the National Environmental Protection Act. No construction of such Treatment Facilities shall be initiated without the prior written approval of Watermaster. Watermaster shall promptly examine each submittal for compatibility with available

information, the Five-Year Plan and the operating principles, and notify the Applicant of its findings and decision regarding such proposed Treatment Facility no later than at its first regular meeting following sixty (60) days after receipt of a complete submittal by the Producer. Watermaster will also report its determination to the Los Angeles Regional Water Quality Control Board.

(3) All operators of Treatment Facilities shall report quarterly to Watermaster at least the following information:

- name or other designation of the Treatment Facility;
- quantity of water treated during quarter;
- quantity of each contaminant removed;
- quality of water before treatment, at beginning and end of each quarter;
- quality of water after treatment, at beginning and end of each quarter; and
- operation and maintenance costs for each quarter.

(i) Decision Making Process, Hearings and Appeals.

(1) All Watermaster determinations relating to the control of Pumping for water quality purposes shall be based upon a staff recommendation and information and recommendations received from or furnished by affected Producers. Staff's recommendation shall result from staff's analysis of information presented by interested Parties, all available water quality data, Watermaster's Five-Year Plan, Ground Water modeling and other water quality trend analysis reports, and will be based on the operating principles set forth in these rules. Staff shall provide supporting data to document each recommendation that it makes to Watermaster. After consideration of the staff recommendation and public comment provided at the Watermaster meeting, Watermaster shall make a final

decision.

(2) Public hearings on Watermaster's draft annual Five-Year Water Quality and Supply Plan will be held following a thirty (30) day public review and comment period. A copy of such draft will be sent to all Parties to the Judgment as well as to all other interested Parties by November 1 of each year along with a notice of the date, time and place of the public hearing, to be scheduled not less than thirty (30) days after the mailing date of the draft Plan. A notice of public hearing will also be published in the San Gabriel Valley's key local newspaper(s) at the beginning of the public review period. Consideration of comments received is described in Section 28 (g) hereof.

(3) Appeal of a Watermaster decision may be made to the Watermaster who shall notice and consider the same at a public hearing. Actions by the Watermaster are subject to review by the Court. Any Party may, by a regularly noticed motion, petition the Court for review of Watermaster's action or decision. Notice of such motion shall be served and filed within ninety (90) days after such Watermaster action or decision.

APPENDIX "A"

DEFINITIONS

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

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

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

(d) Diverter -- Any Party who Diverts.

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

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

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

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

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

(j) In-Lieu Water Cost -- The differential between a particular Producer's cost of Watermaster directed Produced, treated, blended, substituted or Supplemental Water delivered or substituted to, for, or taken by such Producer in-lieu of his cost of otherwise normally producing a like amount of Ground Water.

(k) Judgment -- Judgment entered in Los Angeles Superior Court Civil Action No. 924128, entitled "Upper San Gabriel Valley Municipal Water District v. City of

Alhambra, et al," as amended.

(l) Key Well -- Baldwin Park Key Well, being elsewhere designated as State Well No. 1S/10W-7R2, or Los Angeles County, Department of Public Works, Well No. 3030-F. Said well has a ground surface elevation of 386.7.

(m) Long Beach Case -- Los Angeles Superior Court Case No. 722647, entitled "The Board of Water Commissioners of the City of Long Beach, et al, v. San Gabriel Valley Water Company, et al."

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

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

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

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

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

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

(t) Overlying Rights -- The right to Produce water from the Basin for use on Overlying Lands, which rights are exercisable only on specifically defined Overlying Lands and which cannot be separately conveyed or transferred apart therefrom.

(u) Physical Solution -- The Court-decreed method of managing the waters of the Basin so as to achieve the maximum utilization of the Basin and its water supply, consistent with the rights declared in the Judgment.

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

(w) Produce or Producing -- To Pump or Divert water from the Basin.

(x) Producer -- A Party who Produces water from the Basin.

(y) Production -- The annual quantity of water Produced from the Basin, stated in acre-feet.

(z) Pump or Pumping -- To extract ground water from the Basin by Pumping or by any other method.

(aa) Pumper -- A Party who Pumps water.

(bb) Pumper's Share -- A Pumper's right to a percentage of the entire Natural Safe Yield, Operating Safe Yield and appurtenant Ground Water storage of the Basin.

(cc) Reclaimed Water -- Water which, as a result of treatment of waste, is suitable for a direct beneficial use or a controlled use that would not otherwise occur.

(dd) Relevant Watershed -- That portion of the San Gabriel River Watershed tributary to Whittier Narrows which is shown as such on Exhibit "A" to the Judgment and

the exterior boundaries of which are described in Exhibit "B" of the Judgment.

(ee) Replacement Water -- Water purchased by Watermaster to replace: (1) Production in excess of a Pumper's Share of Operating Safe Yield; (2) the consumptive use portion resulting from the exercise of an Overlying Right; and (3) Production in excess of a Diverter's right to Divert for Direct Use.

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

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

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

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

(gg) Stored Water -- Supplemental Water stored in the Basin pursuant to a Cyclic Storage Agreement with Watermaster as authorized by Section 34(n) of the Judgment herein.

(hh) Supplemental Water -- Nontributary water imported through a Responsible Agency and Reclaimed Water.

(ii) Transporting Parties -- Any Party who has transported water from the Relevant Watershed or Basin to an area outside thereof within the Year immediately preceding the entry of Judgment, and any Party presently or hereafter having an interest

in lands or having a service area outside the Basin or Relevant Watershed contiguous to lands in which it has an interest or a service area within the Basin or Relevant Watershed. Division by a road, highway, or easement shall not interrupt contiguity. Said term shall also include the City of Sierra Madre, or any Party supplying water thereto, so long as the corporate limits of said City are included within one of the Responsible Agencies.

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

(kk) Year -- A calendar year, unless the context clearly indicates a contrary meaning.

The following are supplemental definitions relating to Section 28 of these rules and regulations.

(ll) New Extraction -- Any extraction from the Main San Gabriel Basin using a well or other Ground Water extraction facility that becomes active for the first time for water supply purposes on or after June 28, 1991.

(mm) Increased Extraction (Decreased) -- Any modification to an existing well or extraction facility that physically increases (or decreases) the Effective Extraction Capacity of that well or extraction facility. Such modifications may include: (1) changing the well depth, (2) modifying the perforation intervals, (3) modifying the pump and/or motor, (4) installing or modifying distribution pipelines, (5) installing or modifying booster pumps, and (6) installing or modifying other distribution system components. Normal maintenance work would be excluded.

(nn) Effective Extraction Capacity -- The actual capacity of a well or extraction facility to extract Ground Water from the Basin using the pumping equipment and system

appurtenances in good working order as they existed on June 28, 1991.

(oo) Treatment Facility -- Any facility that provides treatment for contaminated Ground Water in order to meet drinking water standards.

(pp) Planned Treatment -- A specific Treatment Facility with a designated source of Ground Water supply and schedule for development.

(qq) Active Well -- Any well used or that could be used without modifications to extract Ground Water.

(rr) Inactive Well -- Any well that is not in service at the time of filing of an application hereinunder.

(ss) Abandoned Well -- A well that has been abandoned in accordance with the provisions of state, county or local laws and regulations.

(tt) High-level Degradation and Contamination -- Ground Water containing contaminants in excess of the federal or state maximum contaminant level. Some areas of the Basin contain higher contaminant concentrations than others and Treatment Facilities shall be planned to extract Ground Water from the higher level areas of contamination in the Basin.

APPENDIX "B"

SUMMARY OF CRITICAL DATES AND ACTIONS FOR WATERMASTER

This summary of critical dates and actions for Watermaster is presented for the convenience of Watermaster members, the Parties and others in carrying out the provisions of the Court Judgment. It does not necessarily include all critical dates and actions under the Judgment.

SUMMARY OF CRITICAL DATES AND ACTIONS FOR WATERMASTER

1. Watermaster members' terms of office.

January 1 - December 31.

2. Watermaster's first meeting in January.

(a) Election of Watermaster Chairman and Vice-Chairman (from Watermaster membership) and selection of Secretary, Treasurer and assistants (who may, but need not, be Watermaster members). Watermaster Rules and Regulations, Section 6 (R/R 6)

(b) Order Engineering Report for Preliminary Determination of Operating Safe Yield. (R/R 14(a))

3. January 31 - Quarterly Reports, as required by the Rules and Regulations, of Production (R/R 13), Cyclic Storage (R/R 26(h)) and data required by Section 28 (d), due to Watermaster.

4. March - Receive San Gabriel River Watermaster Report.

5. Watermaster's first meeting in April.

Watermaster shall make a Preliminary Determination of the Operating Safe Yield of the Basin for the next five Fiscal Years and mail a copy thereof to all Parties at least ten (10) days prior to a hearing thereon and which said hearing shall commence at Watermaster's first meeting in May. (R/R 14(a))

6. April 30 - Quarterly Reports, as required by the Rules and Regulations, of Production (R/R 13), Cyclic Storage (R/R 26(h)) and data required by Section 28 (d), due to Watermaster.

7. Watermaster's first meeting in May.

(a) Hearing on Preliminary Determination for Watermaster to make Final

Determination of Operating Safe Yield. (R/R 14(b))

Within thirty (30) days of the Final Determination of the Operating Safe Yield a copy of the Final Report and Determination must be mailed to each Pumper and Integrated Producer, including a statement of their entitlements under such Determination. (R/R 14(c))

(b) Budget.

Adopt a proposed Administration Budget for the succeeding Fiscal Year and within fifteen (15) days mail a copy thereof together with a statement of the level of the Administration Assessment levied by Watermaster which will be collected for purposes of raising the necessary funds for said budget. (R/R 18(a))

(c) Assessments.

In addition to the Administration Assessment, Watermaster shall levy the Replacement Water Assessment, Make-up Obligation Assessment and the In-lieu Water Assessments, if any. (R/R 19)

8. June 1 - Watermaster to supply Producers with projections of contaminant migration by June 1. (R/R 28(g))

9. July - Authorize preparation of Annual Watermaster Report. Receive tentative budget from San Gabriel River Watermaster.

10. July 31 - Quarterly Reports, as required by the Rules and Regulations, of Production (R/R 13), Cyclic Storage (R/R 26(h)) and data required by Section 28 (d), due to Watermaster. Producers of potable water from the Basin must submit to Watermaster the data required by Section 28(g).

11. August 15 - On or before this date Watermaster must give written notice of all applicable Assessments to all Parties. (R/R 19)

12. September 20 - All Assessments payable to Watermaster. (R/R 19(a))

13. September 30 - Must pay Upper Area share of San Gabriel River Watermaster budget by this date.

14. October 1 - Mail Notice of Nomination Election of Producer representatives to be held at Watermaster's November meeting. (R/R 9(a))

15. October 31 - Quarterly Reports, as required by the Rules and Regulations, of Production (R/R 13), Cyclic Storage (R/R 26(h)) and data required by Section 28 (d), due to Watermaster.

16. November

(a) Watermaster Annual Report filed with the Court and copies mailed to each Party by November 1. (R/R 24)

(b) Draft Annual Five-Year Water Quality and Supply Plan under Section 28 (g) to be filed with the Los Angeles Regional Quality Control Board and circulated for public review and comment by November 1.

(c) Prior to Watermaster's meeting in November, nomination of Public Representatives to Watermaster by Upper District and San Gabriel District.

(d) Watermaster's meeting in November--election of six Producer Representatives for nomination to Watermaster. (R/R 9(b)) Petition Court for confirmation of nominees and give notice of hearing on Petition to all Parties.

Within ninety (90) days of a vacancy on Watermaster, it shall be filled by nomination by Upper District or San Gabriel District if for a Public Representative and by a special election at a Watermaster meeting for a Producer Representative, after notice thereof to all Parties, and Watermaster Petition (and notice thereof to all parties) for Court confirmation of nominee. (R/R 10)

PERMANENT TRANSFER OF WATER RIGHTS - PRESCRIPTIVE PUMPING RIGHT

For a valuable consideration, receipt of which is hereby acknowledged, _____, ("Seller") does hereby assign and transfer in perpetuity to _____, ("Buyer") all rights to the quantity of _____ acre-feet of the "Prescriptive Pumping Right" and the appropriate % of "Pumper's Share" adjudicated to Seller or his predecessor in the Judgement in the case of "Upper San Gabriel Valley Municipal Water District, v. City of Alhambra, et al," Los Angeles Superior Court No. 924128, together with all the attendant rights, powers and privileges pertaining thereto.

(Check appropriate provision)

This transfer does [ ] does not [ ] include _____ acre-feet of "carry-over of unused rights" associated with said transferred rights and in existence on the date hereof.

DATED: _____

BUYER	SELLER
_____	_____
_____	_____
_____	_____
_____	_____
(Signature)	(Signature)
Name of Designee (of Buyer) to receive service of Processes & Notices:	Name of Designee (of Seller) to receive service of Processes & Notices:
_____	_____
_____	_____
_____	_____
Address	Address
Telephone No.: _____	Telephone No.: _____

To be executed by both Buyer and Seller and, if separately requested by Watermaster, be accompanied by a map of the service area where the water was used by Seller and a map of the service area where the water is intended to be used by the Buyer.

(Have the appropriate individual(s) or corporate attached acknowledgments completed by both Buyer and Seller as part of the transfer)

A TRUE COPY HEREOF MUST BE FILED WITH WATERMASTER WITHIN 15 DAYS OF EXECUTION.

(To be accompanied by completed Exhibit "E" if Buyer is not a party to the Judgment)

EXHIBIT "A"

CORPORATE ACKNOWLEDGMENT

STATE OF CALIFORNIA)
COUNTY OF LOS ANGELES) ss.

On this _____ day of _____, 199__, before me, the undersigned Notary Public, personally appeared

_____,
_____ known to me
_____ proved to me on the basis of satisfactory evidence to be the person(s) who executed the within Instrument as

_____,
or on behalf of the Corporation therein named and acknowledged to me that the Corporation executed it.

WITNESS my hand and official seal.

Signature _____

_____
Name (Typed or Printed)
Notary Public in and for said
County and State

(SEAL)

INDIVIDUAL(s) ACKNOWLEDGMENT

STATE OF CALIFORNIA)
COUNTY OF LOS ANGELES) ss.

On this _____ day of _____, 199__ before me, the undersigned Notary Public, personally appeared

_____,
_____ known to me
_____ proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) _____ subscribed to the within instrument and acknowledged to me that _____ executed the same.

WITNESS my hand and official seal.

Signature _____

_____
Name (Typed or Printed)
Notary Public in and for said
County and State

(SEAL)

PERMANENT TRANSFER OF WATER RIGHTS - BASE ANNUAL DIVERSION RIGHT

For a valuable consideration, receipt of which is hereby acknowledged, _____, ("Seller") does hereby assign and transfer in perpetuity to _____, ("Buyer") all rights to the quantity of _____ acre-feet of the "Base Annual Diversion Right" adjudicated to Seller or his predecessor in the Judgement in the case of "Upper San Gabriel Valley Municipal Water District, v. City of Alhambra, et al," Los Angeles Superior Court No. 924128, together with all the attendant rights, powers and privileges pertaining thereto.

DATED: _____

BUYER	SELLER
_____	_____
_____	_____
_____	_____
_____ (Signature)	_____ (Signature)
Name of Designee (of Buyer) to receive service of Processes & Notices:	Name of Designee (of Seller) to receive service of Processes & Notices:
_____	_____
_____	_____
_____ Address	_____ Address
Telephone No.: _____	Telephone No.: _____

To be executed by both Buyer and Seller and, if separately requested by Watermaster, be accompanied by a map of the service area where the water was used by Seller and a map of the service area where the water is intended to be used by the Buyer.

(Have the appropriate individual(s) or corporate attached acknowledgments completed by both Buyer and Seller as part of the transfer)

A TRUE COPY HEREOF MUST BE FILED WITH WATERMASTER WITHIN 15 DAYS OF EXECUTION.

(To be accompanied by completed Exhibit "E" if Buyer is not a party to the Judgment)

EXHIBIT "B"

CORPORATE ACKNOWLEDGMENT

STATE OF CALIFORNIA)
COUNTY OF LOS ANGELES) ss.

On this _____ day of _____, 199__, before me, the undersigned Notary Public, personally appeared

_____,
_____ known to me
_____ proved to me on the basis of satisfactory evidence to be the person(s) who executed the within Instrument as

_____,
or on behalf of the Corporation therein named and acknowledged to me that the Corporation executed it.

WITNESS my hand and official seal.

Signature _____

_____
Name (Typed or Printed)
Notary Public in and for said
County and State

(SEAL)

INDIVIDUAL(s) ACKNOWLEDGMENT

STATE OF CALIFORNIA)
COUNTY OF LOS ANGELES) ss.

On this _____ day of _____, 199__ before me, the undersigned Notary Public, personally appeared

_____,
_____ known to me
_____ proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) _____ subscribed to the within instrument and acknowledged to me that _____ executed the same.

WITNESS my hand and official seal.

Signature _____

_____
Name (Typed or Printed)
Notary Public in and for said
County and State

(SEAL)

PERMANENT TRANSFER OF WATER RIGHTS - INTEGRATED PRODUCTION RIGHT

For a valuable consideration, receipt of which is hereby acknowledged, _____, ("Seller") does hereby assign and transfer in perpetuity to _____, ("Buyer") all rights to the quantity of _____ acre-feet of the "Prescriptive Pumping Component" and the appropriate % of "Pumper's Share" together with _____ acre-feet of "Diversion Component" adjudicated to Seller or his predecessor in the Judgement in the case of "Upper San Gabriel Valley Municipal Water District, v. City of Alhambra, et al," Los Angeles Superior Court No. 924128, together with all the attendant rights, powers and privileges pertaining thereto.

(Check appropriate provision)

This transfer does [ ] does not [ ] include _____ acre-feet of "carry-over of unused rights" associated with said transferred rights and in existence on the date hereof.

DATED: _____

BUYER	SELLER
_____	_____
_____	_____
_____	_____
_____ (Signature)	_____ (Signature)
Name of Designee (of Buyer) to receive service of Processes & Notices:	Name of Designee (of Seller) to receive service of Processes & Notices:
_____	_____
_____	_____
_____ Address	_____ Address
Telephone No.: _____	Telephone No.: _____

To be executed by both Buyer and Seller and, if separately requested by Watermaster, be accompanied by a map of the service area where the water was used by Seller and a map of the service area where the water is intended to be used by the Buyer.

(Have the appropriate individual(s) or corporate attached acknowledgments completed by both Buyer and Seller as part of the transfer)

A TRUE COPY HEREOF MUST BE FILED WITH WATERMASTER WITHIN 15 DAYS OF EXECUTION.

(To be accompanied by completed Exhibit "E" if Buyer is not a party to the Judgment)

EXHIBIT "C"

CORPORATE ACKNOWLEDGMENT

STATE OF CALIFORNIA)
COUNTY OF LOS ANGELES) ss.

On this _____ day of _____, 199__, before me, the undersigned Notary Public, personally appeared

_____,
_____ known to me
_____ proved to me on the basis of satisfactory evidence to be the person(s) who executed the within Instrument as

_____,
or on behalf of the Corporation therein named and acknowledged to me that the Corporation executed it.

WITNESS my hand and official seal.

Signature _____

_____
Name (Typed or Printed)
Notary Public in and for said
County and State

(SEAL)

INDIVIDUAL(s) ACKNOWLEDGMENT

STATE OF CALIFORNIA)
COUNTY OF LOS ANGELES) ss.

On this _____ day of _____, 199__ before me, the undersigned Notary Public, personally appeared

_____,
_____ known to me
_____ proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) _____ subscribed to the within instrument and acknowledged to me that _____ executed the same.

WITNESS my hand and official seal.

Signature _____

_____
Name (Typed or Printed)
Notary Public in and for said
County and State

(SEAL)

TEMPORARY ASSIGNMENT OR LEASE OF WATER RIGHT

For a valuable consideration, receipt of which is hereby acknowledged, _____,

("Assignor") does hereby assign and transfer to _____, ("Assignee") commencing

on_____ and terminating on _____, the following water right(s):

(Check the following appropriate category)

[ ] Production Right _____AF

[ ] Prescriptive Pumping Right _____AF

[ ] Base Annual Diversion Right _____AF

[ ] Integrated Production Right (consisting of _____ acre-feet of "Prescriptive Pumping Component" and _____ acre-feet of "Diversion Component")

[ ] Carry-over Right _____AF

adjudicated to Assignor or his predecessor in the Judgment in the case of "Upper San Gabriel Valley Municipal Water District v. City of Alhambra, et al," Los Angeles Superior Court No. 924128.

Said assignment is made upon condition that:

(1) Assignee shall exercise said right on behalf of Assignor for the period described hereinabove and the first water produced by Assignee from the Relevant Watershed of the Main San Gabriel Basin after the date hereof shall be that produced hereunder;

(2) Assignee shall put all waters utilized pursuant to said transfer to reasonable beneficial use; and

(3) Assignee shall pay all Watermaster assessments on account of the water production hereby assigned or leased.

DATED:_____

ASSIGNEE	ASSIGNOR
_____	_____
_____	_____
_____	_____
(Signature)	Signature
Name of Designee (of Assignee) to receive service of Processes & Notices:	Name of Designee (of Assignor) to receive service of Processes & Notices:
_____	_____
_____	_____
_____	_____
Address	Address
Telephone No. of Designee:_____	Telephone No. of Designee:_____

To be executed by both Assignee and Assignor and, if separately requested by Watermaster, be accompanied by a map of the service area where the water was used by Assignor and a map of the service area where the water is intended to be used by the Assignee.

(Have the appropriate individual(s) or corporate attached acknowledgments completed as part of the temporary transfer)

A TRUE COPY HEREOF MUST BE FILED WITH WATERMASTER WITHIN 15 DAYS OF EXECUTION.
(To be accompanied by completed Exhibit "E" if Assignee is not a party to the Judgment)

CORPORATE ACKNOWLEDGMENT

STATE OF CALIFORNIA)
COUNTY OF LOS ANGELES) ss.

On this _____ day of _____, 199__, before me, the undersigned Notary Public, personally appeared

_____,
_____ known to me
_____ proved to me on the basis of satisfactory evidence to be the person(s) who executed the within Instrument as

_____,
or on behalf of the Corporation therein named and acknowledged to me that the Corporation executed it.

WITNESS my hand and official seal.

Signature _____

_____
Name (Typed or Printed)
Notary Public in and for said
County and State

(SEAL)

INDIVIDUAL(s) ACKNOWLEDGMENT

STATE OF CALIFORNIA)
COUNTY OF LOS ANGELES) ss.

On this _____ day of _____, 199__ before me, the undersigned Notary Public, personally appeared

_____,
_____ known to me
_____ proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) _____ subscribed to the within instrument and acknowledged to me that _____ executed the same.

WITNESS my hand and official seal.

Signature _____

_____
Name (Typed or Printed)
Notary Public in and for said
County and State

(SEAL)

Attorney for Watermaster

SUPERIOR COURT OF THE STATE OF CALIFORNIA

FOR THE COUNTY OF LOS ANGELES

UPPER SAN GABRIEL VALLEY MUNICIPAL WATER DISTRICT, Plaintiff, v. CITY OF ALHAMBRA, ET AL., Defendants.	NO. 924128 STIPULATION RE INTERVENTION AFTER JUDGMENT OF _____ as Defendant(s)

IT IS HEREBY STIPULATED by and between the Main San Gabriel Basin Watermaster for and on behalf of all parties to the instant action (pursuant to Section 57 of the amended Judgment) and _____ _____ the proposed Intervenor(s) herein, that said proposed Intervenor(s) may intervene in the instant action and become entitled to all of the benefits and bound by all of the burdens of the Judgment herein.

The Court will consider the attached proposed Order confirming said Intervention at _____ o'clock ___M on _____ 199__, in Department _____ located at _____ _____

Watermaster shall give at least 30 days notice to the parties herein of said hearing.

DATED:_____ Watermaster

By_____
Chairman

Attest:

_____
Secretary

DATED:_____ Intervenor(s)

_____

By_____

By_____

Name of Intervenor's Designee:

_____

Address of Designee:

_____

_____

Telephone Number of Designee:

_____

SUPERIOR COURT OF THE STATE OF CALIFORNIA

FOR THE COUNTY OF LOS ANGELES

UPPER SAN GABRIEL VALLEY MUNICIPAL WATER DISTRICT, Plaintiff, v. CITY OF ALHAMBRA, ET AL., Defendants.	NO. 924128 DESIGNEE TO RECEIVE FUTURE NOTICES FOR AND ON BEHALF OF DEFENDANT(S) _____

Defendant(s) _____ hereby designate(s): _____ whose address is: _____ and whose telephone number is _____ as said defendant's Designee to receive service of all future notices, determinations, requests, demands, objections, reports and other papers and processes to be served upon said defendant(s) or delivered to said defendant(s) herein.

A copy hereof has been served upon the Watermaster herein, by mail, on _____, 199___.

Executed under penalties of perjury at _____ California, this _____ day of _____, 199____.

_____

_____

Exhibit "F"

NOTICE OF TRANSFER OF OVERLYING RIGHTS WITH PROPERTY TO WHICH THEY ARE APPURTENANT

On _____, 19___, the undersigned (or his predecessor), adjudged Overlying Rights on the property described in Exhibit 1 attached hereto and by this inference incorporated herein, in the case of "UPPER SAN GABRIEL VALLEY MUNICIPAL WATER DISTRICT, v. CITY OF ALHAMBRA, ET AL," Los Angeles Superior Court No. 924128, transferred said property and said Overlying Rights appurtenant thereto to _____, whose address is _____, and whose telephone number is _____.

That said transferee hereby names _____ whose address is _____ and whose telephone number is _____ as his/her Designee to receive all future notices and processes in said action.

DATED_____

BUYER	SELLER
_____	_____
_____	_____
_____	_____

To be executed by both Buyer and Seller and, if separately requested by Watermaster, be accompanied by a map of the service area where the water was used by Seller and a map of the service area where the water is intended to be used by Buyer.

(Have the appropriate individual(s) or corporate attached acknowledgements completed as part of the transfer, and include Exhibit 1)

A TRUE COPY HEREOF MUST BE FILED WITH WATERMASTER WITHIN 15 DAYS OF EXECUTION

(To be accompanied by completed Exhibit "E" if Buyer is not a party to the Judgment)

Exhibit "G"

CORPORATE ACKNOWLEDGMENT

STATE OF CALIFORNIA)
COUNTY OF LOS ANGELES) ss.

On this _____ day of _____, 199__, before me, the undersigned Notary Public, personally appeared

_____,
_____ known to me
_____ proved to me on the basis of satisfactory evidence to be the person(s) who executed the within Instrument as

_____,
or on behalf of the Corporation therein named and acknowledged to me that the Corporation executed it.

WITNESS my hand and official seal.

Signature _____

_____
Name (Typed or Printed)
Notary Public in and for said
County and State

(SEAL)

INDIVIDUAL(s) ACKNOWLEDGMENT

STATE OF CALIFORNIA)
COUNTY OF LOS ANGELES) ss.

On this _____ day of _____, 199__ before me, the undersigned Notary Public, personally appeared

_____,
_____ known to me
_____ proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) _____ subscribed to the within instrument and acknowledged to me that _____ executed the same.

WITNESS my hand and official seal.

Signature _____

_____
Name (Typed or Printed)
Notary Public in and for said
County and State

(SEAL)

Mailing Address:
25 East Huntington Drive
Monrovia, CA 91016

MAIN SAN GABRIEL BASIN WATERMASTER

SUPERIOR COURT CASE NO. 924128-LOS ANGELES COUNTY

(State Well Number)
(Recordation Number)
(Owner's Designation)
(To Be Completed by Watermaster)

APPLICATION TO DRILL WATER WELL

(1) APPLICANT:
Name_____
Address_____

(2) LOCATION OF PROPOSED WELL:
*Well Address:*_____
*Township, Range, and Section*_____
*Thomas Brothers Guide (Please indicate year, page number and coodinates.)*_____

*Assessors Parcel No.*_____
(Please attach copy of a map or sketch showing well location relative to streets or other major landmarks.)

(3) NAME OF WELL DRILLING CONTRACTOR: _____

(4) PROPOSED USE:
Municipal [ ] Irrigation [ ]
Domestic [ ] Industrial [ ]
Water Quality Cleanup [ ]
Other [ ]

(5) DRILLING EQUIPMENT:
Rotary [ ]
Cable [ ]
Other [ ]_____

(6) PROPOSED WELL CHARACTERISTICS:
A. Casing Installed:
STEEL [ ] PLASTIC [ ]
OTHER [ ]

Gravel Packed:
Yes [ ] No [ ] Size_____

From ft.	To ft.	Diam.	Gage or Wall	Diameter of Bore	Packed From ft.	Packed To ft.

Size of shoe or well ring:____
Describe joint_____
B. Perforations or Screen:
Type of perforation or size of screen

From ft.	To ft.	Perf. per row	Rows per ft.	Slot Size

C. Construction:
Will a surface sanitary seal be provided? Yes [ ] No [ ]
To what depth? _____ ft.
Is any strata anticipated to be sealed against pollution?
Yes [ ] No [ ]
If yes, note anticipated depth of strata
from _____ ft. to _____ ft.
from _____ ft. to _____ ft.
Proposed method of sealing_____

(7) WELL TESTS:
Will a pump test be made? Yes [ ] No [ ] If yes by whom?
_____
Anticipated Well Yield_____
Will a chemical analysis be made? Yes [ ] No [ ]
Will an electric log be made of well? Yes [ ] No [ ]
(If yes, file copy with Watermaster upon well completion)

(8) PROPOSED PUMPING EQUIPMENT:
(A) Pump
Electric [ ] Natural Gas [ ]
Propane [ ] Diesel [ ]
Other [ ] _____
(B)Make_____
(C) Pump Size (hp)_____(gpm)_____
(D) Design Efficiency_____

(9) PROXIMITY TO POTENTIAL SOURCES OF CONTAMINATION:
(A) Distance to nearest sewer line or septic tank _____ (ft.)
(B) Wells (Please provide distance, direction and name of nearest upgradient well(s) with volatile organic chemical or nitrate levels above a maximum contaminant level, if known.)
_____
_____
_____

(10) Please provide copy of County of Los Angeles permits and State Department of Water Resources Water Well Driller Reports and any other permits for construction of a new well upon completion of proposed well.

(11) Please provide Watermaster with copies of all feasibility studies, alternative water supply sources, water quality studies or other reports which validate the Applicant's need to drill a new well. Applicant must provide supporting data to show compliance with the requirements of Section 28 with particular reference to Section 28(e) of Watermaster's Rules and Regulations.

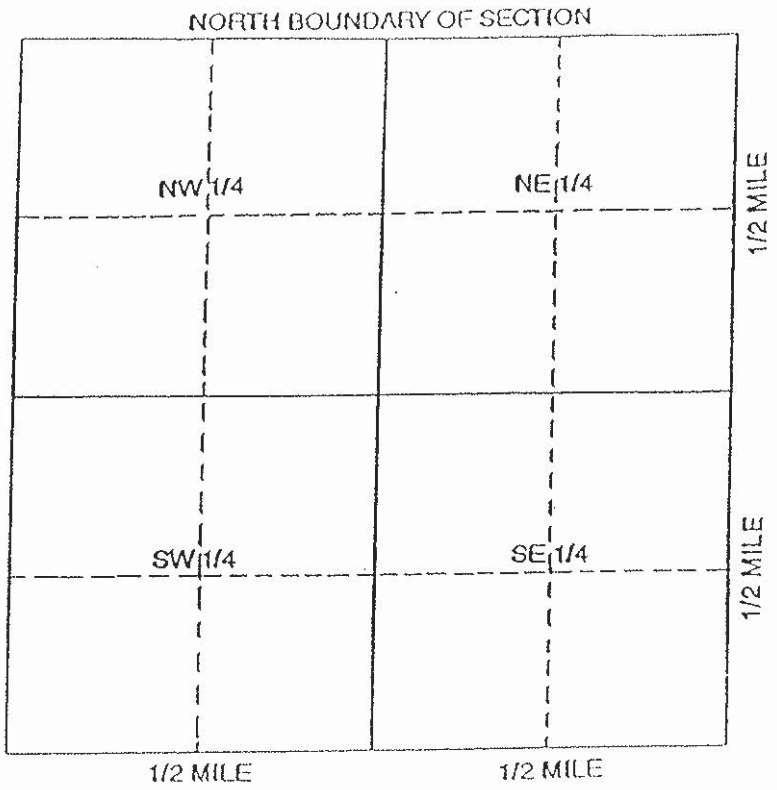
I hereby agree to comply with all regulations of the Main San Gabriel Basin Watermaster pertaining to well construction, operation, repair, modification, destruction and inactivation. The applicant will furnish the Watermaster a complete well log upon completion of well construction.

Submitted for Applicant by:_____
_____
Signature: _____
Title:_____
Date: _____
Date Received by Watermaster: _____

Watermaster Action:
Approved [ ] Denied [ ]
Date of Action: _____
Permit Number:_____
By:_____
(Name)
_____
(Title)

EXHIBIT "H"
H-1

WELL LOCATION SKETCH

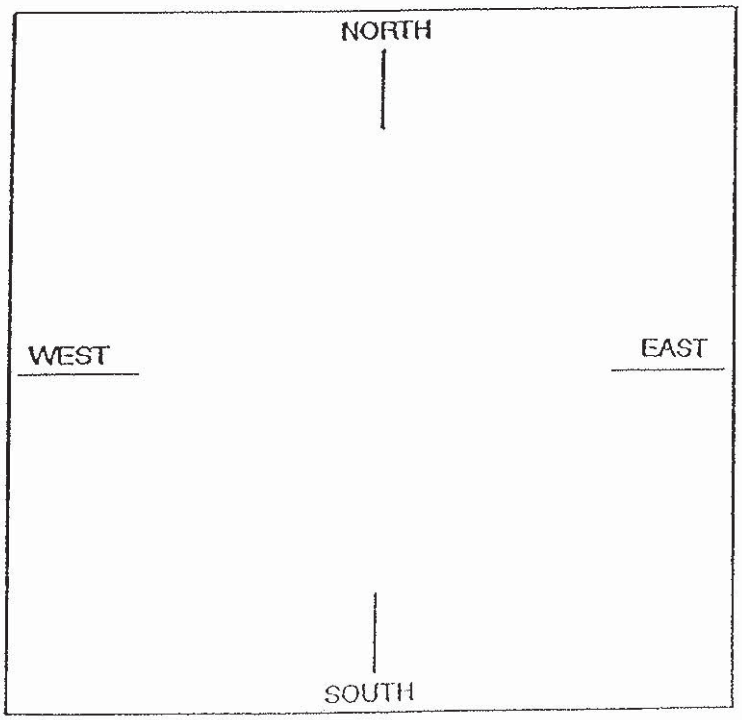


Township _____ N/S

Range _____ E/W

Section No. _____

A. Location of well in sectionized areas.
Sketch roads, railroads, streams, or other features as necessary.



B. Location of well in areas not sectionized.
Sketch roads, railroads, streams, or other features as necessary.
Indicate distances.

Mailing Address:
425 East Huntington Drive
Monrovia, CA 91016

MAIN SAN GABRIEL BASIN WATERMASTER

SUPERIOR COURT CASE NO. 924128-LOS ANGELES COUNTY

(State Well Number)

(Recordation Number)

(Owner's Designation)

APPLICATION TO MODIFY EXISTING WATER WELL

(1) APPLICANT:
Name_____
Address_____

(2) LOCATION OF WELL:
*Well Address:*_____
*Township, Range, and Section*_____
*Thomas Brothers Guide (Please indicate year, page number and coordinates.)*_____
*Assessor's Parcel No.*_____
(Please attach copy of a map or sketch showing well location relative to streets or other major landmarks.)

(3) NAME OF WELL DRILLING CONTRACTOR:_____

(4) TYPE OF WORK (check):
Deepening [ ] Modify Perforations [ ] Increase Yield [ ]
Reconditioning [ ] Other [ ]

(5) PROPOSED USE (check):
Municipal [ ] Irrigation [ ]
Domestic [ ] Industrial [ ]
Water Quality Cleanup [ ]
Other [ ]

(6) DRILLING EQUIPMENT:
Rotary [ ]
Cable [ ]
Other [ ]

(7A) CASING INSTALLED (existing):
STEEL [ ] PLASTIC [ ]
OTHER [ ]
Gravel Packed:
Yes [ ] No [ ] Size_____

From ft.	To ft.	Diam.	Gage or Wall	Diameter of Bore	Packed From ft.	Packed To ft.

Size of shoe or weld ring:____
Describe joint_____

(7B) CASING INSTALLED (proposed):
STEEL [ ] PLASTIC [ ]
OTHER [ ]
Gravel Packed:
Yes [ ] No [ ] Size_____

From ft.	To ft.	Diam.	Gage or Wall	Diameter of Bore	Packed From ft.	Packed To ft.

Size of shoe or weld ring:____
Describe joint_____

(8A) PERFORATIONS OR SCREEN (existing):
Type of perforation or size of screen

From ft.	To ft.	Perf. per row	Rows per ft.	Slot Size

(8B) PERFORATIONS OR SCREEN (proposed):
Type of perforation or size of screen

From ft.	To ft.	Perf. per row	Rows per ft.	Slot Size

(9A) EXISTING CONSTRUCTION:
Was a surface sanitary seal provided? Yes [ ] No [ ]
To what depth? _____ ft.
Were any strata sealed against pollution? Yes [ ] No [ ]
If yes, note depth of strata
from _____ ft. to _____ ft.
from _____ ft. to _____ ft.
Method of sealing_____

(9B) PROPOSED CONSTRUCTION:
Will a surface sanitary seal be provided? Yes [ ] No [ ]
To what depth? _____ ft.
Were any strata sealed against pollution? Yes [ ] No [ ]
If yes, note depth of strata
from _____ ft. to _____ ft.
from _____ ft. to _____ ft.
Method of sealing_____

(10) WELL TESTS:
Was pump test made? Yes [ ] No [ ] (If yes, attach most recent copy)
_____gal./min. with _____ft. drawdown after_____hrs.
Temperature of water_____
Was a chemical analysis made? Yes [ ] No [ ]
Was electric log made of well? Yes [ ] No [ ]
(If yes, attach most recent copy)

(11) WELL LOG:
Total depth _____ft. Depth of completed well _____ft.
Formation: *Describe by color, character, size of material and structure*_____ft. to_____ft.
(Please attach copy of existing well log. If well log is not available, describe well lithology in space provided or on attached page.)

(12) HISTORIC WELL MODIFICATIONS:
(On an attached page, please provide a chronology of all historic well modifications which may have affected well yield or water quality.)

(13A) EXISTING WELL PUMP DATA:
A. Pump Type:
Electric [ ] Natural Gas [ ] Other [ ]
Diesel [ ] Propane [ ]
B. Pump Performance
Horsepower _____GPM_____
Efficiency _____

(13B) PROPOSED WELL PUMP DATA:
A. Pump Type:
Electric [ ] Natural Gas [ ] Other [ ]
Diesel [ ] Propane [ ]
B. Pump Performance
Horsepower_____GPM_____
Efficiency _____

(14) Please provide copy of County of Los Angeles permits and State Department of Water Resources Water Well Drillers Report and any other permits for modification of an existing well upon completion of modification of well.

(15) Please provide Watermaster with copies of all feasibility studies, alternative water supply sources, water quality studies or other reports which validate the Applicant's need to modify this well. Applicant must provide supporting data to show compliance with the requirements of Section 28 with particular reference to Section 28(e) of Watermaster's Rules and Regulations.

I hereby agree to comply with all regulations of the Main San Gabriel Basin Watermaster pertaining to well construction, operation, repair, modification, destruction and inactivation. The Applicant will furnish the Watermaster a complete well log upon completion of well modification.

Submitted for Applicant by: _____

_____

Signature:_____

Title:_____

Date:_____

Date Received by Watermaster: _____

Watermaster Action:
Approved [ ] Denied [ ]

Date of Action:_____

Permit Number: _____

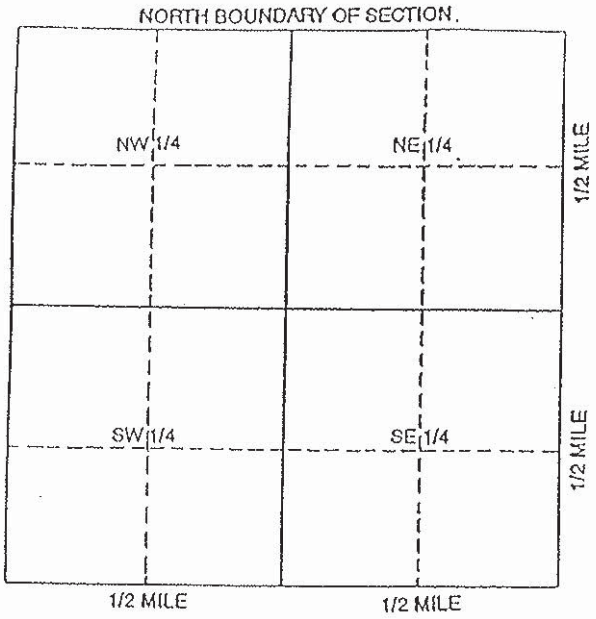
By:_____
(Name)

_____
(Title)

EXHIBIT "I"
I-1

Form No. RR 28-02 7/91

WELL LOCATION SKETCH

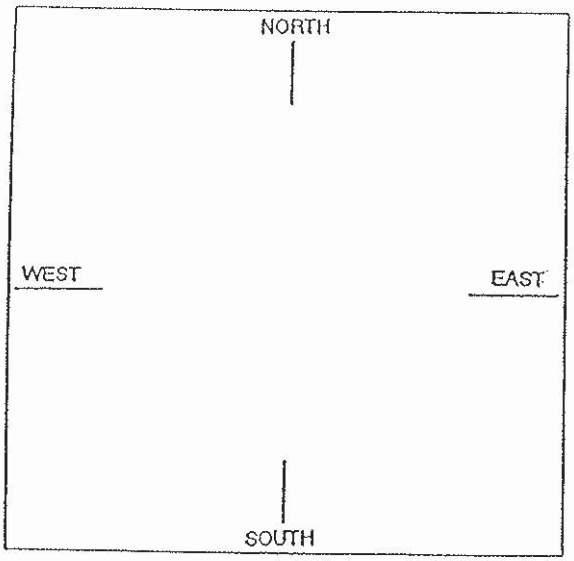


Township _____ N/S

Range _____ E/W

Section No. _____

A. Location of well in sectionized areas.
Sketch roads, railroads, streams, or other features as necessary.



B. Location of well in areas not sectionized.
Sketch roads, railroads, streams, or other features as necessary.
Indicate distances.

Mailing Address:
425 East Huntington Drive
Monrovia, CA 91016

MAIN SAN GABRIEL BASIN WATERMASTER

SUPERIOR COURT CASE NO. 924128-LOS ANGELES COUNTY

(State Well Number)

(Recordation Number)

(Owner's Designation)

APPLICATION TO DESTROY WATER WELL

(1) APPLICANT:
Name_____
Address_____

(2) LOCATION OF WELL:
*Well Address:*_____
*Township, Range, and Section*_____
*Thomas Brothers Guide (Please indicate year, page number and corrdinates.)*_____

*Assessor's Parcel No.*_____
(Please attach copy of a map or sketch showing well location relative to streets or other major landmarks.)

(3) NAME OF WELL DRILLING CONTRACTOR:_____

(4) PURPOSE FOR DESTROYING WELL
Water Quality [ ] Physical [ ]
Other [ ]_____

(5) CURRENT USE:
Municipal [ ] Irrigation [ ]
Domestic [ ] Industrial [ ]
Water Quality Cleanup [ ]
Other [ ]_____

(6) EXISTING CASING INSTALLED:
STEEL [ ] PLASTIC [ ]
OTHER [ ]

Gravel Packed:
Yes [ ] No [ ] Size_____

From ft.	To ft.	Diam.	Gage or Wall	Diameter of Bore	Packed From ft.	Packed To ft.

Size of shoe or well ring:_____
Describe joint_____

(7) EXISTING PERFORATIONS OR SCREEN:
Type of perforation or size of screen

From ft.	To ft.	Perf. per row	Rows per ft.	Slot Size

(8) CONSTRUCTION:
Was a surface sanitary seal provided? Yes [ ] No [ ]
To what depth? _____ ft.
Were any strata sealed against pollution? Yes [ ] No [ ]
If yes, note depth of strata
from _____ ft. to _____ ft.
from _____ ft. to _____ ft.
Method of sealing_____

(9) WELL LOG: (Please provide a copy of well log.)
Total depth _____ ft. Depth of completed well _____ ft.
Formation: *Describe by color, character, size of material and structure if well log cannot be provided.*

_____ ft. to _____ ft.

(10) METHOD OF DESTROYING: (Please provide an explanation of how the well is to be destroyed including drawings showing the proposed method of destroying. Please provide copy of County of Los Angeles permits and State Department of Water Resources Water Well Drillers reports and any other permits for destruction of well following destruction of the well.)

I hereby agree to comply with all regulations of the Main San Gabriel Basin Watermaster pertaining to well construction, operation, repair, modification, destruction and inactivation. The Applicant will notify the Watermaster upon completion of well destruction.

Submitted for Applicant by: _____

Signature: _____

Title: _____

Date: _____

Date Received by Watermaster: _____

Watermaster Action:
Approved [ ] Denied [ ]

Date of Action: _____

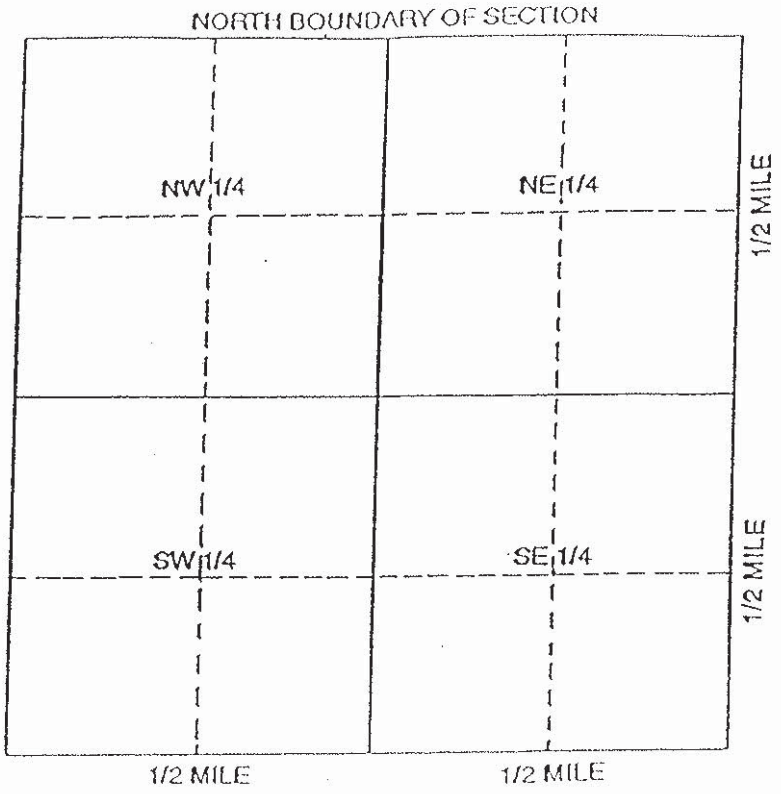
Permit Number: _____

By: _____
(Name)

_____
(Title)

EXHIBIT "J"
J-1

WELL LOCATION SKETCH

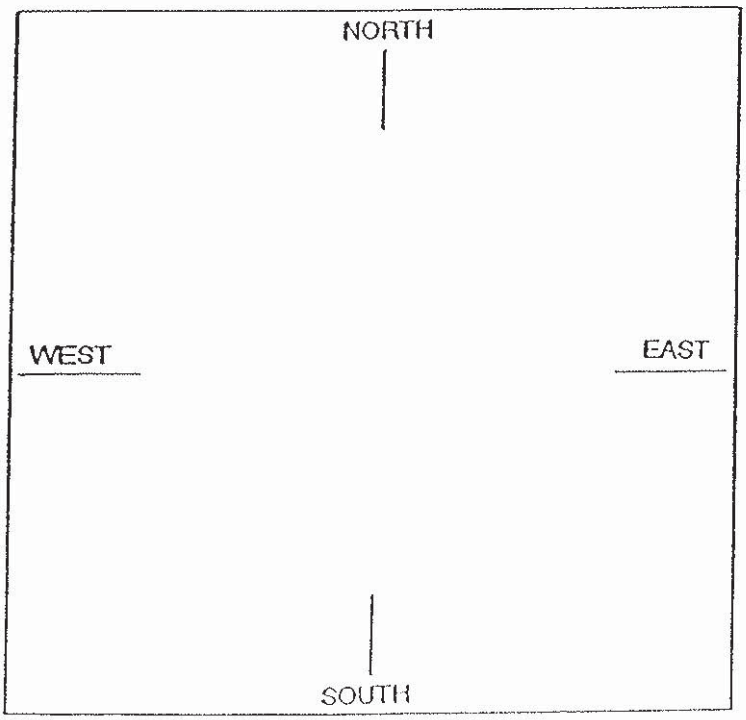


Township _____ N/S

Range _____ E/W

Section No. _____

A. Location of well in sectionized areas.
Sketch roads, railroads, streams, or other features as necessary.



B. Location of well in areas not sectionized.
Sketch roads, railroads, streams, or other features as necessary.
Indicate distances.

Mailing Address:
425 East Huntington Drive
Monrovia, CA 91016

MAIN SAN GABRIEL BASIN WATERMASTER

SUPERIOR COURT CASE NO. 924128-LOS ANGELES COUNTY

APPLICATION FOR WATER TREATMENT FACILITY

(1) APPLICANT:
Name_____
Address_____

(2) LOCATION OF TREATMENT FACILITY:
Address_____

Thomas Brothers Guide (Please indicate year, page number and coordinates.)_____

(Please include a map showing the location of the treatment facility relative to streets, buildings, water system facilities and other points of reference.)

(3) (A) NAME OF WATER TREATMENT FACILITY CONTRACTOR:_____
(B) NAME OF DESIGN ENGINEER AND STATE REGISTRATION NUMBER:_____

(4) PROPOSED ACTION AT TREATMENT FACILITY
Construction [ ] Modification [ ] Removal [ ]
Destruction [ ] Other [ ]

(5) DESCRIPTION OF FACILITY:
(A) Type of treatment:
Volatile Organic Chemical [ ] Nitrate [ ] Other [ ]
(B) Please describe the treatment process to be used at the proposed treatment plant.

(C) Please list, by Owner Designation, all wells to be treated:

(6) ANTICIPATED TREATMENT FACILITY CAPACITY:
_____ Gallons Per Minute
_____ Acre-feet Per Year

(7) EXPECTED CONCENTRATION OF CONTAMINANTS:

Contaminant	Influent Concentration (Parts per Billion)	Effluent Concentration (Parts per Billion)	Contaminant Removal Rate (Percent)
Trichloroethylene (TCE)			
Tetrachloroethylene (PCE)			
1,1,1-Trichloroethane (1,1,1-TCA)			
Carbon Tetrachloride (CTC)			
1,1-Dichloroethylene (1,1-DCE)			
1,1-Dichloroethane (1,1-DCA)			
1,2-Dichloroethane (1,2-DCA)			
Others:			

(8) DISPOSITION OF ALL TREATED WATER:
(Please describe disposition of all treated water, and the corresponding annual amount of discharge.)

(9) INITIAL START-UP DATE:

(10) EXPECTED OPERATING SCHEDULE:
(A) Daily schedule_____
(B) Number of days each month *(Please specify if operating schedule varies month to month)*

(11) EXPECTED COSTS:
(A) Capital cost:$_____
(B) Operation and maintenance:$_____/AF.

(12) REGULATORY PERMITS: Please describe all necessary permits and/or all permits for which you have applied or have received from all regulatory agencies with regard to the proposed treatment facility. Please supply to Watermaster copies of all environmental documents required under the California Environmental Quality Act and/or the National Environmental Protection Act.

(13) Applicant acknowledges it will comply with all portions of Section 28 of Watermaster's Rules and Regulations pertaining to quarterly data submittal, for treatment plant operation, to Watermaster. Specifically, at least the following data shall be provided on a quarterly basis:

- Name or other designation of treatment facility;
- Quantity of water treated during quarter;
- Quantity of each contaminant removed;
- Quality of water before treatment, at beginning and end of each quarter;
- Quality of water after treatment, at beginning and end of each quarter; and
- Operation and maintenance costs for each quarter.

14) Please provide Watermaster with copies of all feasibility studies, alternative water supply sources, water quality studies or other report which validate the Applicant's need to install a water treatment facility. Applicant must provide supporting data to show compliance with the requirements of Section 28 with particular reference to Section 28(h) of Watermaster's Rules and Regulations.

Applicant must provide supporting data to show compliance with the requirements of Section 28 with particular reference to Section 28(h) of Watermaster's Rules and Regulations.

I hereby agree to comply with all regulations of the Main San Gabriel Basin Watermaster pertaining to treatment plant construction, operation, repair, modification, destruction and inactivation.

Submitted For Applicant By:_____

Signature:_____

Title:_____

Date Received by Watermaster:_____

Watermaster Action:
Approved [ ] Denied [ ]

Date of Action:_____

Permit Number:_____

By:_____
(Name)

_____
(Title)

EXHIBIT "K"
K-1

Suburban
Water Systems
A SouthWest Water Company

Appendix I: Central Basin Judgment

Suburban Water Systems | 2020 Urban Water Management Plan

WILLIAM F. KRUSE (CSB # 090231)
LAGERLOF, SENECAL, GOSNEY & KRUSE, LLP
301 N. Lake Avenue, 10th Floor
Pasadena, CA 91101-4108
626/793-9400; FAX 626/793-5900

Attorneys for CITY OF LAKEWOOD,
CITY OF LONG BEACH

SUPERIOR COURT OF THE STATE OF CALIFORNIA

FOR THE COUNTY OF LOS ANGELES

CENTRAL AND WEST BASIN WATER REPLENISHMENT DISTRICT, etc.,

Plaintiff,

vs.

CHARLES E. ADAMS, et al.,

Defendant

CITY OF LAKEWOOD, a municipal corporation,

Cross-Complainant

vs.

CHARLES E. ADAMS, et al.,

Cross-Defendants.

Case No.: 786,656

THIRD AMENDED JUDGMENT

(Declaring and establishing water rights in Central Basin, enjoining extractions therefrom in excess of specified quantities and providing for the storage and extraction of stored water.)

Assigned for all purposes to
Hon. Abraham Khan
Dept. 51

TABLE OF CONTENTS

The original judgment in this action was entered on or about August 27, 1965. Pursuant to the reserved and continuing jurisdiction of the court under the Judgment herein, certain amendments to said Judgment and temporary orders have heretofore been made and entered. Continuing jurisdiction of the court for this action is currently assigned to Hon. Abraham Khan.

The Motion of Plaintiff WATER REPLENISHMENT DISTRICT OF SOUTHERN CALIFORNIA (which originally brought this action under its former name "Central and West Basin Water Replenishment District"), and of defendants, City of Lakewood, City of Long Beach, Golden State Water Company, California Water Service Company, City of Los Angeles, City of Cerritos, City of Downey, City of Signal Hill, Pico Water District, Bellflower-Somerset Mutual Water Company, LaHabra Heights County Water District, City of Norwalk, Orchard Dale Water District, Montebello Land & Water Company, South Montebello Irrigation District, Sativa Los Angeles County Water District, City of Vernon and Central Basin Municipal Water District ("Moving Parties") herein for further amendments to the Judgment, notice thereof and of the hearing thereon having been duly and regularly given to all parties, came on for hearing in Department 51 of the above-entitled court on December 18, 2013 at 9:00 a.m. before said Hon. Abraham Khan. This "Third Amended Judgment" incorporates amendments and orders heretofore made to the extent presently operable and amendments pursuant to said last mentioned motion. To the extent this Amended Judgment is a restatement of the Judgment as heretofore amended, it is for convenience in incorporating all matters in one document, is not a readjudication of such matters and is not intended to reopen any such matters. As used hereinafter the word "Judgment" shall include the original Judgment entered in this action as amended to date, including this Third Amended Judgment.

There exists in the County of Los Angeles, State of California, an underground water basin or reservoir known and hereinafter referred to as the "Central Basin" or "Basin" described in Appendix "1" to this Judgment.

Within this Judgment, the following terms, words, phrases and clauses are used by the Court with the following meanings:

"Adjudicated Storage Capacity" means 220,000 acre-feet of the Available Dewatered

Space which has been apportioned herein for Individual Storage Accounts and Community Storage.

"Administrative Body" is defined in Section II(A).

"Administrative Year" means the twelve (12) month period beginning July 1 and ending June 30.

"Allowed Pumping Allocation" is that quantity in acre feet which the Court adjudges to be the maximum quantity which a party should be allowed to extract annually from Central Basin as set forth in Part I hereof, which constitutes 80% of such party's Total Water Right.

"Allowed Pumping Allocation for a particular Administrative Year" and "Allowed Pumping Allocation in the following Administrative Year" and similar clauses, mean the Allowed Pumping Allocation as increased in a particular Administrative Year by any authorized carryovers pursuant to Section III(A) of this Judgment and as reduced by reason of any over-extractions in a previous Administrative Year.

"Artificial Replenishment" is the replenishment of Central Basin achieved through the spreading or injection of imported or recycled water for percolation thereof into Central Basin by a governmental agency, including WRD.

"Artificial Replenishment Water" means water captured or procured by WRD to replenish the Basin, either directly by percolating or injecting the water into the Basin, or through in lieu replenishment by substituting surface water (or payment therefor) in lieu of production and use of groundwater.

"Available Dewatered Space" means the total amount of space available to hold groundwater within the Central Basin without causing Material Physical Harm, which space is allocated between Adjudicated Storage Capacity and Basin Operating Reserve.

"Base Water Right" is the highest continuous extractions of water by a party from Central Basin for a beneficial use in any period of five consecutive years after the commencement of overdraft in Central Basin and prior to the commencement of this action, as to which there has been no cessation of use by that party during any subsequent period of five consecutive years. As employed in the above definition, the words "extractions of water by a party" and "cessation

of use by that party" include such extractions and cessations by any predecessor or predecessors in interest.

"Basin Operating Reserve" means a total of 110,000 acre feet of Available Dewatered Space available for Basin operations as provided in Section IV(L). The Basin Operating Reserve added to the Adjudicated Storage Capacity equals the amount of Available Dewatered Space.

"Calendar Year" is the twelve month period commencing January 1 of each year and ending December 31 of each year.

"Carryover" is defined in Section III(A).

"Carryover Conversion" means the process of transferring water properly held as Carryover into Stored Water, or the water so converted to Stored Water.

"Central Basin" is the underground basin or reservoir underlying the Central Basin Area, the exterior boundaries of which Central Basin are the same as the exterior boundaries of Central Basin Area.

"Central Basin Area" is the territory described in Appendix "1" to this Judgment and is a segment of the territory comprising Plaintiff District.

"Central Basin Water Rights Panel" means the constituent body of Watermaster consisting of seven (7) Parties elected from among parties holding Allowed Pumping Allocations as provided in Section II(B).

"CEQA" refers to the California Environmental Quality Act, Public Resources Code §§ 21000 *et seq.*

"Community Storage Pool" is defined in Section IV(E).

"Declared Water Emergency" means a period commencing with the adoption of a resolution of the Board of Directors of WRD declaring that conditions within the Central Basin relating to natural and imported supplies of water are such that, without implementation of the water emergency provisions of this Judgment, the water resources of the Central Basin risk degradation. Such Declaration may be made as provided in Section III(A)(3).

"Disadvantaged Community" means any area that is served by a Water Purveyor and that consists of one or more contiguous census tracts which, based upon the most-recent United

States Census data, demonstrates a median household income which is less than eighty percent (80%) of the median household income for all Census Tracts within the state of California. The identification of Disadvantaged Communities shall be made by Watermaster following each decennial census.

"Extraction," "extractions," "extracting," "extracted," and other variations of the same noun and verb, mean pumping, taking, diverting or withdrawing groundwater by any manner or means whatsoever from Central Basin.

"Imported Water" means water brought into Central Basin Area from a non-tributary source by a party and any predecessors in interest, either through purchase directly from Metropolitan Water District of Southern California ("MWD"), the Central Basin Municipal Water District ("CBMWD"), or any other MWD member agency and additionally, as to the Department of Water and Power of the City of Los Angeles, water brought into the Central Basin Area by that party by means of the Owens River Aqueduct. In the case of water imported for storage by a party pursuant to this Judgment, "Imported Water" means water brought into the Central Basin from any non-tributary source as one method for establishing storage in the Central Basin.

"Imported Water Use Credit" is the annual amount, computed on a calendar year basis, of Imported Water which any party and any predecessors in interest, who have timely made the required filings under Water Code Section 1005.1, have imported into Central Basin Area in any calendar year and subsequent to July 9, 1951, for beneficial use therein, but not exceeding the amount by which that party and any predecessors in interest reduces his or their extractions of groundwater from Central Basin in that calendar year from the level of his or their extractions in the preceding calendar year, or in any prior calendar year not earlier than the calendar year 1950, whichever is the greater.

"Individual Storage Allocation" is defined in Section IV(D).

"Majority Protest" means a written protest filed with the Administrative Body of Watermaster within sixty (60) days following a protested event or decision, which evidences the concurrence of a majority of the Allowed Pumping Allocations held within the Basin as of the

date thereof.

"Material Physical Harm" means material physical injury or a material diminution in the quality or quantity of groundwater available within the Basin to support extraction of Total Water Rights or Stored Water, that is demonstrated to be attributable to the placement, recharge, injection, storage or recapture of Stored Water in the Central Basin, including, but not limited to, degradation of water quality, 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. Once fully mitigated, physical injury shall no longer be considered to be material.

"Natural Replenishment" means and includes all processes other than "Artificial Replenishment" by which water may become a part of the groundwater supply of Central Basin.

"Natural Safe Yield" is the maximum quantity of groundwater, not in excess of the long term average annual quantity of Natural Replenishment, which may be extracted annually from Central Basin without eventual depletion thereof or without otherwise causing eventual permanent damage to Central Basin as a source of groundwater for beneficial use, said maximum quantity being determined without reference to Artificial Replenishment.

"Outgoing Watermaster" is the State of California, Department of Water Resources, the Watermaster appointed pursuant to the terms of the Judgment before this Third Amendment.

"Overdraft" is that condition of a groundwater basin resulting from extractions in any given annual period or periods in excess of the long term average annual quantity of Natural Replenishment, or in excess of that quantity which may be extracted annually without otherwise causing eventual permanent damage to the basin.

"Party" means a party to this action. Whenever the term "party" is used in connection with a quantitative water right, or any quantitative right, privilege or obligation, or in connection with the assessment for the budget of the Watermaster, it shall be deemed to refer collectively to those parties to whom are attributed a Total Water Right in Part I of this Judgment.

"Person" or "persons" include individuals, partnerships, associations, governmental

agencies and corporations, and any and all types of entities.

"Recycled Water" means water that has been reclaimed through treatment appropriate for its intended use in compliance with applicable regulations.

"Regional Disadvantaged Communities Incentive Program" means a program to be developed by Watermaster in the manner provided in Section II(H) of this Judgment, and approved by the Court, whereby a portion of the Community Storage Pool is made available to or for the benefit of Disadvantaged Communities, on a priority basis within the Central Basin.

"Replenishment Assessment" means the replenishment assessment imposed by WRD upon each acre-foot of groundwater extracted from the Central Basin pursuant to WRD's enabling act, California Water Code §§ 60000 et seq.

"Small Water Producers Group" means a body consisting of parties holding no greater than 5,000 acre-feet of Allowed Pumping Allocation, as set forth on Appendix 3 hereto and as may be modified from time to time by the Group's own procedures and the requirements set forth in Appendix 3.

"Storage Panel" or "Central Basin Storage Panel" means a bicameral constituent body of Watermaster consisting of (i) the Central Basin Water Rights Panel and (ii) the Board of Directors of WRD.

"Storage Project" means an activity pertaining to the placement, recharge, injection, storage, transfer, or recapture of Stored Water within the Basin, but does not include actions by WRD undertaken in connection with its replenishment activities.

"Stored Water" means water, including Recycled Water, held within Available Dewatered Space as a result of spreading, injection, in-lieu delivery, or Carryover Conversion, where there is an intention to subsequently withdraw the water for reasonable and beneficial use pursuant to this Judgment.

"Total Water Right" is the quantity arrived at in the same manner as in the computation of "Base Water Right," but including as if extracted in any particular year the Imported Water Use Credit, if any, to which a particular party may be entitled.

"Water" includes only non-saline water, which is that having less than 1,000 parts of

chlorides to 1,000,000 parts of water.

"Water Augmentation Project" means pre-approved physical actions and management activities that provide demonstrated appreciable increases in long-term annual groundwater yield in the Basin that are initiated as provided in this Judgment after January 1, 2013.

"Water Purveyor" means a Party (and successors in interest) which sells water to the public, whether a regulated public utility, mutual water company or public entity. As that term is used in Section III(B)(6), "Water Purveyor," in addition to the foregoing, means a Party which has a connection or connections for the taking of Imported Water through the Metropolitan Water District of Southern California ("MWD"), or through a MWD-member agency, or access to such Imported Water through such connection, and which normally supplies at least a part of its customers' water needs with such Imported Water.

"Watermaster" is defined in Part II and is comprised of (i) the Administrative Body, (ii) the Central Basin Water Rights Panel, and (iii) the Central Basin Storage Panel. Watermaster, and the various constituent bodies of Watermaster, as designated in this Judgment, exist as a special master pursuant to this Judgment and Watermaster serves at the pleasure of the Court. Nothing herein shall be construed as creating an independent designation of "Watermaster" as a public agency subject to the provisions of CEQA, nor does membership or participation as the designated Watermaster expand any statutory, constitutional, or other powers of the members serving as part of the Watermaster.

"West Coast Basin" is the groundwater basin adjacent to the Central Basin which is the subject of a separate adjudication of groundwater rights in *California Water Service Company, et al. v. City of Compton, et al.*, Los Angeles Superior Court Case No. 506806.

"WRD" or "Water Replenishment District" is the plaintiff herein, the Water Replenishment District of Southern California, a special district of the State of California, which brought this action under its former name, "Central and West Basin Water Replenishment District."

In those instances where any of the above-defined words, terms, phrases or clauses are utilized in the definition of any of the other above-defined words, terms, phrases and clauses,

such use is with the same meaning as is above set forth.

NOW THEREFORE, IT IS ORDERED, DECLARED, ADJUDGED AND DECREED WITH RESPECT TO THE ACTION AND CROSS-ACTION AS FOLLOWS:

I. DECLARATION AND DETERMINATION OF WATER RIGHTS OF PARTIES; RESTRICTION ON THE EXERCISE THEREOF.[1]

A. Determination of Rights of Parties.

(1) Each party, except defendants The City of Los Angeles and Department of Water and Power of the City of Los Angeles, whose name is set forth in Appendix 2 and by this reference made a part hereof, and after whose name there appears under the column "Total Water Right" a figure other than "0," is the owner of and has the right to extract annually groundwater from Central Basin for beneficial use in the quantity set forth after that party's name under said column "Total Water Right" as of the close of the Administrative Year ending June 30, 2012 in accordance with the Watermaster Reports on file with this Court and the records of the Plaintiff. This tabulation does not take into account additions or subtractions from any Allowed Pumping Allocation of a producer for the 2012-2013 Administrative Year, nor other adjustments not representing change in fee title to water rights, such as leases of water rights, nor does it include the names of lessees of landowners where the lessees are exercising the water rights. The exercise of all water rights is subject, however, to the provisions of this Judgment as hereinafter contained. All of said rights are of the same legal force and effect and are without priority with reference to each other. Each party whose name is set forth in the tabulation in Appendix "2" of this

[1] Headings in the Judgment are for purposes of reference and the language of said headings do not constitute, other than for such purpose, a portion of this Judgment.

Judgment, and after whose name there appears under the column "Total Water Right" the figure "0," owns no rights to extract any groundwater from Central Basin, and has no right to extract any groundwater from Central Basin.

(2) Defendant The City of Los Angeles is the owner of the right to extract fifteen thousand (15,000) acre feet per annum of groundwater from Central Basin, but it has the right and ability to purchase or lease additional rights to extract groundwater and increase its Allowed Pumping Allocation. Defendant Department of Water and Power of the City of Los Angeles has no right to extract groundwater from Central Basin except insofar as it has the right, power, duty or obligation on behalf of defendant The City of Los Angeles to exercise the water rights in Central Basin of defendant The City of Los Angeles. The exercise of said rights is subject, however, to the provisions of this Judgment hereafter contained, including but not limited to, sharing with other parties in any subsequent decreases or increases in the quantity of extractions permitted from Central Basin, pursuant to continuing jurisdiction of the Court, on the basis that fifteen thousand (15,000) acre feet (and any increase in its Allowed Pumping Allocation) bears to the Allowed Pumping Allocations of the other parties.

(3) No party to this action is the owner of or has any right to extract groundwater from Central Basin except as herein affirmatively determined.

B. Parties Enjoined as to Quantities of Extractions.

(1) Each party, other than The State of California and The City of Los Angeles and Department of Water and Power of The City of Los Angeles, is enjoined and restrained in any Administrative Year commencing after the date this Judgment becomes final from extracting from Central Basin any quantity of Water greater than the party's Allowed Pumping Allocation as hereinafter set forth next to the name of the party in the tabulation appearing in Appendix 2 at the end of this Judgment, subject to further provisions of this Judgment. Subject to such further provisions, the officials, agents and employees of The State of

California are enjoined and restrained in any such Administrative Year from extracting from Central Basin collectively any quantity of water greater than the Allowed Pumping Allocation of The State of California as hereinafter set forth next to the name of that party in the same tabulation. Each party adjudged and declared above not to be the owner of and not to have the right to extract groundwater from Central Basin is enjoined and restrained in any Administrative Year commencing after the date this Judgment becomes final from extracting any groundwater from Central Basin, except as may be hereinafter permitted to any such party under this Judgment.

(2) The total extraction right for each party includes a party's Allowed Pumping Allocation (to the extent not transferred by agreement or otherwise), any contractual right acquired through lease or other agreement to extract or use the rights of another party, and any right to extract Stored Water or Carryover as provided in this Judgment. No party may extract in excess of 140% of the sum of (i) the party's Allowed Pumping Allocation and (ii) the party's leased water, except upon prior approval by the applicable body of Watermaster as required pursuant to Section IV(J)as provided herein. Upon application, the body specified in Section IV(J) shall approve a party's request to extract water in excess of such limit, provided there is no Material Physical Harm. Requests to extract water in excess of such limit shall be reviewed and either approved or denied within thirty (30) days of such request.

(3) Defendant The City of Los Angeles is enjoined and restrained in any Administrative Year commencing after the date this Judgment becomes final from extracting from Central Basin any quantity of water greater than fifteen thousand (15,000) acre feet or its Allowed Pumping Allocation, as recognized by the Watermaster, if it acquires additional rights to pump groundwater through purchase or lease, subject to further provisions of this Judgment, including but not limited to, sharing with other parties in any subsequent decreases or increases in

the quantity of extractions permitted from Central Basin by parties, pursuant to continuing jurisdiction of the Court, on the basis that fifteen thousand (15,000) acre feet (or the adjusted Allowed Pumping Allocation if additional rights are acquired) bears to the Allowed Pumping Allocations of the other parties. Defendant Department of Water and Power of The City of Los Angeles is enjoined and restrained in any Administrative Year commencing after the date this Judgment becomes final from extracting from Central Basin any quantity of water other than such as it may extract on behalf of defendant The City of Los Angeles, and which extractions, along with any extractions by said City, shall not exceed that quantity permitted by this Judgment to that City in any Administrative Year. Whenever in this Judgment the term "Allowed Pumping Allocation" appears, it shall be deemed to mean as to defendant The City of Los Angeles the quantity of fifteen thousand (15,000) acre feet unless the City of Los Angeles has acquired through purchase or lease right to extract additional groundwater. The limit on extraction as provided in the preceding Section I(B)(1) shall also apply to The City of Los Angeles.

(4) Any rights decreed and adjudicated herein may be transferred, assigned, licensed or leased by the owner thereof provided, however, that no such transfer shall be complete until compliance with the appropriate notice procedures established by Watermaster.

(5) Unless a party elects otherwise, production of water from the Basin for the use or benefit of the parties hereto shall be counted against the party's total extraction right in the following order: (i) Increased extractions by certain qualified water rights holders pursuant to Section IV(K), (ii) Exchange Pool production, (iii) production of Carryover water, (iv) production of leased water, , (v) production of Allowed Pumping Allocation, (vi) production of Stored Water, (vii) production of Drought Carryover (according to Watermaster's Rules), and (viii) production of water under an agreement with WRD during a period of

emergency pursuant to Section III(B)(6).

C. Parties Enjoined as to Export of Extractions.

Except as expressly authorized herein, or upon further order of the Court, all parties are enjoined and restrained from transporting water extracted from the Central Basin outside the boundaries of the Central Basin Area. For purposes of this Section, water supplied by a Water Purveyor to its customers located within any of its service areas contiguous to the Central Basin or within WRD's service area shall be exempt from the export prohibition of this Section provided that the Water Purveyor also provides water to a service area that overlies the Basin in whole or in part. The foregoing exemption is not made, nor is it related to, a determination of an underflow between the basins, a cost or benefit allocation, or any other factor relating to the allocation of the Replenishment Assessment by WRD. Further, this injunction and restriction does not apply to export of water that will take place pursuant to contractual obligations specifically identified on Appendix 4, nor does it apply to export of Stored Water not having its origin in Carryover Conversion. The export identified on Appendix 4 may continue to the extent that any such extraction does not violate any other provisions of this Judgment, provided however that no such export identified on Appendix 4 shall exceed 5,000 acre-feet in any Year.

II. APPOINTMENT OF WATERMASTER; WATERMASTER ADMINISTRATION PROVISIONS.

The particular bodies specified below are, jointly, hereby appointed Watermaster, for an indefinite term, but subject to removal by the Court, to administer this Judgment. Such bodies, which together shall constitute the "Watermaster," shall have restricted powers, duties and responsibilities as specified herein, it being the court's intention that particular constituent bodies of Watermaster have only limited and specified powers over certain aspects of the administration of this Judgment. The Outgoing Watermaster will exercise reasonable diligence in the complete transition of Watermaster duties and responsibilities within a reasonable time

following entry of this order, and to make available to the new Watermaster all records concerning Watermaster activities. The chair of the Central Basin Water Rights Panel (defined below) shall thereafter represent the Watermaster before the Court.

A. The Administrative Body.

Plaintiff Water Replenishment District of Southern California ("WRD") is appointed the Administrative Body of the Central Basin Watermaster ("Administrative Body"). In order to assist the Court in the administration of the provisions of this Judgment and to keep the Water Rights Panel and the Court fully advised in the premises, the Administrative Body shall have the following duties, powers and responsibilities:

(1) To Require Reports, Information and Records.

In consultation with the Water Rights Panel, the Administrative Body shall require the parties to furnish such reports, information and records as may be reasonably necessary to determine compliance or lack of compliance by any party with the provisions of this Judgment.

(2) Storage Projects.

The Administrative Body shall exercise such powers as may be specifically granted to it under this Judgment with regard to Stored Water.

(3) Annual Report.

The Administrative Body shall prepare, on or before the 15th day of the fourth month following the end of the preceding Administrative Year, an annual report for the consideration of the Water Rights Panel. The Chair of the Water Rights Panel shall submit to the Court either (1) the annual report prepared by the Administrative Body, following the adoption by the Water Rights Panel, or (2) an annual report separately prepared and adopted by the Water Rights Panel. The annual report prepared by the Administrative Body shall be limited to the following, unless otherwise required by the Court:

(a) Groundwater extractions

(b) Storage Accounts maintained by each party

(c) Status of the Regional Disadvantaged Community Incentive Program, if approved by the Court

(d) Exchange Pool operation

(e) Use of Imported Water

(f) Violations of this Judgment and corrective action taken by bodies of Watermaster having jurisdiction as provided in this Judgment

(g) Change of ownership of Total Water Rights

(h) Watermaster administration costs

(i) Water spread or imported into the Basin

(j) Water Augmentation Projects

(k) Whether the Administrative Body has become aware of the development of a Material Physical Harm, or imminent threat of the development of a Material Physical Harm, as required pursuant to Section IV(B) of this Judgment

(l) Other matters as agreed with the Water Rights Panel

(m) Recommendations, if any.

In consultation with the Water Rights Panel, the Administrative Body shall provide reasonable notice to all parties of all material actions or determinations by Watermaster or any constituent body thereof, and as otherwise provided by this Third Amended Judgment.

(4) Annual Budget and Appeal Procedure in Relation Thereto.

By April 1 of each Administrative Year, the Administrative Body shall prepare a proposed administrative budget for the subsequent year stating the anticipated expense for performing the administrative functions specified in this Judgment (the "Administrative Budget"). The Administrative Body shall mail a copy of the proposed Administrative Budget to each of the Parties at least 60 days

before the beginning of each Administrative Year. The Administrative Budget mailed to the Parties shall provide sufficient detail in the Administrative Budget to demonstrate a separation in accounting between the Administrative Budget and WRD's Replenishment Assessment and operating budget. For the first Administrative Year of operation under this Third Amended Judgment, if the Administrative Body is unable to meet the above time requirement, the Administrative Body shall mail said copies as soon as possible. The first year the Administrative Budget is prepared, the amount of that budget shall not exceed an amount equal to fifty percent (50%) of the 2012-2013 charge for Watermaster service for the Central Basin collected from Parties by the California Department of Water Resources. At all times, the Administrative Body shall maintain a separation in accounting between the Administrative Budget and WRD's Replenishment Assessment and operating budget. All increases in future budgets for the Administrative Body above the amount set forth above shall be subject to approval by the Water Rights Panel following a public meeting to be held prior to the beginning of the Administrative Year, provided that the approved budget shall not be less than the amount of the first-year budget for the Administrative Body, except upon further order of the Court. Any administrative function by WRD already paid for by the Replenishment Assessment shall not be added as an expense in the Administrative Budget. Similarly, any expense paid for by the Administrative Budget shall not be added to WRD's operating budget, or otherwise added to the calculation of the Replenishment Assessment. While WRD may approve the proposed Administrative Budget at the same meeting in which WRD adopts its annual Replenishment Assessment or annual budget, the Administrative Body's budget shall be separate and distinct from the Replenishment Assessment imposed pursuant to Water Code §60317 and WRD's operating budget.

If approval by the Water Rights Panel is required pursuant to the

foregoing, the Water Rights Panel shall act upon the proposed budget within 15 calendar days after the public meeting. If the Water Rights Panel does not approve the budget prior to such deadline, the matter may be appealed to the Court within sixty (60) days. If any Party hereto has any objection to the Administrative Budget, it shall present the same in writing to Watermaster within 15 days after the date of mailing of said tentative budget by the Administrative Body. The Parties shall make the payments otherwise required of them to the Administrative Body even though an appeal of such budget may be pending. Upon any revision by the Court, the Administrative Body shall either remit to the Parties their pro rata portions of any reduction in the budget, or shall credit their accounts with respect to their budget assessments for the next ensuing Administrative Year, as the Court shall direct.

The amount of the Administrative Budget to be assessed to each party shall be determined as follows: If that portion of the final budget to be assessed to the Parties is equal to or less than $20.00 per party then the cost shall be equally apportioned among the Parties. If that portion of the final budget to be assessed to Parties is greater than $20.00 per party then each Party shall be assessed a minimum of $20.00. The amount of revenue expected to be received through the foregoing minimum assessments shall be deducted from that portion of the final budget to be assessed to the Parties and the balance shall be assessed to the Parties having Allowed Pumping Allocation, such balance being divided among them proportionately in accordance with their respective Allowed Pumping Allocation.

Payment of the assessment provided for herein, subject to adjustment by the Court as provided, shall be made by each such party prior to beginning of the Administrative Year to which the assessment relates, or within 40 days after the mailing of the tentative budget, whichever is later. If such payment by any Party is not made on or before said date, the Administrative Body shall add a penalty of 5% thereof to such party's statement. Payment required of any Party hereunder

may be enforced by execution issued out of the Court, or as may be provided by order hereinafter made by the Court, or by other proceedings by the Watermaster or by any Party on the Watermaster's behalf.

Any money unexpended at the end of any Administrative Year shall be applied to the budget of the next succeeding Administrative Year. The Administrative Body shall maintain no reserves.

Notwithstanding the above, no part of the budget of the Administrative Body shall be assessed to WRD or to any Party who has not extracted water from Central Basin for a period of two successive Administrative Years prior to the Administrative Year in which the tentative budget should be mailed by the Administrative Body under the provisions of this subparagraph (4).

(5) Rules.

The Administrative Body may adopt, and amend from time to time, rules consistent with this Judgment as may be reasonably necessary to carry out duties under the provisions of this Judgment within its particular area of responsibility. The Body shall adopt its first set of rules and procedures within three (3) months following entry of this Third Amended Judgment. The rules shall be effective on such date after the mailing thereof to the Parties as is specified by the Body, but not sooner than thirty (30) days after such mailing.

B. The Central Basin Water Rights Panel.

The Central Basin Water Rights Panel of the Central Basin Watermaster ("Water Rights Panel") shall consist of seven (7) members, each of which is a Party. The term of each member of the Panel, with the exception of the seat held by the Small Water Producers Group, as provided herein, shall be limited to four years. The Court will make the initial appointments to the Central Basin Water Rights Panel upon motion by Parties consistent with the categories set forth below at or about the time of entry of this Third Amended Judgment, and shall establish a procedure for the staggered terms of such members. Thereafter, elections of members of the Panel shall be held as provided herein. One (1) such member of the Water Rights Panel shall be

elected by vote of the Small Water Producers Group conducted in accordance with its own procedures, provided such Group, as of the date of the election, consists of at least five (5) members who are Water Purveyors. One (1) such member of the Water Rights Panel shall be elected by vote of Parties with Allowed Pumping Allocation of less than 5,000 acre-feet who are not members of the Small Water Producers Group or, if the Small Water Producers Group does not then qualify following a continuous six-month period of non-qualification as provided herein, then two (2) such members shall be so selected. One (1) such member of the Water Rights Panel shall be elected by vote of Parties with Allowed Pumping Allocation of at least 5,000 acre-feet but less than 10,000 acre-feet. Three (3) such members of the Water Rights Panel shall be elected by vote of Parties with Allowed Pumping Allocation of 10,000 acre-feet or greater. One (1) such member of the Water Rights Panel shall be elected by a vote of all holders of Allowed Pumping Allocations, with each such holder being entitled to one vote, such member to be elected by a plurality of the votes cast, following a nomination procedure to be established in the Water Rights Panel's rules. In the event of a tie, the seventh member shall be determined as may be provided in the Water Rights Panel's rules, or otherwise by the court. Except as otherwise provided in this Section, each such rights holder shall have the right to cast a total number of votes equal to the number of acre-feet of its Allowed Pumping Allocation (rounded to the next highest whole number). With the exception of voting for the seventh member, Parties shall be entitled to vote only for candidates within the category(ies) that represent that Party's Allowed Pumping Allocation. For example, parties who are members of the Small Water Producers Group are entitled to vote only for the Small Water Producer Group member and the seventh member of the Water Rights Panel, and so on. Parties are not permitted to split votes. The results of such election shall be reported to the Court for confirmation of each member's appointment to the Water Rights Panel of Watermaster. The elected members of the Water Rights Panel shall be those candidates receiving the highest vote total in their respective categories. The Water Rights Panel shall hold its first meeting within thirty (30) days of the date this Third Amended Judgment becomes final. The Water Rights Panel shall develop rules for its operation consistent with this Judgment. The Water Rights Panel shall take action, including the

election of its Chair, by majority vote of its members. Election of the Chair shall occur every two years, with no Party serving as Chair for consecutive terms. Members of the Water Rights Panel shall serve without compensation. All references to Annual Pumping Allocation, as used herein, are as determined by the last published Watermaster report.

(1) The Water Rights Panel shall have the following duties and responsibilities:

(a) Enforcement of Adjudicated Rights. As against the other bodies of Watermaster, the Water Rights Panel shall have exclusive authority to move the Court to take such action as may be necessary to enforce the terms of the Judgment with regard to the extraction of Allowed Pumping Allocation and the maintenance of adjudicated groundwater extraction rights as provided in this Judgment.

(b) Requirement of Measuring Devices. The Water Rights Panel shall require all parties owning or operating any facilities for the extraction of groundwater from Central Basin to install and maintain at all times in good working order at such party's own expense, appropriate measuring devices at such times and as often as may be reasonable under the circumstances and to calibrate or test such devices.

(c) Inspections by Watermaster. The Water Rights Panel may make inspections of groundwater production facilities, including aquifer storage and recovery facilities, and measuring devices at such times and as often as may be reasonable under the circumstances and to calibrate or test such devices.

(d) Reports. Annually, the Water Rights Panel, in cooperation with the Administrative Body, shall report to the Court, concerning any or all of the following:

(i) Groundwater extractions

(ii) Exchange Pool operation

(iii) Status of the Regional Disadvantaged Community Incentive Program, if approved by the Court

(iv) Violations of this Judgment and corrective action taken or sought

(v) Change of ownership of Total Water Rights

(vi) Assessments made by the Water Rights Panel and any costs incurred

(vii) Whether the Water Rights Panel has become aware of the development of a Material Physical Harm, or imminent threat of the development of a Material Physical Harm, as required pursuant to Section IV(B) of this Judgment

(viii) Recommendations, if any.

As provided in Section II.A(3), the Water Rights Panel may adopt the annual report prepared by the Administrative Body, and submit the same to the Court, or the Water Rights Panel may prepare, adopt and submit to the Court a separate report. The Chair of the Water Rights Panel shall be responsible for reporting to the Court concerning adjudicated water rights issues in the Basin.

(2) Assessment. The Water Rights Panel shall assess holders of water rights within the Central Basin an annual amount not to exceed $1.00 per acre-foot of Allowed Pumping Allocation, by majority vote of the members of the Water Rights Panel. The body may assess a higher amount, subject to being overruled by Majority Protest. The assessment is intended to cover any costs associated with reporting responsibilities, any Judgment enforcement action, and the review of storage projects as a component of the "Storage Panel" as provided below. It is anticipated that this body will rely on the Administrative Body's staff for the functions related to the Administrative Body's responsibilities, but the

Water Rights Panel may engage its own staff if required in its reasonable judgment. Assessments will constitute a lien on the water right assessed, enforceable as provided in this Judgment.

(3) Rules. The Water Rights Panel may adopt and amend from time to time, at an open meeting of that Panel, rules consistent with this Judgment as may be reasonably necessary to carry out duties under the provisions of this Judgment within its particular area of responsibility. The Panel shall adopt its first set of rules and procedures within three (3) months following entry of this Third Amended Judgment. The rules shall be effective on such date after the mailing thereof to the Parties as is specified by the Panel, but not sooner than thirty (30) days after such mailing.

C. The Storage Panel.

The Storage Panel of the Central Basin Watermaster ("Storage Panel") shall be a bicameral body consisting of (i) the Water Rights Panel and (ii) the Board of Directors of WRD. Action by the Storage Panel shall require separate action by a majority of each of its constituent bodies. The Storage Panel shall have the duties and responsibilities specified with regard to the Provisions for the Storage and Extraction of Stored Groundwater as set forth in Part IV and the other provisions of this Judgment.

D. Use of Facilities and Data Collected by Other Governmental Agencies.

Where practicable, the three bodies constituting the Central Basin Watermaster should not duplicate the collection of data relative to conditions of the Central Basin which is then being collected by one or more governmental agencies, but where necessary each such body may collect supplemental data. Where it appears more economical to do so, the Watermaster and its constituent bodies are directed to use such facilities of other governmental agencies as are available to it under either no cost or cost agreements with respect to the receipt of reports, billings to parties, mailings to parties, and similar matters.

E. Appeal from Watermaster Decisions.

Appeals concerning the budget proposed by the Administrative Body shall be governed by Section II(A)(4) of this Judgment. Appeals concerning decisions by the Storage Panel shall be governed by Section IV(P) of this Judgment. With respect to all other objections by a Party to any action or decision by the Watermaster, such objections will be governed by this Section II(E). Any party interested therein who objects to any rule, determination, order or finding made by the Watermaster or any constituent body thereof, may object thereto in writing delivered to the Administrative Body within 30 days after the date the Watermaster, or any constituent body thereof, mails written notice of the making of such rule, determination, order or finding. Within 30 days after such delivery the Watermaster, or the affected constituent body thereof, shall consider said objection and shall amend or affirm his rule, determination, order or finding and shall give notice thereof to all parties. Any such party may file with the Court within 60 days from the date of said notice any objection to such rule, determination, order or finding of the Watermaster, or any constituent body thereof, and bring the same on for hearing before the Court at such time as the Court may direct, after first having served said objection upon all other parties. The Court may affirm, modify, amend or overrule any such rule, determination, order or finding of the Watermaster or its affected constituent body. Any objection under this paragraph shall not stay the rule, determination, order or finding of the Watermaster. However, the Court, by *ex parte* order, may provide for a stay thereof on application of any interested party on or after the date that any such party delivers to the Watermaster any written objection.

F. Effect of Non-Compliance by Watermaster With Time Provisions.

Failure of the Watermaster to perform any duty, power or responsibility set forth in this Judgment within the time limitation herein set forth shall not deprive the Watermaster or its applicable constituent body of authority to subsequently discharge such duty, power or responsibility, except to the extent that any such failure by the Watermaster may have rendered some otherwise required act by a party impossible.

G. Limitations on Administrative Body.

WRD shall not acquire Central Basin water rights, nor lease Central Basin water or water rights to or from any Party or third party. However, the foregoing shall (i) not be interpreted to restrict WRD's ability or authority to acquire water from any source for purposes of Artificial or Natural Replenishment or for water quality activities, and (ii) not restrict WRD's authority under California Water Code Section 60000 et seq. to develop reclaimed, recycled or remediated water for groundwater replenishment activities.

H. Regional Disadvantaged Communities Incentive Program.

The Water Rights Panel, acting through the General Manager of WRD, shall develop a Regional Disadvantaged Communities Incentive Program, pursuant to which a portion of the Community Storage Pool is reserved for the benefit of Disadvantaged Communities within the Central Basin. Nothing in this Judgment, nor the establishment of such a program, shall diminish the rights otherwise granted to Parties under this Judgment, including but not limited to the right to place water in storage in the Community Storage Pool. The Water Rights Panel shall meet within thirty (30) days of its formation to identify and consider potential third-party independent consultants who may be retained to design the program, including those recommended by the General Manager of WRD. The Water Rights Panel shall select a consultant within thirty (30) days thereafter. In the event the General Manager of WRD objects to the selected consultant, in writing, then the Water Rights Panel and the General Manager of WRD shall exchange a list of no more than two (2) consultants each for further consideration. If the Water Rights Panel and the General Manager of WRD are unable to agree to a consultant within an additional thirty (30) days, then the Chair of the Water Rights Panel shall file a request with the Court for an order appointing a consultant. Upon selection of a third-party independent consultant, whether through the Water Rights Panel process or the court process identified herein, the consultant shall design a detailed program and deliver it to the Water Rights Panel within ninety (90) days of the consultant's retention. All costs associated with design of the program shall be paid for out of the Water Rights

Panel's assessment, as provided in Section II.B(2). The Water Rights Panel shall present the program to the Court for its review and approval within one year of entry of this Third Amended Judgment. If approved by the Court, the Water Rights Panel, acting through the General Manager of WRD, shall be responsible for administration of the Regional Disadvantaged Communities Incentive Program, including insuring that any funds generated through the program benefit Disadvantaged Communities. Any Storage Project established pursuant to this Program shall have priority to use up to 23,000 acre-feet of Available Storage within the Community Storage Pool, as further provided in Section IV.E(2). Watermaster shall report to the Court concerning such program as a part of its annual report.

III. PROVISIONS FOR PHYSICAL SOLUTION TO MEET THE WATER REQUIREMENTS IN CENTRAL BASIN.

In order to provide flexibility to the injunction set forth in Part I of the Judgment, and to assist in a physical solution to meet water requirements in Central Basin, the injunction so set forth is subject to the following provisions.

A. Carryover of Portion of Allowed Pumping Allocation.

(1) Amount of Carryover.

Each party adjudged to have a Total Water Right or water rights and who, during a particular Administrative Year, does not extract from Central Basin a total quantity equal to such party's Allowed Pumping Allocation for the particular Administrative Year, less any allocated subscriptions by such party to the Exchange Pool, or plus any allocated requests by such party for purchase of Exchange Pool water, is permitted to carry over (the "One Year Carryover") from such Administrative Year the right to extract from Central Basin in the next succeeding Administrative Year so much of said total quantity as it did not extract in the particular Administrative Year, not to exceed (i) the Applicable Percentage of such party's Allowed Pumping Allocation for the particular Administrative

Year, or 20 acre-feet, whichever of said percentage or 20 acre-feet is the larger, less (ii) the total quantity of water then held in that party's combined Individual and Community Storage accounts, as hereinafter defined, but in no event less than 20% of the party's Allowed Pumping Allocation for the particular Administrative Year. For purposes of this Section, the "Applicable Percentage" shall be as follows for the years indicated:

For the Administrative Year in which this Third Amended Judgment becomes final:	30%
For the next Administrative Year:	40%
For the next Administrative Year:	50%
For the next Administrative Year and years following:	60%

(2) Conversion of Carryover to Stored Water.

A party having Carryover may, from time to time, elect to convert all or part of such party's Carryover to Stored Water as authorized herein ("Carryover Conversion") upon payment of the Replenishment Assessment to WRD. Such Stored Water shall be assigned to that party's Individual Storage Allocation, if available, and otherwise to the Community Storage Pool.

(3) Declared Water Emergency.

The Board of Directors of WRD may, from time to time, declare a water emergency upon a determination that conditions within the Central Basin relating to natural and imported water supplies are such that, without implementation of the Declared Water Emergency provisions of this subsection, the water resources of the Central Basin risk degradation. In making such declaration, the Board of Directors shall consider any information and requests provided by water producers, purveyors and other affected entities and shall, for that purpose, hold a public hearing in advance of such declaration. A Declared Water Emergency

shall extend to the end of the Administrative Year during which such resolution is adopted, unless sooner ended by similar resolution.

(4) Drought Carryover.

Following the declaration of a Declared Water Emergency and until the Declared Water Emergency ends either by expiration or by resolution of the Board of Directors of WRD, each party adjudged to have a Total Water Right or water rights and who, during a particular Administrative Year, does not extract from Central Basin a total quantity equal to such party's Allowed Pumping Allocation for the particular Administrative Year, less any allocated subscriptions by such party to the Exchange Pool, or plus any allocated requests by such party for purchase of Exchange Pool water, is permitted to carry over (the "Drought Carryover") from such Administrative Year the right to extract from Central Basin so much of said total quantity as it did not extract during the period of the Declared Water Emergency, to the extent such quantity exceeds the One Year Carryover, not to exceed an additional 35% of such party's Allowed Pumping Allocation, or additional 35 acre feet, whichever of said 35% or 35 acre feet is the larger, less the amount of such party's Stored Water. Carryover amounts shall first be allocated to the One Year Carryover and any remaining carryover amount for that year shall be allocated to the Drought Carryover.

(5) Accumulated Drought Carryover.

No further amounts shall be added to the Drought Carryover following the end of the Declared Water Emergency, provided however that in the event another Declared Water Emergency is declared, additional Drought Carryover may be added, to the extent such additional Drought Carryover would not cause the total Drought Carryover to exceed the limits set forth above. The Drought Carryover shall be supplemental to and shall not affect any previous drought carryover acquired by a party pursuant to previous order of the court.

B. When Over-Extractions May be Permitted.

(1) Underestimation of Requirements for Water.

Any party hereto without Stored Water, having an Allowed Pumping Allocation, and not in violation of any provision of this Judgment may extract in an Administrative Year an additional quantity of water not to exceed: (a) 20% of such party's Allowed Pumping Allocation or 20 acre feet, whichever is greater, and (b) any amount in addition thereto which may be approved in advance by the Water Rights Panel of Watermaster.

(2) Reductions in Allowed Pumping Allocations in Succeeding Years to Compensate for Permissible Overextractions.

Any such party's Allowed Pumping Allocation for the following Administrative Year shall be reduced by the amount over-extracted pursuant to paragraph 1 above, provided that if the Water Rights Panel determines that such reduction in the party's Allowed Pumping Allocation in one Administrative Year will impose upon such a party an unreasonable hardship, the said reduction in said party's Allowed Pumping Allocation shall be prorated over a period of five (5) Administrative Years succeeding that in which the excessive extractions by the party occurred. Application for such relief to the Water Rights Panel must be made not later than the 40th day after the end of the Administrative Year in which such excessive pumping occurred. The Water Rights Panel shall grant such relief if such over-extraction, or any portion thereof, occurred during a period of Declared Water Emergency.

(3) Reductions in Allowed Pumping Allocations for the Next Succeeding Administrative Year to Compensate for Overpumping.

Whenever, pursuant to Section III(B)(1), a party over-extracts in excess of such party's Allowed Pumping Allocation plus that party's available One-Year Carryover and any Stored Water held by that party, and such excess has not been approved in advance by the Water Rights Panel, then such party's Allowed Pumping Allocation for the following Administrative Year shall be reduced by an

amount equivalent to its total over-extractions in the particular Administrative Year in which it occurred.

(4) Reports of Certain Over-extractions to the Court.

Whenever a party over-extracts in excess of 20% of such party's Allowed Pumping Allocation for the particular Administrative Year plus that party's available One-Year Carryover and any Stored Water held by that party, without having obtained prior approval of the Water Rights Panel, such shall constitute a violation of the Judgment and the Water Rights Panel shall make a written report to the Court for such action as the Court may deem necessary. Such party shall be subject to such injunctive and other processes and action as the Court might otherwise take with regard to any other violation of such Judgment.

(5) Effect of Over-extractions on Rights.

Any party who over-extracts from Central Basin in any Administrative Year shall not acquire any additional rights by reason of such over-extractions; nor shall any required reductions in extractions during any subsequent years reduce the Total Water Right or water rights of any party to the extent said over-extractions are in compliance with paragraph 1 above.

(6) Pumping Under Agreement With Plaintiff During Periods of Emergency.

Plaintiff WRD overlies Central Basin and engages in activities of replenishing the groundwaters thereof. Plaintiff by resolution has appropriated for use during emergencies the quantity of 17,000 acre feet of imported and reclaimed water replenished by it into Central Basin, and pursuant to such resolution Plaintiff reserves the right to use or cause the use of such quantity during such emergency periods for the benefit of Water Purveyors.

(a) Notwithstanding any other provision of this Judgment, parties who are Water Purveyors (including successors in interest) are authorized to enter into agreements with Plaintiff for extraction of a

portion of Plaintiff's 17,000 acre-feet of appropriated water, in excess of their respective Allowed Pumping Allocations for the particular Administrative Year when the following conditions are met:

(i) Plaintiff is in receipt of a resolution of the Board of Directors of the Metropolitan Water District of Southern California ("MWD") that there is an actual or immediately threatened temporary shortage of MWD's imported water supply compared to MWD's needs, or a temporary inability to deliver MWD's imported water supply throughout its area, which will be alleviated by overpumping from Central Basin.

(ii) The Board of Directors of both Plaintiff and Central Basin Municipal Water District by resolutions concur in the resolution of MWD's Board of Directors, and the Board of Directors of Plaintiff finds in its resolution that the average minimum elevation of water surface among those wells in the Montebello Forebay of the Central Basin designated as Los Angeles County Flood Control District Wells Nos. 1601T, 1564P, 1615P, and 1626L, is at least 43.7 feet above sea level. This computation shall be based upon the most recent "static readings" taken, which shall have been taken not more than four weeks prior. Should any of the wells designated above become destroyed or otherwise be in a condition so that readings cannot be made, or should the owner prevent their use for such readings, the Board of Directors of the Plaintiff may, upon appropriate engineering recommendation, substitute such other well or wells as it

may deem appropriate.

(iii) In said resolution, Plaintiff's Board of Directors sets a public hearing, and notice of the time, place and date thereof (which may be continued from time to time without further notice) is given by First Class Mail to the current designees of the Parties, filed and served in accordance with Section VI(C) of this Judgment. Said notice shall be mailed at least five (5) days before the scheduled hearing date.

(iv) At said public hearing, parties (including successors in interest) are given full opportunity to be heard, and at the conclusion thereof the Board of Directors of Plaintiff by resolution decides to proceed with agreements under this Section III(B)(6).

(b) All such agreements shall be subject to the following requirements, and such others as Plaintiff's Board of Directors shall require:

(i) They shall be of uniform content except as to quantity involved, and any special provisions considered necessary or desirable with respect to local hydrological conditions or good hydrologic practice.

(ii) They shall be offered to all Water Purveyors, excepting those which Plaintiff's Board of Directors determines should not overpump because such overpumping would occur in undesirable proximity to a sea water barrier project designed to forestall sea water intrusion, or within or in undesirable proximity to an area within Central Basin wherein groundwater levels are at an

elevation where overpumping is under all the circumstances then undesirable.

(iii) The maximum terms for the agreements shall be four (4) months, which agreements shall commence on the same date and end on the same date (and which may be executed at any time within the four-month period), unless an extension thereof is authorized by the Court, under Part V of this Judgment.

(iv) They shall contain provisions requiring that the Water Purveyor executing the agreement pay to the Plaintiff a price in addition to the applicable replenishment assessment determined on the following formula. The normal price per acre-foot of Central Basin Municipal Water District's (CBMWD) treated domestic and municipal water, as "normal" price of such category of water is defined in Section III(C)(10) (price to be paid for Exchange Pool Water) as of the beginning of the contract term less the deductions set forth in said paragraph 10 for the Administrative Year in which the contract term commences. The agreement shall provide for adjustments in the first of said components for any proportional period of the contract term during which the CBMWD said normal price is changed, and if the agreement straddles two administrative years, the said deductions shall be adjusted for any proportionate period of the contract term in which the amount thereof or of either subcomponent changes for purposes of said paragraph 10. Any price for a partial acre-foot shall be computed pro rata. Payments shall be due and

payable on the principle that over extractions under the agreement are of the last water pumped in the Administrative Year, and shall be payable as the agreement shall provide.

(v) They shall contain provisions that: (1) All of such agreements (but not less than all) shall be subject to termination by Plaintiff if, in the Judgment of Plaintiff's Board of Directors, the conditions or threatened conditions upon which they were based have abated to the extent over extractions are no longer considered necessary; and (2) that any individual agreement or agreements may be terminated if the Plaintiff's Board of Directors finds that adverse hydrologic circumstances have developed as a result of over extractions by any Water Purveyor(s) which have executed said agreements, or for any other reason that Plaintiff's Board of Directors finds good and sufficient.

(c) Other matters applicable to such agreements and overpumping thereunder are as follows, without need for express provisions in the agreements;

(i) The quantity of overpumping permitted shall be additional to that which the Water Purveyor could otherwise overpump under this Judgment.

(ii) The total quantity of permitted overpumping under all said agreements during said four months shall not exceed seventeen thousand (17,000) acre feet, but the individual Water Purveyor shall not be responsible or affected by any violation of this requirement. That total is additional to over extractions otherwise permitted under

this Judgment.

(iii) Only one four month period may be utilized by Plaintiff in entering into such agreements, as to any one emergency or continuation thereof declared by MWD's Board of Directors under Section III(B)(6)(a).

(iv) If any party claims it is being damaged or threatened with damage by the over extractions by any party to such an agreement, the first party or the Water Rights Panel may seek appropriate action of the Court for termination of any such agreement upon notice of hearing to the party complaining, to the party to said agreement, to the plaintiff, and to any parties who have filed a request for special notice. Any termination shall not affect the obligation of the party to make payments under the agreement for over extractions which did occur thereunder.

(v) Plaintiff shall maintain separate accounting of the proceeds from payments made pursuant to agreements entered into under this Part. Said fund shall be utilized solely for purposes of replenishment in replacement of waters in Central Basin and West Basin. Plaintiff shall as soon as practicable cause replenishment in Central Basin by the amounts to be overproduced pursuant to this Paragraph 6, whether through spreading, injection, or in lieu agreements.

(vi) Over extractions pursuant to the agreements shall not be subject to the "make up" provisions of the Judgment as amended, provided that if any party fails to make payments as required by the agreement, Plaintiff may

require such "make up" under Section III(B)(3) of this Judgment.

(vii) A Water Purveyor under any such agreement may, and is encouraged to enter into appropriate arrangements with customers who have water rights in Central Basin under or pursuant to this Judgment whereby the Water Purveyor will be assisted in meeting the objectives of the agreement.

(7) Exemption for Extractors of Contaminated Groundwater.

Any party herein may petition WRD for a Non-consumptive Water Use Permit as part of a project to remedy or ameliorate groundwater contamination. If the petition is granted as set forth in this paragraph, the petitioner may extract the groundwater as permitted hereinafter, without the production counting against the petitioner's production rights.

(a) If the Board of WRD determines by Resolution that there is a problem of groundwater contamination that a proposed program will remedy or ameliorate, an operator may make extractions of groundwater to remedy or ameliorate that problem without the production counting against the petitioner's production rights if the water is not applied to beneficial surface use, its extractions are made in compliance with all the terms and conditions of the Board Resolution, and the Board has determined in the Resolution either of the following:

(i) The groundwater to be extracted is unusable and cannot be economically treated or blended for use with other water.

(ii) The proposed program involves extraction of usable water in the same quantity as will be returned to the

underground without degradation of quality.

(b) The Resolution may provide those terms and conditions the Board deems appropriate, including, but not limited to, restrictions on the quantity of the extractions to be so exempted, limitations on time, periodic reviews, requirement of submission of test results from a Board-approved laboratory, and any other relevant terms or conditions.

(c) Upon written notice to the operator involved, the Board may rescind or modify its Resolution. The rescission or modification of the Resolution shall apply to groundwater extractions occurring more than ten (10) days after the rescission or modification. Notice of rescission or modification shall be either mailed first class mail, postage prepaid, at least two weeks prior to the meeting of the Board at which the rescission or modification will be made to the address of record of the operator or personally delivered two weeks prior to the meeting.

(d) The Board's decision to grant, deny, modify or revoke a permit or to interrupt or stop a permitted project may be appealed to this court within thirty days of the notice thereof to the applicant and upon thirty days' notice to the designees of all parties herein.

(e) WRD shall monitor and periodically inspect the project for compliance with the terms and conditions for any permit issued pursuant to these provisions.

(f) No party shall recover costs from any other party herein in connection with determinations made with respect to this Part.

(8) "Call" on Carryover Converted to Stored Water.

Where any Party has elected, as permitted by Section III(A)(2), to convert Carryover to Stored Water, any other Party which has not, within the previous ten (10) years, been granted approval to extract Carryover Conversion under this

Section III(B)(8) more than five (5) times, may apply to the Storage Panel for the right to extract all or a portion of that Carryover Conversion in the year such Conversion occurs. The Storage Panel shall grant such request, providing there is no Material Physical Harm, if it determines that leased groundwater to meet the applicant's needs within the Basin cannot be obtained for less than forty-five percent (45%) of MWD's Imported Water rate for delivery of untreated water to the Central Basin spreading facilities (which rate is presently MWD's "Full Service Untreated Volumetric Cost, Tier 1"), and that the applicant will fully extract its Allowed Pumping Allocation, Carryover, and Stored Water, if any, in addition to its permitted overextraction under Section III(B)(1), prior to accessing such Carryover Conversion.

Upon such approval, the applicant may thereafter extract such water as provided herein. A Party so extracting groundwater shall fully restore such extracted water (either through under-extraction of its rights or through importing water) during the five-year period following the Year in which the extraction under this Section occurs. Otherwise, the extracting Party shall pay to the Watermaster an amount equal to 100% of MWD's Imported Water rate for purchase and delivery of untreated water to the Central Basin spreading facilities (which rate is presently MWD's "Full Service Untreated Volumetric Cost, Tier 1") whether or not such water is available that year, for the year during which is the fifth anniversary of the year during which such Carryover Conversion extraction occurs, multiplied by the amount of Carryover Conversion so extracted and not restored during such five-year period. Payment shall be made within thirty (30) days of demand by Watermaster. No Replenishment Assessment shall be due on Carryover Conversion so extracted. However, the Party must deposit with the Watermaster an amount equal to the Replenishment Assessment that would otherwise be imposed by WRD upon such extraction. If the party restores the water within the 5-year repayment period, then the Watermaster shall

promptly return the deposit to the Party, without interest. If the Party does not restore the water within the 5-year repayment period, the deposit shall be credited towards the Party's obligation to pay 100% of MWD's Imported Water rate as required herein.

Should there be multiple requests to so extract Carryover Conversion in the same year, the Storage Panel shall allocate such extraction right such that each requesting party may extract a pro rata portion of the available Carryover Conversion for that year. No party may extract in excess of 2,500 acre feet of groundwater pursuant to this Section III(B)(8) in a single Year. Amounts paid to Watermaster hereunder shall be used by WRD solely for purchase of water for replenishment in the Basin. Watermaster, through the Storage Panel, shall give reasonable notice to the Parties of any application to so extract Carryover Conversion in such manner as the Storage Panel shall determine, including, without limitation, notice by electronic mail or by website posting, at least ten (10) days prior to consideration of any such application.

C. Exchange Pool Provisions.

(1) Definitions.

For purposes of these Exchange Pool provisions, the following words and terms have the following meanings:

(a) "Exchange Pool" is the arrangement hereinafter set forth whereby certain of the parties, ("Exchangees") may, notwithstanding the other provisions of the Judgment, extract additional water from Central Basin to meet their needs, and certain other of the parties ("Exchangors"), reduce their extractions below their Allowed Pumping Allocations in order to permit such additional extractions by others.

(b) "Exchangor" is one who offers, voluntarily or otherwise, pursuant to subsequent provisions, to reduce its extractions below its Allowed Pumping Allocation in order to permit such additional

extractions by others.

(c) "Exchangee" is one who requests permission to extract additional water from Central Basin.

(d) "Undue hardship" means unusual and severe economic or operational hardship, other than that arising (i) by reason of any differential in quality that might exist between water extracted from Central Basin and water available for importation or (ii) by reason of any difference in cost to a party in subscribing to the Exchange Pool and reducing its extractions of water from Central Basin in an equivalent amount as opposed to extracting any such quantity itself.

(2) Parties Who May Purchase Water Through the Exchange Pool.

Any party not having existing facilities for the taking of imported water as of the beginning of any Administrative Year, and any party having such facilities as of the beginning of any Administrative Year who is unable, without undue hardship, to obtain, take, and put to beneficial use, through its distribution system or systems existing as of the beginning of the particular Administrative Year, imported water in a quantity which, when added to its Allowed Pumping Allocation for that particular Administrative Year, will meet its estimated needs for that particular Administrative Year, may purchase water from the Exchange Pool, subject to the limitations contained in this Section III(C) (Subpart "C" hereinafter).

(3) Procedure for Purchasing Exchange Pool Water.

Not later than the 40th day following the commencement of each Administrative Year, each such party desiring to purchase water from the Exchange Pool shall file with the Watermaster a request to so purchase, setting forth the amount of water in acre feet that such party estimates that it will require during the then current Administrative Year in excess of the total of:

(a) Its Allowed Pumping Allocation for that particular

Administrative Year; and

(b) The imported water, if any, which it estimates it will be able, without undue hardship, to obtain, take and put to beneficial use, through its distribution system or systems existing as of the beginning of that particular Administrative Year.

Any party who as of the beginning of any Administrative Year has existing facilities for the taking of imported water and who makes a request to purchase from the Exchange Pool must provide with such request substantiating data and other proof which, together with any further data and other proof requested by the Water Rights Panel, establishes that such party is unable without undue hardship, to obtain, take and put to beneficial use through its said distribution system or systems a sufficient quantity of imported water which, when added to its said Allowed Pumping Allocation for the particular Administrative Year, will meet its estimated needs. As to any such party, the Water Rights Panel shall make a determination whether the party has so established such inability, which determination shall be subject to review by the court under the procedure set forth in Part II of this Judgment. Any party making a request to purchase from the Exchange Pool shall either furnish such substantiating data and other proof, or a statement that such party had no existing facilities for the taking of imported water as of the beginning of that Administrative Year, and in either event a statement of the basis for the quantity requested to be purchased.

(4) Subscriptions to Exchange Pool:

(a) Required Subscription. Each party having existing facilities for the taking of imported water as of the beginning of any Administrative Year hereby subscribed to the Exchange Pool for purposes of meeting Category (a) requests thereon, as more particularly defined in paragraph 5 of this Subpart C, twenty percent

(20%) of its Allowed Pumping Allocation, or the quantity of imported water which it is able, without undue hardship, to obtain, take and put to beneficial use through its distribution system or systems existing as of the beginning of the particular Administrative Year in addition to such party's own estimated needs for imported water during that Administrative Year, whichever is the lesser. A party's subscription under this subparagraph (a) and subparagraph (b) of this paragraph 4 is sometimes hereinafter referred to as a "required subscription."

(b) Report to Watermaster Water Rights Panel by Parties with Connections and Unable to Subscribe 20%. Any party having existing facilities for the taking of imported water and estimating that it will be unable, without undue hardship, in that Administrative Year to obtain, take and put to beneficial use through its distribution system or systems existing as of the beginning of that Administrative Year, sufficient imported water to further reduce its extractions from the Central Basin by twenty percent (20%) of its Allowed Pumping Allocation for purposes of providing water to the Exchange Pool must furnish not later than the 40th day following the commencement of such Administrative Year substantiating data and other proof which, together with any further data and other proof requested by the Water Rights Panel, establishes said inability or such party shall be deemed to have subscribed twenty percent (20%) of its Allowed Pumping Allocation for the purpose of providing water to the Exchange Pool. As to any such party so contending such inability, the Water Rights Panel shall make a determination whether the party has so established such inability, which determination shall be subject to review by the Court under the procedure set forth in Part II of this Judgment.

(c) Voluntary Subscriptions. Any party, whether or not having

facilities for the taking of imported water, who desires to subscribe to the Exchange Pool a quantity or further quantity of its Allowed Pumping Allocation, may so notify the Water Rights Panel in writing of the quantity of such offer on or prior to the 40th day following the commencement of the particular Administrative Year. Such subscriptions are referred to hereinafter as "voluntary subscriptions." Any Exchangor who desires that any part of its otherwise required subscription not needed to fill Category (a) requests shall be available for Category (b) requests may so notify the Water Rights Panel in writing on or prior to said 40th day. If all of that Exchangor's otherwise required subscription is not needed in order to fill Category (a) requests, the remainder of such required subscription not so used, or such part thereof as such Exchangor may designate, shall be deemed to be a voluntary subscription.

(5) Limitations on Purchases of Exchange Pool Water and Allocation of Requests to Purchase Exchange Pool Water Among Exchangors.

(a) Categories of Requests. Two categories of Exchange Pool requests are established as follows:

(i) Category (a) requests. The quantity requested by each Exchangee, whether or not that Exchangee has an Allowed Pumping Allocation, which quantity is not in excess of 150% of its Allowed Pumping Allocation, if any, or 100 acre feet, whichever is greater. Requests or portions thereof within the above criteria are sometimes hereinafter referred to as "Category (a) requests."

(ii) Category (b) requests. The quantity requested by each Exchangee having an Allowed Pumping Allocation to the extent the request is in excess of 150% of that Allowed

Pumping Allocation or 100 acre feet, whichever is greater, and the quantity requested by each Exchangee having no Allowed Pumping Allocation to the extent the request is in excess of 100 acre feet. Portions of requests within the above criteria are sometimes hereinafter referred to as "Category (b) requests."

(b) Filling of Category (a) Requests. All Exchange Pool subscriptions, required and voluntary, shall be available to fill Category (a) requests. Category (a) requests shall be filled first from voluntary subscriptions, and if voluntary subscriptions should be insufficient to fill all Category (a) requests required subscriptions shall be then utilized to fill Category (a) requests. All Category (a) requests shall be first filled before any Category (b) requests are filled.

(c) Filling of Category (b) Requests. To the extent that voluntary subscriptions have not been utilized in filling Category (a) requests, Category (b) requests shall be filled only out of any remaining voluntary subscriptions. Required subscriptions will then be utilized for the filling of any remaining Category (b) requests.

(d) Allocation of Requests to Subscriptions When Available Subscriptions Exceed Requests. In the event the quantity of subscriptions available for any category of requests exceeds those requests in that category, or exceeds the remainder of those requests in that category, such requests shall be filled out of such subscriptions proportionately in relation to the quantity of each subscription.

(e) Allocation of Subscriptions to Category (b) Requests in the Event of Shortage of Subscriptions. In the event available subscriptions are insufficient to meet Category (b) requests, available subscriptions shall be allocated to each request in the proportion that

the particular request bears to the total requests of the particular category.

(6) Additional Voluntary Subscriptions.

If subscriptions available to meet the requests of Exchangees are insufficient to meet all requests, additional voluntary subscriptions may be solicited and received from parties by the Water Rights Panel. Such additional subscriptions shall be allocated first to Category (a) requests to the extent unfilled, and next to Category (b) requests to the extent unfilled. All allocations are to be otherwise in the same manner as earlier provided in paragraph 5 (a) through 5 (e) inclusive.

(7) Effect if Category (a) Requests Exceed Available Subscriptions, Both Required and Voluntary.

In the event that the quantity of subscriptions available to fill Category (a) requests is less than the total quantity of such requests, the Exchangees may, nonetheless, extract the full amount of their Category (a) requests otherwise approved by the Water Rights Panel as if sufficient subscriptions were available. The amounts received by the Water Rights Panel on account of that portion of the approved requests in excess of the total quantities available from Exchangors shall be paid by the Water Rights Panel to WRD in trust for the purpose of purchasing imported water and spreading the same in Central Basin for replenishment thereof. Thereafter WRD may, at any time, withdraw said funds or any part thereof so credited in trust for the aforesaid purpose, or may by the 40th day of any Administrative Year utilize all or any portion of said funds for the purchase of water available from subscriptions by Exchangors in the event the total quantity of such subscriptions exceeds the total quantity of approved requests by parties to purchase Exchange Pool water. To the extent that there is such an excess of available subscriptions over requests and to the extent that the existing credit in favor of WRD is sufficient to purchase such excess quantity at

the price established for Exchange Pool purchases during that Administrative Year, the money shall be paid to the Exchangors in the same manner as if another party had made such purchase as an Exchangee. WRD shall not extract any such Exchange Pool water so purchased.

(8) Additional Pumping by Exchangees Pursuant to Exchange Pool Provisions.

An Exchangee may extract from Central Basin in addition to its Allowed Pumping Allocation for a particular Administrative Year that quantity of water which it has requested to purchase from the Exchange Pool during that Administrative Year and which has been allocated to it pursuant to the provisions of paragraphs 5, 6 and 7. The first pumping by an Exchangee in any Administrative Year shall be deemed to be pumping of the party's allocation of Exchange Pool water.

(9) Reduction in Pumping by Exchangors.

Each Exchangor shall in each Administrative Year reduce its extractions of water from Central Basin below its Allowed Pumping Allocation for the particular year in a quantity equal to the quantity of Exchange Pool requests allocated to it pursuant to the provisions of paragraphs 4, 5, 6 and 7 of this Subpart C.

(10) Price to be Paid for Exchange Pool Water.

The price to be paid by Exchangees and to be paid to Exchangors per acre foot for required and voluntary subscriptions of Exchangors utilized to fill requests on the Exchange Pool by Exchangees shall be the dollar amount computed as follows by the Water Rights Panel for each Administrative Year. The "normal" price as of the beginning of the Administrative Year charged by Central Basin Municipal Water District (CBMWD) for treated MWD (Metropolitan Water District of Southern California) water used for domestic and municipal purposes shall be determined, and if on that date there are any changes

scheduled during that Administrative Year in CBMWD's "normal" price for such category of water, the weighted daily "normal" CBMWD price shall be determined and used in lieu of the beginning such price; and there shall be deducted from such beginning or weighted price, as the case may be, the "incremental cost of pumping water in Central Basin" at the beginning of the Administrative Year and any then current rate or rates, of assessments levied on the pumping of groundwater in Central Basin by Plaintiff District and any other governmental agency. The "normal" price charged by CBMWD shall be the highest price of CBMWD for normal service excluding any surcharge or higher rate for emergency deliveries or otherwise failing to comply with CBMWD rates and regulations relating to earlier deliveries. The "incremental cost of pumping water in Central Basin" as of the beginning of the Administrative Year shall be deemed to be the Southern California Edison Company Schedule No. PA-1 rate per kilowatt-hour, including all adjustments and all uniform authorized additions to the basic rate, multiplied by 560 kilowatt-hours per acre-foot, rounded to the nearest dollar (which number of kilowatt-hours has been determined to represent the average energy consumption to pump an acre-foot of water in Central Basin). In applying said PA-1 rate the charge per kilowatt-hour under the schedule shall be employed and if there are any rate blocks then the last rate block shall be employed. Should a change occur in Edison schedule designations, the Water Rights Panel shall employ that applicable to motors used for pumping water by municipal utilities.

(11) Carry-over of Exchange Pool Purchases by Exchangees.

An Exchangee who does not extract from Central Basin in a particular Administrative Year a quantity of water equal to the total of (a) its Allowed Pumping Allocation for that particular Administrative Year, reduced by any authorized amount of carryover into the next succeeding Administrative Year pursuant to the provisions of Section III(A) of this Judgment, and (b) the quantity

that it purchased from the Exchange Pool for that particular Administrative Year, may carry over into the next succeeding Administrative Year the right to extract from Central Basin a quantity equal to the difference between said total and the quantity actually extracted in that Administrative Year, but not exceeding the quantity purchased from the Exchange Pool for that Administrative Year. Any such carryover shall be in addition to that provided in said Section III(A).

If the "Basinwide Average Exchange Pool Price" in the next succeeding Administrative Year exceeds the "Exchange Pool Price" in the previous Administrative Year any such Exchangee exercising such carryover rights hereinabove provided shall pay to the Watermaster, forthwith upon the determination of the "Exchange Pool Price" in said succeeding Administrative Year, and as a condition to such carryover rights, an additional amount determined by multiplying the number of acre feet of carryover by the difference in "Exchange Pool Price" as between the two Administrative Years. Such additional payment shall be miscellaneous income to the Watermaster which shall be applied by it against that share of the Watermaster's Administrative Body's budget to be paid by the parties to this Agreement for the second Administrative Year succeeding that in which the Exchange Pool water was so purchased. For purposes of this paragraph, the term Basinwide Average Exchange Pool Price means the average price per acre foot paid for Exchange Pool water produced within the Central Basin during the year for which such determination is to be made, taking into account all Exchange Pool transactions consummated during that year.

(12) Notification by Watermaster to Exchangors and Exchangees of Exchange Pool Requests and Allocations Thereof and Price of Exchange Pool Water.

Not later than the 65th day after the commencement of each Administrative Year, the Administrative Body of Watermaster shall determine

and notify all Exchangors and Exchangees of the total of the allocated requests for Exchange Pool water and shall provide a schedule divided into categories of requests showing the quantity allocated to each Exchangee and a schedule of the allocation of the total Exchange Pool requirements among the Exchangors. Such notification shall also advise Exchangors and Exchangees of the prices to be paid to Exchangors for subscriptions utilized and the Exchange Pool Price for that Administrative Year as determined by the Water Rights Panel. The determinations of the Watermaster in this regard shall be subject to review by the Court in accordance with the procedure set forth in Part II of this Judgment.

(13) Payment by Exchangees.

Each Exchangee shall, on or prior to last day of the third month of each Administrative Year, pay to the Watermaster one-quarter of said price per acre-foot multiplied by the number of acre feet of such party's approved request and shall, on or before the last day of each of the next succeeding three months, pay a like sum to the Watermaster. Such amounts must be paid by each Exchangee regardless of whether or not it in fact extracts or uses any of the water it has requested to purchase from the Exchange Pool.

(14) Payments to Exchangors.

As soon as possible after receipt of moneys from Exchangees, the Watermaster shall remit to the Exchangors their pro rata portions of the amount so received in accordance with the provisions of paragraph 10 above.

(15) Delinquent Payments.

Any amounts not paid on or prior to any due date above shall carry interest at the rate of 1% per month or any part of a month. Any amounts required to be so paid may be enforced by the equitable powers of the Court, including, but not limited to, the injunctive process of the Court. In addition thereto, the Watermaster, as Trustee for the Exchangors and acting through the Water Rights Panel, may enforce such payment by any appropriate legal action, and shall be

entitled to recover as additional damages reasonable attorneys' fees incurred in connection therewith. If any Exchangee shall fail to make any payments required of it on or before 30 days after the last payment is due, including any accrued interest, said party shall thenceforward not be entitled to purchase water from the Exchange Pool in any succeeding Administrative Year except upon order of the Court, upon such conditions as the Court may impose.

IV. PROVISIONS FOR THE STORAGE OF WATER AND THE EXTRACTION OF STORED WATER.

A. Adjudication of Available Dewatered Space, Storage Capacity and Storage Apportionment.

There exists within the Basin a substantial amount of available space which has not been optimally utilized for basin management and for storage of native and imported waters. The Court finds and determines that (i) there is 330,000 acre feet of Available Dewatered Space in the Basin; (ii) use of this Available Dewatered Space will increase reasonable and beneficial use of the Basin by permitting the more efficient procurement and management of Replenishment Water, conjunctive use, and for direct and in-lieu recharge, thereby increasing the prudent storage and recovery of Stored Water for later use by parties to this Judgment, conservation of water and reliability of the water supply available to all Parties; and (iii) use of the Available Dewatered Space pursuant to the terms and conditions of this Judgment will not result in Material Physical Harm.

B. Avoidance of Material Physical Harm.

It is essential that the use of the Available Dewatered Space be undertaken for the greatest public benefit pursuant to uniform, certain, and transparent regulation that encourages the conservation of water and reliability of the water supply, avoids Material Physical Harm, and promotes the reasonable and beneficial use of water. Accordingly, in the event Watermaster becomes aware of the development of a Material Physical Harm, or imminent threat of the development of a Material Physical Harm, relating to the

use of the Available Dewatered Space, Watermaster shall, within thirty (30) days thereafter, notice a hearing before the Court and concurrently file a report with the Court, served on all parties, which shall explain the relevant facts then known to Watermaster relating to the Material Physical Harm, or imminent threat thereof, including without limitation, the location of the occurrence, the source or cause, existing and potential physical impacts or consequences of the identified or threatened material Physical Harm, and any recommendations to remediate the identified or threatened Material Physical Harm.

C. Apportionment of Available Dewatered Space.

To fairly balance the needs of the divergent interests of parties having water rights in the Basin, on the one hand, and the replenishment functions of WRD on the other hand, and in consideration of the shared desire and public purpose of removing impediments to the voluntary conservation, storage, exchange and transfer of water, all of the Available Dewatered Space is hereby adjudicated and apportioned into complimentary classifications of Stored Water and a Basin Operating Reserve as set forth in this Part IV. The apportionment contemplates flexible administration of storage capacity where use is apportioned among competing needs, while allowing all Available Dewatered Space to be used from time to time on a "space available" basis, subject to the priorities specified in this Judgment, and as further defined in Section IV(I) of this Judgment. The Court further finds and determines that, of the Available Dewatered Space, there is 220,000 acre-feet of storage capacity in the Central Basin which is presently available ("Adjudicated Storage Capacity"). The use of Adjudicated Storage Capacity as provided in this Judgment will not adversely affect the efficient operation of the Basin or the recharge of water necessary for the production of the parties' respective Allowed Pumping Allocations. The apportionment of Adjudicated Storage Capacity as provided herein will allow for flexible administration of groundwater storage within the Basin. The Adjudicated Storage Capacity is hereby assigned to Individual Storage Allocations and Community Storage as provided herein, provided however that if all

space in a particular classification is fully occupied then, on a "space available" basis, to available space within the other classifications of Adjudicated Storage Capacity and, only then, to available space within Basin Operating Reserve.

The Court further finds and determines that, out of the Available Dewatered Space, there is 110,000 acre feet that should be set aside for use by WRD as a Basin Operating Reserve, provided in Section IV(L), and subject to temporary occupancy by Stored Water as permitted hereunder.

No storage of water shall occur in the Basin except in conformity with this Judgment.

D. Individual Storage Allocation.

Each Party having an adjudicated groundwater extraction right hereunder shall have a priority right to store water in an Individual Storage Account, through conversion of Carryover to Stored Water as provided herein, or by any means authorized by this Judgment, up to a maximum of 50% of such party's Allowed Pumping Allocation. The cumulative quantity of Adjudicated Storage Capacity subject to individual storage allocation is 108,750 acre-feet. In recognition of prior importation of water which was introduced into the Basin as Stored Water, and which has not yet been extracted, the Court finds and determines that, as of the date of this Order, the following Parties have occupied a portion of their respective Individual Storage Allocations and have all associated rights therein, as follows:

City of Long Beach:	13,076.8 acre-feet
City of Lakewood:	500 acre-feet
City of Downey:	500 acre-feet
City of Cerritos	500 acre-feet

E. Community Storage; Regional Disadvantaged Communities Incentive Program.

In addition to Individual Storage Allocation, a Party that has fully occupied its Individual Storage allocation may, on a first in time, first in right basis (subject to the

limits expressed below) place water into storage in the "Community Storage Pool." The cumulative quantity of Adjudicated Storage Capacity allocated to Community Storage shall be 111,250 acre-feet. So long as there is available capacity in the Community Storage Pool, any Party may store water in the Community Storage Pool through conversion of Carryover to Stored Water as provided herein, or by any other means authorized by this Judgment, provided such Party has first fully occupied that party's available Individual Storage Allocation.

(1) Parties to this Judgment which, as of January 1, 2013, held Allowed Pumping Allocation of not greater than 5,000 acre-feet shall have a first priority right to occupy, in the aggregate, up to 10,000 acre-feet of storage space within the Central Basin Community Storage Pool, on the basis of first in time, first in right.

(2) Water stored pursuant to the Regional Disadvantaged Communities Incentive Program shall have a second priority right to occupy up to 23,000 acre-feet within the Community Storage Pool, on such terms as shall be determined by the Court.

(3) Any further storage in excess of the maximum quantity of Community Storage will be on a "space-available" interim basis. From time to time, and on a "space-available" basis, the total quantity of water available for storage is permitted to exceed Adjudicated Storage Capacity for the Community Storage Pool on an interim basis. This interim storage may occur if storage capacity exists as a result of unused Adjudicated Storage Capacity within other classifications, or available space exists in the Basin Operating Reserve. Such interim storage, however, is subject to priority rights to such Dewatered Space as provided in this Judgment. A party that seeks to convert the water temporarily held in interim storage to a more firm right, may contract for the use of another party's Individual Storage Allocation, or may add such water to the Community Storage Pool once space therein becomes available.

(4) After a party occupies available storage capacity within the Community Storage Pool and then withdraws water from the Community Storage Pool, the storing party will be allowed a period of twenty-four (24) months to refill the evacuated storage before the capacity will be determined excess and available for use by other parties. Once the Basin's Community Storage Pool has been filled for the first time, a party may exercise its twenty-four (24) month refill priority only once, and then only provided there is then capacity available to permit that party to refill the vacated space. Except to the extent Community Storage space may be subject to such priority right to re-fill, all space therein shall be occupied on a first in time, first in right basis.

(5) A party that has occupied storage in the Community Storage Pool for ten (10) consecutive years shall be deemed to extract its Stored Water first in subsequent years (notwithstanding the order of water production set forth in Section I(B)(3)) until its entire Community Storage account has been extracted, but thereafter may again make use of Community Storage on the same terms available to other parties on a first in time, first in right, space-available basis.

(6) Any quantity of water held in the Community Storage Pool for a term greater than ten (10) consecutive years shall be assessed an annual water loss equal to 5% of the lowest quantity of water held within the party's Community Storage Pool account at any time during the immediately preceding ten-year period. The lowest quantity means the smallest amount of water held by the Party in the Community Storage Pool during any of the preceding ten (10) years, with a new loss calculation being undertaken every year. Water subject to the loss assessment will be deemed dedicated to the Basin Operating Reserve in furtherance of the physical solution without compensation. Water lost to the Basin shall constitute water replenished into the Central Basin for the benefit of all parties

F. Limit on Storage.

Irrespective of the category of storage utilized, each party to this Judgment may not cumulatively have in storage at any time Stored Water totaling more than two hundred percent (200%) of that party's Allowed Pumping Allocation. Subject to the foregoing, the right to produce Stored Water may be freely transferred to another party to this Judgment, or as otherwise permitted herein.

G. Extractions of Stored Water; Exemption from Replenishment Assessment.

The Court finds and declares that the extraction of Stored Water as permitted hereunder does not constitute "production of groundwater" within the meaning of Water Code Section 60317 and that no Replenishment Assessment shall be levied on the extraction of Stored Water. WRD has stipulated to the same. This determination reflects the practical application of certain provisions of this Judgment concerning storage of water, including, without limitation, understanding the following: (1) payment of the Replenishment Assessment is required upon the conversion of Carryover Water into storage, and; (2) developed water introduced into the Basin for storage by or on behalf of a Party through spreading or injection need not be replenished by WRD and should not be subject to the Replenishment Assessment.

H. Storage Procedure.

The Administrative Body shall (i) prescribe forms and procedures for the orderly reporting of Stored Water, (ii) maintain records of all water stored in the Basin, and (iii) undertake monitoring and modeling of Stored Water as may be reasonably required. As to any Storage Projects that will require review and approval by the Storage Panel, the Administrative Body shall provide appropriate applications, and shall work with project applicants to complete the application documents for presentation to the Storage Panel. The Administrative Body shall be responsible for conducting any groundwater modeling necessary to evaluate a proposed Storage Project. The proponent of a proposed project will bear all costs associated with the review of the application for approval of the project and all costs associated with its implementation. Nothing in this Judgment shall alter the applicant(s) duty to comply with CEQA or to meet other legal requirements as to any

proposed Storage Project. Within thirty (30) days after final submission of the storage application documents, the Administrative Body shall provide notice of the storage application (either by electronic mail or U.S. postal mail), together with a copy of the application documents, to all parties possessing an Allowed Pumping Allocation, and to any other person requesting notice thereof. Following notice, any necessary hearings before the Storage Panel shall be conducted as provided in Section IV(O) of this Judgment.

I. Loss of Stored Water/Relative Priority.

To balance the need to protect priority uses of storage and to encourage the full utilization of Adjudicated Storage Capacity and Basin Operating Reserve where it can be accommodated without interference with priority uses, and except as otherwise provided in this Judgment, no water held in any authorized storage account will be deemed lost from that storage account unless the cumulative quantity of water held as Stored Water plus the quantity of water held within the Basin Operating Reserve exceeds 330,000 acre-feet. Where all Adjudicated Storage Capacity and Basin Operating Reserve has been occupied, the first Stored Water to be deemed lost shall be the last water stored as Community Storage. Upon receipt of a bona fide request by another use entitled to priority hereunder, Watermaster shall issue a notice requiring the other parties to evacuate their Stored Water. Any Stored Water that is not evacuated shall be deemed dedicated to the Basin Operating Reserve in furtherance of the physical solution without compensation and accounted for accordingly.

J. Limits on Extraction.

Anything in this Judgment to the contrary notwithstanding, no party shall extract greater than 140% of the sum of (i) the party's Allowed Pumping Allocation and (ii) the party's leased water, except upon prior approval by the Water Rights Panel. For this purpose, a party's total extraction right for a particular year shall include that party's Allowed Pumping Allocation and any contractual right through lease or other means to utilize the adjudicated rights of another party. Where such proposed extraction would

occur within the Central Basin Pressure Area as defined by Watermaster consistent with historical records, the Water Rights Panel shall submit such request for review by the Board of WRD. The Water Rights Panel shall not approve any request for over-extraction within the Pressure Area without a written finding by the Board of WRD that such over-extraction will not cause Material Physical Harm. The role of the Board of WRD in this process shall not be read to expand or restrict WRD's statutory authority. Consideration shall be on an expedited basis.

K. Increased Extractions in the Central Basin for Certain Water Purveyors.

(1) This Court also maintains continuing jurisdiction over the West Coast Basin, which bounds the Central Basin to the west.

(2) Certain Water Purveyors are parties to both this Amended Judgment and the judgment governing the West Coast Basin and serve communities overlying both the Central Basin and the West Coast Basin.

(3) Certain Water Purveyors may exceed their Allowed Pumping Allocation in any Administrative Year, subject to all of the following conditions:

(a) The Water Purveyor is one of the following eligible Parties:

(i) City of Los Angeles

(ii) Golden State Water Company

(iii) California Water Service Company.

(b) Increased extractions pursuant to this Section shall not exceed 5,000 acre-feet per Water Purveyor for the particular Administrative Year.

(c) Increased extractions pursuant to this Section shall not exceed the Water Purveyor's unused "Adjudicated Rights" in the West Coast Basin.

(d) Increased extractions pursuant to this Section shall not result in Material Physical Harm.

(4) Notwithstanding the foregoing, nothing herein permits extraction

of water within the Central Basin in excess of 140% of Allowed Pumping Allocation for the particular Administrative Year, except as otherwise permitted under this Judgment.

(5) Replenishment of any water extracted from the Central Basin pursuant to this Section shall occur exclusively in the Central Basin.

(6) The benefits of this Section are made available only to the certain Water Purveyors that serve communities overlying the Central Basin and communities overlying the West Basin, in recognition of the management of water resources by those Water Purveyors to serve such overlying communities. It is not made, nor is it related to, a determination of an underflow between the basins, a cost or benefit allocation, or any other factor relating to the allocation of the Replenishment Assessment.

L. Special Provisions for Temporary Storage within Community Storage Pool.

The Central Basin Municipal Water District ("CBMWD") shall take such action as may be necessary to reduce its Allowed Pumping Allocation to five (5) acre-feet or fewer by December 31, 2018, and has agreed, by stipulation, not to acquire any additional Central Basin water rights. Upon application by CBMWD, the Storage Panel may, after making each of the findings required in this subsection, approve storage of water by CBMWD within the Community Storage Pool subject to the stated conditions. The Storage Panel may only authorize such storage after finding each of the following to be true as of the date of such approval:

(1) CBMWD (a) then owns five (5) acre-feet or fewer of Allowed Pumping Allocation, and (b) has not produced water utilizing any extraction rights it holds within the Basin but has only engaged in the sale or leasing of those rights to others.

(2) There is available space for Storage within the Community Storage

Pool.

(3) CBMWD has identified a source of imported water that may be brought into the Basin and stored underground.

(4) The water identified for storage (a) is unlikely to be acquired by other parties through surface delivery for use within the Basin, and (b) was offered to WRD to purchase for replenishment purposes at the same price that CBMWD otherwise sells imported water to WRD and WRD declined to purchase said water, within a reasonable period of time.

(5) There will be no Material Physical Harm associated with the introduction of the water into storage, or its extraction, in the manner approved by the Storage Panel.

The condition expressed in Section IV(L)(1)(a) above shall not be operative until January 1, 2019, or upon reduction of CBMWD's Allowed Pumping Allocation to five (5) acre-feet or fewer, whichever first occurs. CBMWD may not extract the Stored Water, and may instead only transfer that Stored Water to a party having extraction rights, or to WRD for replenishment purposes only. Such Stored Water not so transferred within three (3) years following its storage may be purchased by WRD, at its option, for replenishment purposes only, at a price not exceeding the actual cost incurred by CBMWD in importing and storing the water in the first instance, plus a reasonable administrative charge for overhead not exceeding five percent (5%) of the price paid by CBMWD for the water with no other fees or markups imposed by CBMWD. Except as otherwise permitted in this Section, any such Stored Water held by CBMWD for a term greater than three (3) years shall be assessed an annual water loss equal to 10% of the amount of such Stored Water at the end of each year. Water subject to the loss

assessment will be deemed dedicated to the Basin Operating Reserve in furtherance of the physical solution without further compensation. The Storage Panel shall grant CBMWD one or more extensions of such term, not exceeding total extensions of three (3) additional years, following public hearing, if the Storage Panel determines that the Stored Water has been actively marketed by CBMWD for transfer to Parties on reasonable terms in the previous year. The Storage Panel may impose such additional reasonable conditions as it determines to be appropriate. Any review by the Storage Panel hereunder shall only occur at a public hearing held following at least 15 days' (but not more than 30 days') mailed notice to all Parties to this Judgment, at which hearing an opportunity for public comment shall be afforded in advance of any such decision. However, the Storage Panel may consider an application on shorter notice under exigent circumstances, including the potential loss of the water proposed to be stored if action is not taken sooner. CBMWD shall have the right to appeal any action or inaction by the Storage Panel to this court. The storage and extraction of Stored Water hereunder shall otherwise be subject to all other provisions of this Judgment. The court finds and declares that this subsection constitutes a "court order issued by a court having jurisdiction over the adjudication of groundwater extraction rights within the groundwater basin where storage is sought" within the meaning of Water Code §71610(b)(2)(B). Nothing in this provision impedes CBMWD's ability to store water pursuant to a contract with an adjudicated groundwater extraction rights holder as permitted by Water Code § 71610(b)(2)(A) and otherwise in accordance with this Judgment.

M. Basin Operating Reserve.

It is in the public interest and in furtherance of the physical solution for WRD to prudently exercise its statutory discretion to purchase, spread, and inject Replenishment Water, to provide for in-lieu replenishment, and otherwise to fulfill its replenishment function within the Basin as provided in Water Code Section 60000 et. seq. Hydrologic,

regulatory and economic conditions now prevailing within the State require that WRD be authorized to exercise reasonable discretion and have flexibility in the accomplishment of its replenishment function. Accordingly, WRD may pre-purchase or defer the purchase of Replenishment Water, and may otherwise purchase and manage available sources of Replenishment Water under the most favorable climatic and economic conditions as it may determine reasonable and prudent under the circumstances. It is the intent of the parties to preserve space for such replenishment activities, including capture of natural inflows during wet years, recapture of water when possible, and artificial replenishment when water is available at discounted rate, for the benefit of the Basin and the parties to the Judgment. The Basin Operating Reserve is intended to allow WRD to meet its replenishment needs to make APA available for extraction by all water rights holders. Accordingly, WRD shall have a priority right to occupy up to 110,000 acre-feet of the Available Dewatered Space as the "Basin Operating Reserve" for the acquisition and replenishment of water, or to ensure space remains available in the Basin to capture natural inflows during wet years for the benefit of the parties to the Judgment, to offset over-production. The priority right is not intended to allow WRD to sell or lease stored water, storage, or water rights. To the extent WRD does not require the use of all of such Basin Operating Reserve, that portion of the Basin Operating Reserve that is not then being used shall be available to other Parties to store water on a temporary and space-available basis. No Party may use any portion of the Basin Operating Reserve for space-available storage unless that Party has already maximized its allowed Storage pursuant to its Individual Storage Allocation and all available Community Storage is already in use. WRD's failure to use any portion of its Basin Operating Reserve shall not cause forfeiture or create a limitation of its right to make use of the designated space in the future. WRD's first priority right to this category of space shall be absolute. To the extent that there is a conflict between WRD and a third party regarding the availability of and desire to use any portion of the space available for replenishment up to the maximum limits set forth in this section, the interests of WRD will prevail. If a party other than

WRD is using the Basin Operating Reserve space on a "space available" basis and a conflict develops between WRD and the storing party, the storing party will, upon notice from WRD, evacuate the Stored Water within ninety (90) days thereafter. In such event, temporary occupancy within the Basin Operating Reserve shall be first in time, first in right, and the last Party to store water shall be required to evacuate first until adequate space shall be made available within the Basin Operating Reserve to meet WRD's needs. The storing party or parties assume all risks of waste, spill and loss regardless of the hardship. Stored Water that is not evacuated following WRD's notice of intent to occupy the Basin Operating Reserve will be deemed dedicated to the Basin Operating Reserve in furtherance of the physical solution without compensation and accounted for accordingly. Nothing herein shall permit WRD to limit or encumber, by contract or otherwise, its right to use the Basin Operating Reserve for Replenishment purposes for any reason, or to make space therein available to any person by any means. Notwithstanding the foregoing, to the extent excess space is available, water evacuated from the Basin Operating Reserve as provided in this Section shall be deemed added to available space within the Individual Storage Allocations and Community Storage Pool, subject to the priority rights otherwise provided in this Judgment.

N. Water Augmentation.

The parties, in coordination with WRD, may undertake projects that add to the long-term reliable yield of the Basin. Innovations and improvements in practices that increase the conservation and maximization of the reasonable and beneficial use of water should be promoted. To the extent that Parties to the Judgment, in coordination with WRD, implement a project that provides additional long-term reliable water supply to the Central Basin, the annual extraction rights in the Central Basin will be increased commensurately in an amount to be determined by the Storage Panel to reflect the actual yield enhancement associated with the project. Augmented supplies of water resulting from such a project may be extracted or stored as permitted in this Judgment in the same manner as other water. Participation in any Water Rights Augmentation Project shall be

voluntary. A party may elect to treat a proposed project as a Water Augmentation Project (for the purpose of seeking an increase in that party's Allowed Pumping Allocation) or may elect to treat such a project as a Storage Project under the other provisions of this Judgment. The terms of participation in any Water Augmentation Project will be at the full discretion of the participating parties. All Water Augmentation Projects will be approved by the Storage Panel.

(1) Participating Parties.

Parties who propose a Water Augmentation Project ("Project Leads") may do so in their absolute discretion, upon such terms as they may determine. All other parties to this Judgment will be offered an opportunity to participate in the Water Augmentation Project on condition that they share proportionally in common costs and benefits, and assume the obligation to bear exclusively the cost of any improvements that are required to accommodate their individual or particular needs. Notice shall be provided which generally describes the project and the opportunity to participate with sufficient time for deliberation and action by any of these parties who could potentially participate. Disputes over the adequacy of notice shall be referred to the Storage Panel, and then to the Court under its continuing jurisdiction. Parties who elect to participate ("Project Participants") may do so provided they agree to offer customary written and legally binding assurances that they will bear their proportionate costs attributable to the Water Rights Augmentation Project, or provide other valuable consideration deemed sufficient by the Project Leads and the Project Participants.

(2) Determination of Additional Extraction Rights.

The amount of additional groundwater extraction as a result of a Water Augmentation project will be determined by the Storage Panel, subject to review by the Court. The determination will be based upon substantial evidence which supports the finding that the Water Augmentation project will increase the long-term sustainable yield of the respective Basin by an amount at least equal to the

proposed increase in extraction rights.

(3) Increase in Extraction Rights.

A party that elects to participate and pays that party's full pro-rata share of costs associated with any Water Augmentation Project and/or reaches an agreement with other participants based upon other valuable consideration acceptable to the Project Leads and Project Participants, will receive a commensurate increase in extraction rights. Non-participating parties will not receive an increase or a decrease in extraction rights. Any party that elects not to participate will not be required to pay any of the costs attributable to the particular Water Augmentation Project, whether directly or indirectly as a component of the WRD Replenishment Assessment.

(4) Nominal Fluctuations.

Because water made available for Water Rights Augmentation will be produced annually, fluctuations in groundwater levels will be temporary, nominal and managed within the Basin Operating Reserve.

(5) Availability of New Water.

The amount of additional groundwater extraction established as a result of a Water Augmentation Project shall be equal to the quantity of new water in the Basin that is attributable to that Water Augmentation Project. No extraction shall occur and no extraction right shall be established until new water has been actually introduced into the Basin as a result of the Project. Any approval for a Water Augmentation Project shall include provisions (a) requiring regular monitoring to determine the actual amount of such new water made available, (b) requiring make-up water or equivalent payment therefor to the extent that actual water supply augmentation does not meet projections, and (c) adjusting extraction rights attributable to the Water Augmentation Project to match the actual water created. The right to extract augmented water from the Basin resulting from a party's participation in a Water Augmentation Project shall be accounted for

separately and shall not be added to a party's Allowed Pumping Allocation. No Replenishment Assessment shall be levied against the extraction of augmented water.

(6) Limitation.

Notwithstanding the foregoing, WRD will not obtain any water rights or extraction rights under this Judgment by virtue of its participation in a Water Augmentation Project. If WRD participates in a Water Rights Augmentation Project through funding or other investments, its allocation of new water from the project shall be used to offset its replenishment responsibilities.

O. Limits on Watermaster Review.

It shall not be necessary for Watermaster, or any constituent body thereof, to review or approve any of the following before the affected Party may proceed: (i) exercise of adjudicated water rights consistent with this Judgment, except for extraction above 140% of a Party's extraction right as set out in Section IV(J) of this Judgment; (ii) replenishment of the Basin with Replenishment Water by WRD consistent with Water Code Section 60000 et seq., including replenishment of water produced by water rights holders through the exercise of adjudicated water rights; (iii) WRD's operations within the Basin Operating Reserve; (iv) Carryover Conversion or other means of the filling of the Individual Storage Accounts and the Community Storage Pool, as provided in this Judgment, as long as existing water production, spreading, or injection facilities are used; and (v) individual transfers of the right to produce Stored Water as permitted in Section IV(F). All other Storage Projects and all Water Augmentation Projects shall be subject to review and approval as provided herein, including (i) material variances to substantive criteria governing projects exempt from the review and approval process, (ii) modifications to previously approved Storage Projects and agreements, (iii) a party's proposal for Carryover Conversion in quantities greater than the express apportionment of Adjudicated Storage Capacity on a non-priority, space-available, interim basis, and (iv) Storage, by means other than Carryover Conversion, when new production,

spreading, or injection facilities are proposed to be utilized.

P. Hearing Process For Watermaster Review.

The following procedures shall be followed by Watermaster where Watermaster review of storage or extraction of Stored Water is required or permitted under this Judgment:

(1) No later than thirty (30) days after notice has been issued for the storage application, the matter shall be set for hearings before the Storage Panel. A staff report shall be submitted by WRD staff in conjunction with the completed storage application documents and the Water Rights Panel may prepare an independent staff report, if it elects to do so.

(2) The Board of WRD and the Water Rights Panel (sitting jointly as the Storage Panel) shall conduct a joint hearing concerning the storage application.

(3) All Watermaster meetings shall be conducted in the manner prescribed by the applicable Rules and Regulations. The Rules shall provide that all meetings of Watermaster shall be open to water rights holders and that reasonable notice shall be given of all meetings.

(4) The Board of WRD and the Water Rights Panel shall each adopt written findings explaining its decision on the proposed Storage Project, although if both entities reach the same decision on the Storage Project, they shall work together to adopt a uniform set of findings.

(5) Unless both the Board of WRD and the Water Rights Panel approve the Storage Project, the Storage Project application shall be deemed denied (a "Project Denial"). If both the Board of WRD and the Water Rights Panel approve the Storage Project, the Storage Project shall be deemed approved (a "Project Approval").

Q. Trial Court Review

(1) The applicant may seek the Storage Panel's reconsideration of a

Project Denial. However, there shall be no process for mandatory reconsideration or mediation of a Project Approval or a Project Denial either before the Administrative Body, or before the Water Rights Panel.

(2) Any Party may file an appeal from a Project Approval or Project Denial with this Court, as further described in Section II(F).

(3) In order to (a) promote the full presentation of all relevant evidence before the Storage Panel in connection with its consideration of any proposed Storage Project, (b) achieve an expeditious resolution of any appeal to the Court, and (c) accord the appropriate amount of deference to the expertise of the Storage Panel, the appeal before the Court shall be based solely on the administrative record, subject only to the limited exception in California Code of Civil Procedure section 1094.5(e).

(4) If both the WRD Board and the Water Rights Panel each vote to deny or approve a proposed Storage Project, it shall be an action by the Storage Panel and that decision shall be accorded by the Court deference according to the substantial evidence test. If one of the reviewing bodies votes to approve the proposed Storage Project and the other reviewing body votes to deny the proposed storage project, then the Court's review shall be *de novo*, although still restricted to the administrative record. In the case of any *de novo* Trial Court review, the findings made by the respective Watermaster bodies shall not be accorded any weight independent of the evidence supporting them.

R. Space Available Storage, Relative Priority, and Dedication of "Spilled" Water.

To balance the need to protect priority uses of storage and to encourage the full utilization of Available Dewatered Space within the Adjudicated Storage Capacity and the Basin Operating Reserve, any Party may make interim, temporary use of then currently unused Available Dewatered Space within any category of Adjudicated Storage Capacity, and then if all Adjudicated Storage Capacity is being fully used for Stored

Water within the Basin Operating Reserve ("Space-Available Storage"), subject to the following criteria:

(1) Any Party may engage in Space-Available Storage without prior approval from Watermaster provided that the storing Party or Parties shall assume all risks of waste, spill, and loss regardless of the hardship. Whenever the Storage Panel determines that a Party is making use of excess Available Dewatered Space for Space-Available Storage, the Storage Panel shall issue written notice to the Party informing them of the risk of spill and loss.

(2) Whenever the Available Dewatered Space is needed to accommodate the priority use within a respective category of Adjudicated Storage Capacity, or WRD seeks to make use of its priority right to the Basin Operating Reserve to fulfill its replenishment function, the Storage Panel shall issue a notice to evacuate the respective category of Adjudicated Storage Capacity or Basin Operating Reserve, as applicable, within the time-periods set forth within this Amended Judgment. To the extent the Stored Water is not timely evacuated such Stored Water will be placed into any other excess Available Dewatered Space, first within the Adjudicated Storage Capacity, if available, and then if all Adjudicated Storage Capacity is being fully used for Stored Water within the Basin Operating Reserve. If no excess Available Dewatered Space is available within the Basin Operating Reserve, then the Stored Water shall be deemed spilled and will be deemed dedicated to the Basin Operating Reserve in furtherance of the physical solution without compensation and accounted for accordingly. A Party that seeks to convert the Stored Water temporarily held in interim storage as Space-Available Storage to a more firm right, may in its discretion, contract for the use of another Party's Individual Storage Allocation, or may add such water to the Community Storage Pool once space therein becomes available.

(3) No Stored Water will be deemed abandoned unless the cumulative

quantity of water held as Stored Water plus the quantity of water held in the Basin Operating Reserve exceeds 330,000 (three hundred and thirty thousand) acre-feet in the Central Basin.

V. CONTINUING JURISDICTION OF THE COURT.

The Court hereby reserves continuing jurisdiction and upon application of any interested party, or upon its own motion, may review and redetermine the following matters and any matters incident thereto:

A. Its determination of the permissible level of extractions from Central Basin in relation to achieving a balanced basin and an economic utilization of Central Basin for groundwater storage, taking into account any then anticipated artificial replenishment of Central Basin by governmental agencies for the purpose of alleviating what would otherwise be annual overdrafts upon Central Basin and all other relevant factors.

B. Whether in accordance with applicable law any party has lost all or any portion of his rights to extract groundwater from Central Basin and, if so, to ratably adjust the Allowed Pumping Allocations of the other parties and ratably thereto any remaining Allowed Pumping Allocation of such party.

C. To remove any Watermaster or constituent body appointed from time to time and appoint a new Watermaster; and to review and revise the duties, powers and responsibilities of the Watermaster or its constituent bodies and to make such other and further provisions and orders of the Court that may be necessary or desirable for the adequate administration and enforcement of the Judgment.

D. To revise the price to be paid by Exchangees and to Exchangors for Exchange Pool purchases and subscriptions.

E. In case of emergency or necessity, to permit extractions from Central Basin for such periods as the Court may determine: (i) ratably in excess of the Allowed Pumping Allocations of the parties; or (ii) on a non-ratable basis by certain parties if

either compensation or other equitable adjustment for the benefit of the other parties is provided. Such overextractions may be permitted not only for emergency and necessity arising within Central Basin area, but to assist the remainder of the areas within The Metropolitan Water District of Southern California in the event of temporary shortage or threatened temporary shortage of its imported water supply, or temporary inability to deliver the same throughout its area, but only if the court is reasonably satisfied that no party will be irreparably damaged thereby. Increased energy cost for pumping shall not be deemed irreparable damage. Provided, however, that the provisions of this subparagraph will apply only if the temporary shortage, threatened temporary shortage, or temporary inability to deliver was either not reasonably avoidable by the Metropolitan Water District, or if reasonably avoidable, good reason existed for not taking the steps necessary to avoid it.

F. To review actions of the Watermaster.

G. To assist the remainder of the areas within The Metropolitan Water District of Southern California within the parameter set forth in subparagraph (e) above.

H. To provide for such other matters as are not contemplated by the Judgment and which might occur in the future, and which if not provided for would defeat any or all of the purposes of this Judgment to assure a balanced Central Basin subject to the requirements of Central Basin Area for water required for its needs, growth and development.

The exercise of such continuing jurisdiction shall be after 30 days' notice to the parties, with the exception of the exercise of such continuing jurisdiction in relation to subparagraphs E and G above, which may be *ex parte,* in which event the matter shall be forthwith reviewed either upon the Court's own motion or the motion of any party upon which 30 days' notice shall be so given. Within ten (10) days of obtaining any *ex parte* order, the party so obtaining the same shall mail notice thereof to the other parties. If any other party desires Court review thereof, the party obtaining the *ex parte* order shall bear the reasonable expenses of mailing notice of the proceedings, or may in lieu thereof undertake the mailing. Any contrary or

modified decision upon such review shall not prejudice any party who relied on said *ex parte* order.

VI. GENERAL PROVISIONS.

A. Judgment Constitutes Inter Se Adjudication.

This Judgment constitutes an inter se adjudication of the respective rights of all parties, except as may be otherwise specifically indicated in the listing of the water rights of the parties of this Judgment, or in Appendix "2" hereof. All parties to this Judgment retain all rights not specifically determined herein, including any right, by common law or otherwise, to seek compensation for damages arising out of any act or omission of any person. This Judgment constitutes a "court order" within the meaning of Water Code Section 71610(B)(2)(b).

B. Assignment, Transfer, Etc., of Rights.

Subject to the other provision of this Judgment, and any rules and regulations of the Watermaster requiring reports relative thereto, nothing herein contained shall be deemed to prevent any party hereto from assigning, transferring, licensing or leasing all or any portion of such water rights as it may have with the same force and effect as would otherwise be permissible under applicable rules of law as exist from time to time.

C. Service Upon and Delivery to Parties of Various Papers.

Service of the Judgment on those parties who have executed that certain Stipulation and Agreement for Judgment or who have filed a notice of election to be bound by the Exchange Pool provisions shall be made by first class mail, postage prepaid, addressed to the designee and at the address designated for that purpose in the executed and filed Counterpart of the Stipulation and Agreement for Judgment or in the executed and filed "Notice of Election to be Bound by Exchange Pool Provisions," as the case may be, or in any substitute designation filed with the Court.

Each party who has not heretofore made such a designation shall, within 30 days after the Judgment shall have been served upon that party, file with the Court, with proof

of service of a copy upon the Watermaster, a written designation of the person to whom and the address at which all future notices, determinations, requests, demands, objections, reports and other papers and processes to be served upon that party or delivered to that party are to be so served or delivered.

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

Delivery to or service upon any party by the Watermaster, by any other party, or by the Court, or any item required to be served upon or delivered to a party under or pursuant to the Judgment may be by deposit in the mail, first class, postage prepaid, addressed to the designee and at the address in the latest designation filed by that party.

D. Judgment Does Not Affect Rights, Powers, Etc., of Plaintiff District.

Nothing herein constitutes a determination or adjudication which shall foreclose Plaintiff District from exercising such rights, powers, privileges and prerogatives as it may now have or may hereafter have by reason of provisions of law.

E. Continuation of Order under Interim Agreement.

The order of Court made pursuant to the "Stipulation and Interim Agreement and Petition for Order" shall remain in effect through the Administrative Year in which this Judgment shall become final (subject to the reserved jurisdiction of the Court).

F. Effect of Extractions by Exchangees; Reductions in Extractions.

With regard to Exchange Pool purchases, the first extractions by each Exchangee shall be deemed the extractions of the quantities of water which that party is entitled to extract pursuant to his allocation from the Exchange Pool for that Administrative Year. Each Exchangee shall be deemed to have pumped his Exchange Pool request so allocated for and on behalf of each Exchangor in proportion to each Exchangor's subscription to the Exchange Pool which is utilized to meet Exchange Pool requests. No Exchangor shall ever be deemed to have relinquished or lost any of its rights determined in this

Judgment by reason of allocated subscriptions to the Exchange Pool. Each Exchangee shall be responsible as between Exchangors and that Exchangee, for any tax or assessment upon the production of groundwater levied for replenishment purposes by WRD or by any other governmental agency with respect to water extracted by such Exchangee by reason of Exchange Pool allocations and purchases. No Exchangor or Exchangee shall acquire any additional rights, with respect to any party to this action, to extract waters from Central Basin pursuant to Water Code Section 1005.1 by reason of the obligations pursuant to and the operation of the Exchange Pool.

G. Judgment Binding on Successors, Etc.

This Judgment and all provisions thereof are applicable to and binding upon not only the parties to this action, but as well to their respective heirs, executors, administrators, successors, assigns, lessees, licensees and to the agents, employees and attorneys in fact of any such persons.

H. Costs.

No party shall recover its costs herein as against any other party.

I. Intervention of Successors in Interest and New Parties.

Any person who is not a party (including but not limited to successors or parties who are bound by this Judgment) and who proposes to produce water from the Basin, store water in the Basin, or exercise water rights of a predecessor may seek to become a party to this Judgment through a Stipulation in Intervention entered into with the Plaintiff. Plaintiff may execute said Stipulation on behalf of the other parties herein, but such Stipulation shall not preclude a party from opposing such intervention at the time of the court hearing thereon. Said Stipulation for Intervention must thereupon be filed with the Court, which will consider an order confirming said intervention following thirty (30) days' notice to the parties. Thereafter, if approved by the Court, such intervenor shall be a party bound by this Judgment and entitled to the rights and privileges accorded under the physical solution herein.

J. Effect of this Amended Judgment on Orders Filed Herein.

This Third Amended Judgment shall not abrogate such rights of additional carryover of unused water rights as may otherwise exist pursuant to orders herein filed June 2, 1977 and September 29, 1977.

THE CLERK WILL ENTER THIS THIRD AMENDED JUDGMENT FORTHWITH.

DATED: 12-23-13

ABRAHAM KHAN

Judge of the Superior Court

APPENDIX 1

Description of Central Basin Area

That certain area in the County of Los Angeles, State of California, situated within the following exterior boundaries:

1. Commencing at the southernmost corner of the basin at a point on the Los Angeles-Orange County boundary 2,000 feet, more or less, northeasterly of the intersection of the center line of Pacific Coast Highway with said County boundary;

2. Thence in a straight line along the trace of the Reservoir Hill Fault to a point about 650 feet north and about 700 feet east of the intersection of Anaheim Street and Ximeno Avenue;

3. Thence in a straight line along the trace of said Reservoir Hill Fault to a point on the center line of Pacific Coast Highway, 650 feet west of the intersection of the center lines of said Pacific Coast Highway and Lakewood Boulevard;

4. Thence westerly along the center line of said Pacific Coast Highway to a point 300 feet west of its intersection with the center line of Obispo Avenue;

5. Thence in a straight line to a point about 400 feet east of the intersection of the center lines of Walnut and Creston Avenues;

6. Thence in a straight line along the escarpment of the Cherry Hill Fault to a point about 750 feet west and about 730 feet south of the intersection of Wardlow Road and Long Beach Boulevard;

7. Thence in a straight line to a point about 100 feet north and about 100 feet west of the intersection of Bixby Road and Del Mar Avenue;

8. Thence in a straight line extending through a point in the center line of Del Amo Boulevard about 900 feet west of the center line of the Pacific

Electric Railway to a point in the center line of Alameda Street about 2, 900 feet north of Del Amo Boulevard, the latter distance measured along the center line of Alameda Street;

9. Thence in a straight line along the crest of the Dominguez Hills to a point about 1, 300 feet north and about 850 feet west of the intersection of the center lines of Central Avenue and Victoria Street;

10. Thence in a straight line along the escarpment of the Avalon-Compton Fault to a point about 700 feet west of the intersection of the center lines of Avalon Boulevard and Rosecrans Avenue;

11. Thence in a straight line to a point 400 feet north of the intersection of El Segundo Boulevard and Vermont Avenue and continuing in another straight line to a point 2, 400 feet south and 1, 000 feet east of the intersection of the center lines of Crenshaw and Century Boulevards, the latter point being the approximate southeasterly end of the escarpment of the Potrero Fault;

12. Thence in a straight line along the escarpment of the Potrero Fault and continuing to a point on Northridge Drive about 200 feet northeasterly of its intersection with Marvale Drive, measured along the center line of Northridge Drive;

13. Thence in a straight line to a point on the center line of Stocker Street 1, 800 feet, more or less, northeasterly of the intersection of the center lines of Stocker Street and La Brea Avenue, measured along the center line of Stocker Street;

14. Thence easterly along said last mentioned center line and continuing along said center line, following the same in all its various courses and curves to its first intersection with the boundary line of said City of Los Angeles, being a boundary line in that certain annexation to the City of Los Angeles on April 22, 1948, designated Angeles Mesa Addition No. 5;

15. Thence southeasterly along said boundary line of the City of Los Angeles and continuing along the boundary line of said City of Los Angeles, following the same in all its various courses and curves, to an angle point in said boundary line of the City of Los Angeles being also an angle point in the boundary line of that certain territory annexed to the City of Los Angeles September 18, 1946 and known as Mesa Addition No. 3, said angle point being at the intersection of the southeasterly line of Stocker Avenue, 80 feet wide, as said Stocker Avenue is described in deed to the County of Los Angeles, recorded in Book 13445, page 197, of Official Records, in the office of said Recorder, with the westerly boundary line of that certain territory annexed to the City of Los Angeles July 27, 1922 and known as the Angeles Mesa Addition;

16. Thence northeasterly in a direct line to the intersection of the center line of Stocker Avenue, 80 feet wide, as shown on map of Tract No. 10023, recorded in Book 150, page 46, of Maps, in the office of said Recorder, with that certain center line of Crenshaw Boulevard, formerly Angeles Mesa Drive, 60 feet wide, shown on said map of Tract No. 10023 as the center line of Angeles Mesa Drive per book 6053, page 120, of Deeds;

17. Thence northerly along said certain center line of Crenshaw Boulevard, formerly Angeles Mesa Drive, 60 feet wide, to the southerly line of the northerly 30 feet of Santa Barbara Avenue, 75 feet wide, shown on said map of Tract No. 10023 as the line described in deed recorded in Book 347, page 35, of Official Records;

18. Thence easterly along said line shown on said map of Tract No. 10023 as the line described in deed recorded in Book 347, page 35, of Official Records, to the easterly terminus thereof as shown on said map;

19. Thence northerly in a direct line to the southwesterly corner of Lot 273, Tract No. 809, as shown on map recorded in Book 16, page 74, of Maps, in the office of said Recorder, said southwesterly corner of Lot 273 being a point on the northerly line of the north roadway, 30 feet wide, of Santa Barbara Avenue, as shown on said last mentioned map;

20. Thence easterly along said northerly line of the north roadway, 30 feet wide, of Santa Barbara Avenue, to the southeasterly corner of Lot 52 of said Tract No. 809;

21. Thence in a direct line to the southwesterly corner of Lot 280, Tract No. 4463, as shown on map recorded in Book 48, page 31, of Maps, in the office of said Recorder, said southwesterly corner of Lot 280 being a point in the northerly line of the north roadway of Santa Barbara Avenue as shown on said last mentioned map;

22. Thence easterly along said northerly line of the north roadway of Santa Barbara Avenue to the southeasterly corner of Lot 39 of said Tract No. 4463;

23. Thence continuing easterly along said northerly line of the north roadway of Santa Barbara Avenue to the westerly line of Western Avenue, 60 feet wide, as shown on said map of Tract No. 4463;

24. Thence easterly in a direct line to the intersection of the easterly line of Western Avenue, 60 feet wide, with the northerly line of the north roadway of Santa Barbara Avenue, as said intersection is shown on map of Tract No. 2583, recorded in Book 32, page 58, of Maps, in the office of said Recorder;

25. Thence easterly along said northerly line of the north roadway of Santa Barbara Avenue to its intersection with the westerly line of Denker Avenue, 60 feet wide, as shown on said map of Tract No. 2583;

26. Thence easterly in a direct line to the southwesterly corner of Lot 7 of Dalton Avenue Square as shown on map recorded in Book 14, page 116, of Maps, in the office of said Recorder, said southwesterly corner being a point in the northerly line of the north roadway, 20 feet wide, of Santa Barbara Avenue, as shown on said last mentioned map;

27. Thence easterly along said northerly line of the north roadway, 20 feet wide, of Santa Barbara Avenue, to the southeasterly corner of Lot 56 of said Dalton Avenue Square;

28. Thence easterly in a direct line to the intersection of the center line of Normandie Avenue, 60 feet wide, with the southerly line of the northerly 30 feet of the north roadway, 45 feet wide, of Santa Barbara Avenue, as said intersection is shown on map of Tract No. 11593, recorded in Book 247, page 42, of Maps, in the office of said Recorder;

29. Thence easterly along said southerly line of the northerly 30 feet of the north roadway, 45 feet wide, of Santa Barbara Avenue to the center line of Vermont Avenue, 80 feet wide, as shown on said map of Tract No. 11593;

30. Thence easterly in a direct line to the southwesterly corner of Lot 10, Tract No. 2411, as shown on map recorded in Book 26, Page 77, of Maps, in the office of said Recorder, said southwesterly corner of Lot 10 being a point on the northerly line of the north roadway of Santa Barbara Avenue, as shown on said last mentioned map;

31. Thence easterly along said northerly line of the north roadway of Santa Barbara Avenue to the southeasterly corner of Lot 7 of said Tract No. 2411;

32. Thence easterly in a direct line to the southwesterly corner of Lot 1, Block A of Tract No. 4719, as shown on map recorded in Book 52, page 48, of Maps, in the office of said Recorder, said southwesterly corner of Lot 1, Block A, being a point on the northerly line of the north roadway of Santa Barbara Avenue as shown on said last mentioned map;

33. Thence easterly along said northerly line of the north roadway of Santa Barbara Avenue to the southeasterly corner of Lot 1, Block B, of said Tract No. 4719;

34. Thence southeasterly in a direct line to the intersection of the center line of Figueroa Street, 100 feet wide, with the center line of Santa Barbara Avenue, 60 feet wide, as said intersection is shown on Map of Bowen and Chamberlin's Main and Figueroa Street Tract No. 2, recorded in Book 7, page 5, of Maps, in the office of said Recorder;

35. Thence easterly along said center line of Santa Barbara Avenue, 60 feet wide, as shown on said map of Bowen and Chamberlin's Main and Figueroa Street Tract No. 2, to the center line of Broadway Place, formerly Moneta Avenue, 76 feet wide, as shown on said last mentioned map;

36. Thence easterly along the northerly line of the southerly 30 feet of Santa Barbara Avenue as shown on map of Main Street Boulevard Tract, recorded in Book 5, page 32, of Maps, in the office of said Recorder, to the center line of Main Street, 80 feet wide, as shown on said last mentioned map;

37. Thence easterly along the center line of Santa Barbara Avenue, 60 feet wide, as shown on Map of South Woodlawn, recorded in Book 4, page 5, of Maps, in the office of said Recorder, to the southeasterly line of the northwesterly 40 feet of San Pedro Street, as shown on said last mentioned Map;

38. Thence along said southeasterly line of the northwesterly 40 feet of San Pedro Street as shown on said Map of South Woodlawn to the center line of Santa Barbara Avenue, formerly Defiance Street, 60 feet wide, as shown on map of the Mettler Tract, recorded in Book 6, page 50, of Maps, in the office of said Recorder;

39. Thence easterly along said center line of Santa Barbara Avenue, formerly Defiance Street, 60 feet wide, to the center line of Griffith Avenue, 60 feet wide, as said Griffith Avenue is shown on said map of the Mettler Tract;

40. Thence southeasterly in a direct line to the point of intersection of the westerly line of McKinley Avenue, formerly Eureka Street, with the westerly prolongation of the center line of Santa Barbara Avenue, formerly Reno Street, 60 feet wide, as said streets are shown on Map of the Nadeau Orange Tract, recorded in Book 25, page 34, of Miscellaneous Records, in the office of said Recorder;

41. Thence easterly along said westerly prolongation and along said center line of Santa Barbara Avenue, formerly Reno Street, 60 feet wide, as said street is shown on said Map of the Nadeau Orange Tract, and continuing easterly along the easterly prolongation of said center line to the easterly line of Central Avenue, 80 feet wide, as shown on Map of Lienau's

Cottage Home Tract, recorded in Book 28, page 48, of Miscellaneous Records, in the office of said Recorder;

42. Thence northerly along said easterly line of Central Avenue, 80 feet wide, as shown on said map of Lienau's Cottage Home Tract, to the northwesterly corner of Lot 11, Block 1, of said Lienau's Cottage Home Tract, said northwesterly corner of Lot 11 being a point on the southerly line of Santa Barbara Avenue, formerly Herbert Street, as shown on said last mentioned map;

43. Thence easterly along said southerly line of Santa Barbara Avenue, formerly Herbert Street, to the northeasterly corner of Lot 1, Block 1, of said Lienau's Cottage Home Tract;

44. Thence easterly in a direct line to the northwesterly corner of Lot 1 of the Oakley's Home Tract, as shown on map recorded in Book 5, page 18, of Maps, in the office of said Recorder, said northwesterly corner of Lot 1 being a point on the southerly line of Santa Barbara Avenue, formerly 36th Street, 60 feet wide, as shown on said last mentioned map;

45. Thence easterly along said southerly line of Santa Barbara Avenue, formerly 36th Street, 60 feet wide, as shown on said map of Oakley's Home Tract and continuing easterly along the easterly prolongation of said southerly line to the westerly line of that certain tract of land shown on Plat Showing the Property of George Stephenson, recorded in Book 53, page 31, of Miscellaneous Records, in the office of said Recorder;

46. Thence southerly along said westerly line of said certain tract of land shown on Plat Showing the Property of George Stephenson to the southerly line of said certain tract of land, said southerly line being shown on said Plat as having a bearing of S 81° E and a distance of 7.03 chains;

47. Thence easterly along said southerly line of said certain tract of land to the southeasterly line of said certain tract of land, said southeasterly line being shown on said Plat as having a bearing of N 25° E and a distance of 18.84 chains;

48. Thence northeasterly along said southeasterly line of said certain tract of land, being also along the northwesterly line of Compton Avenue, formerly Orange Street, 60 feet wide, as shown on said Plat, to the westerly prolongation of the center line of Santa Barbara Avenue, formerly 30th Street, 60 feet wide, as shown on map of the Deeble Tract, recorded in Book 9, page 188, of Maps, in the office of said Recorder;

49. Thence easterly along said westerly prolongation and along said center line of Santa Barbara Avenue, formerly 30th Street, 60 feet wide, as

shown on said map of the Deeble Tract, to the westerly line of The Morgan Tract, as shown on map recorded in Book 5, page 5, of Maps, in the office of said Recorder;

50. Thence easterly in a direct line to the point of intersection of the easterly line of said Morgan Tract with the center line of Santa Barbara Avenue, formerly 30th Street, 50 feet wide, as said street is shown on Map of East Jefferson Street Tract No. 2, recorded in Book 7, page 92, of Maps, in the office of said Recorder;

51. Thence easterly along said center line of Santa Barbara Avenue, formerly 30th Street, 50 feet wide, and continuing easterly along the easterly prolongation of said center line of Santa Barbara Avenue to the east line of the west roadway, 40 feet wide, of Long Beach Avenue as shown on said map of East Jefferson Street Tract No. 2;

52. Thence easterly in a direct line to the point of intersection of the westerly line of the east roadway, 40 feet wide, of Long Beach Avenue as shown on Map of East Jefferson Street Tract No. 1, recorded in Book 7, page 113, of Maps, in the office of said Recorder, with the westerly prolongation of the center line of Santa Barbara Avenue, formerly 30th Street, 50 feet wide, as said street is shown on said last mentioned Map;

53. Thence easterly along said westerly prolongation and along said center line of Santa Barbara Avenue, formerly 30th Street, 50 feet wide, and continuing easterly along the easterly prolongation of said center line to the first intersection with the boundary line of the City of Los Angeles, said intersection being in Alameda Street;

54. Thence northerly and easterly along said boundary line of the City of Los Angeles to the easterly line of Alameda Street, 80 feet wide, as shown on map of Huntington Industrial Tract recorded in Book 6, page 10, of Maps, in the office of said Recorder;

55. Thence northerly along said easterly line of Alameda Street, 80 feet wide, as shown on said map of Huntington Industrial Tract to the northwesterly corner of Block A of said Huntington Industrial Tract;

56. Thence in a direct line to the southeasterly corner of Lot 73 of the Weiss Tract No. 2, as shown on map recorded in Book 2, page 42, of Maps, in the office of said Recorder, said southeasterly corner of Lot 73 being a point on the westerly line of Alameda Street, 80 feet wide, as shown on said last mentioned map;

57. Thence northerly along said westerly line of Alameda Street, 80 feet wide, to the northeasterly corner of Lot 62 of said Weiss Tract No. 2.

58. Thence northerly in a direct line to the southeasterly corner of Lot 189, Block A, of the Meade and Dalton Tract, as shown on map recorded in Book 37, page 50, of Miscellaneous Records, in the office of said Recorder, said southeasterly corner of Lot 189 being a point on the westerly line of Alameda Street, 80 feet wide, as shown on said last mentioned map;

59. Thence northerly along said westerly line of Alameda Street, 80 feet wide, to the northeasterly corner of Lot 1, Block A, of said Meade and Dalton Tract;

60. Thence easterly along the easterly prolongation of the northerly line of said Lot 1, Block A, of the Meade and Dalton Tract to the easterly line of Alameda Street, 80 feet wide, as shown on map of the Central Industrial Tract, recorded in Book 4, page 21, of Maps, in the office of said Recorder;

61. Thence northerly along said easterly line of Alameda Street, 80 feet wide, to the northwesterly corner of said Central Industrial Tract;

62. Thence continuing northerly along the easterly line of Alameda Street, 80 feet wide, as shown on map of the Hughes Manufacturing Co.'s Tract, recorded in Book 7, page 105, of Maps, in the office of said Recorder, to the southwesterly corner of Lot 7, Block A, of Ninth Street Tract Extension, as shown on map recorded in Book 55, page 89, of Miscellaneous Records, in the office of said Recorder;

63. Thence continuing northerly along the easterly line of Alameda Street as shown on said map of Ninth Street Tract Extension to northwesterly corner of Lot 1, Block A, of said Ninth Street Extension, said northwesterly corner of Lot 1 being a point on the easterly line of Alameda Street as shown on map of H. N. Elliott's Ninth Street Tract, recorded in Book 53, page 98, of Miscellaneous Records, in the office of said Recorder;

64. Thence continuing northerly along said easterly line of Alameda Street as shown on said map of H. N. Elliott's Ninth Street Tract and continuing northerly along the northerly prolongation of said easterly line to that certain line designated City Engineer's center line of Olympic Boulevard on map of Tract No. 11512, recorded in Book 221, page 29, of Maps, in the office of said Recorder;

65. Thence easterly along said certain line designated City Engineer's center line of Olympic Boulevard to the intersection with the center line of Mateo Street, as shown on said map of Tract No. 11512, said intersection being also shown on map of Tract No. 10068, recorded in Book 141, page 44, of Maps, in the office of said Recorder, as the intersection of the city center lines of Mateo Street, 60 feet wide, and Olympic Boulevard, formerly Ninth Street, 80 feet wide;

66. Thence continuing easterly along said city center line of Olympic Boulevard, formerly Ninth Street, 80 feet wide, to the intersection with the westerly prolongation of that certain center line of Olympic Boulevard shown on map filed in Book 52, page 5, of Record of Surveys, in the office of said Recorder, as having a bearing of North 89° 33' 00" West;

67. Thence easterly along said westerly prolongation and continuing easterly along said certain center line of Olympic Boulevard, shown on said map filed in Book 52, page 5, of Record of Surveys, as having a bearing of North 89° 33' 00" West, to the westerly line of the Official Bed of the Los Angeles River, as shown on said last mentioned map;

68. Thence easterly in a direct line to a point on the easterly line of the Official Bed of the Los Angeles River as shown on map of Tract No. 12316, recorded in Book 263, page 5, of Maps, in the office of said Recorder, said point being at the westerly terminus of that certain course of the center line of Olympic Boulevard shown on said last mentioned map as having a bearing of North 89° 21' West and a distance of 214.13 feet;

69. Thence easterly along said center line of Olympic Boulevard and continuing easterly along the center line of Olympic Boulevard as shown on said map of Tract No. 12316 to the intersection with the center line of that portion of Rio Vista Avenue, 60 feet wide, extending northerly from said Olympic Boulevard, as shown on said map of Tract No. 12316, said intersection being also shown on map of Tract No. 6783 recorded in Book 99, page 77, of Maps, in the office of said Recorder, as the intersection of Olympic Boulevard, formerly Ninth Street, 100 feet wide, with said center line of Rio Vista Avenue;

70. Thence southeasterly along said center line of Olympic Boulevard, formerly Ninth Street, 100 feet wide, and continuing southeasterly along said center line to the intersection with the center line of Mines Avenue, as shown on said map of Tract No. 6783;

71. Thence easterly along said center line of Olympic Boulevard to the intersection with the center line of Lorena Street, 82.50 feet wide, as shown on said map of Tract No. 6783;

72. Thence easterly in a direct line to the most westerly corner of Lot 636 of Tract No. 941, as shown on map recorded in Book 16, pages 194 and 195, of Maps, in the office of said Recorder, said most westerly corner being a point on the southerly boundary line of said Tract No. 941;

73. Thence easterly along said southerly boundary line of Tract No. 941 to the most easterly corner of Lot 480 of said Tract No. 941;

74. Thence easterly in a direct line to the intersection of the northeasterly line of Hollenbeck Avenue, 82.50 feet wide, as shown on said map of Tract No. 941, with the southerly boundary line of said Tract No. 941;

75. Thence easterly along said last mentioned southerly boundary line of Tract No. 941 to the boundary line of the City of Los Angeles;

76. Thence northerly and easterly along the boundary line of the City of Los Angeles to an angle point in the boundary line, said point also being a point in the boundary of the City of Monterey Park, at the northwest corner of Section 29, Township 1 South, Range 12 West, S. B. B. & M.;

77. Thence southerly along the boundary line of said City of Monterey Park and continuing along the boundary line of said City of Monterey Park, following all its various courses and curves, to its first intersection with the boundary line of the City of Montebello, said intersection being in Pomona Boulevard (formerly Third Street) between Gerhart Avenue and Bradshaw Avenue, at the north quarter section corner of fractional Section 4, Township 2 South, Range 12 West, S. B. B. & M., as shown on map of the Repetto Rancho recorded in Book 759, pages 21 and 22, of Deeds, in the Office of the Recorder of the County of Los Angeles;

78. Thence easterly along the common boundary line of said City of Monterey Park and said City of Montebello to the easterly terminus of said common boundary line, said easterly terminus being at the intersection of said common boundary line with the southwesterly line of Rancho La Merced, as shown on map recorded in Book 13, page 24, of Patents, in the office of said Recorder, and being in the south line of Township 1 South, Range 12 West, S. B. B. & M.;

79. Thence easterly along the boundary line of said City of Monterey Park and said south line of Township 1 South, Range 12 West, S. B. B. & M., to an angle point in said boundary line of the City of Monterey Park;

80. Thence easterly along said south line of Township 1 South, Range 12 West, S.B.B. & M., to the easterly line of Tract No. 10063 as shown on map recorded in Book 179, pages 32 to 34, inclusive, of Maps, in the office of said Recorder;

81. Thence southerly along said easterly line of Tract No. 10063 to its first intersection with the boundary line of said City of Montebello;

82. Thence easterly along the boundary line of said City of Montebello and continuing along the boundary line of said City of Montebello, following all its various courses and curves, to its intersection with the Compromised Dividing Line between the Rancho Paso de Bartolo on the South Side and the Ranchos La Puente, Potrero de Felipe Lugo and La Merced on the North Side, as shown on map filed in Book 1, page 73, Record of Surveys, in the office of said Recorder;

83. Thence easterly along said Compromised Dividing Line to a point thereon, distant 1068.62 feet westerly, measured along said Compromised Dividing Line, from the center line of Cate Road (now Durfee Avenue), 40 feet wide, as described in deed to the County of Los Angeles, recorded in Book 1207, page 74, of Deeds, in the office of said Recorder;

84. Thence easterly in a direct line to the point of intersection of said center line of Cate Road (now Durfee Avenue), with a line bearing South 86° 40' 44" West from a point in the northwesterly line of Lot 12, Tract No. 688, as shown on map recorded in Book 15, page 171, of Maps, in the office of said Recorder, said last mentioned point being distant North 24° 55' 13" East 556.72 feet, measured along said northwesterly line of Lot 12, from the southwesterly corner of said Lot 12;

85. Thence North 86° 40' 44" East 2759.06 feet, more or less, to the northwesterly prolongation of the northeasterly line of Parcel 1 of land described in deed to Walter G. Kruse, et ux., recorded in Book 25982, page 70, of Official Records, in the office of said Recorder;

86. Thence easterly in a direct line to an angle point in the southerly line of Lot 11, of aforementioned Tract No. 688, from which angle point the most westerly corner of said Lot 11 is shown on said map of Tract No. 688 to be distant 453.30 feet S. 68° 51-1/2' W., measured along said southerly line of Lot 11;

87. Thence southerly in a direct line to an angle point in the northwesterly line of Lot 1, Cohn's Partition of Lots 26, 27, 29 and 32 as shown on map recorded in Book 60, pages 3 and 4, of Miscellaneous Records, in the office of said Recorder, said last mentioned angle point being shown on said map of Cohn's Partition of Lots 26, 27, 29 and 32 to be located as follows:

Beginning at the most westerly corner of said Lot 1; thence, N. 49° 52' E. 9.00 chains; thence N. 23° 13' E. 5.09 chains to said last mentioned angle point;

88. Thence southwesterly along said northwesterly line of Lot 1 to said most westerly corner of Lot 1, said most westerly corner also being the most northerly corner of Lot 2 of said Cohn's Partition of Lots 26, 27, 29 and 32;

89. Thence southwesterly along the northwesterly line of said Lot 2 and continuing along the line of said Lot 2, following all its various courses, to the most westerly corner of Lot 7, of said Cohn's Partition of Lots 26, 27, 29 and 32;

90. Thence southerly along the westerly line of said Lot 7 and continuing along the southerly prolongation of said westerly line of Lot 7 to the easterly prolongation of the center line of Guirado Street, 40 feet wide, (now Pioneer Boulevard) as shown on map of Tract No. 3584, recorded in Book 38, page 70, of Maps, in the office of said Recorder;

91. Thence along said easterly prolongation of the center line of Guirado Street, 40 feet wide, (now Pioneer Boulevard), to the center line of Workman Mill Road as described in deed to the County of Los Angeles recorded in Book 12367, page 75, of Official Records, in the office of said Recorder;

92. Thence southerly along said center line of Workman Mill Road, following all its various courses and curves, to the northerly terminus of that certain course having a bearing of N. 6° 10' 15" E. in the center line of Workman Mill Road, as shown on map of Tract No. 6041 recorded in Book 180, pages 12 to 14, inclusive, of Maps, in the office of said Recorder;

93. Thence southerly along the center line of Workman Mill Road as shown on said map of Tract No. 6041 and as shown on map of Tract No. 14971, recorded in Book 341, pages 5 to 10 inclusive, of Maps, in the office of said Recorder, to the westerly prolongation of the northerly line of Lot 3, shown on said map of Tract No. 14971 as having a bearing and length of S. 83° 49' 45" E., 221.86 feet, said northerly line of Lot 3 also being in the northerly boundary line of said Tract 14971;

94. Thence easterly along said westerly prolongation, said northerly line of Lot 3 and said northerly boundary line of Tract No. 14971 and continuing along the boundary line of said Tract No. 14971, following all its various courses, to the westerly line of Lot 24, of Cohn's Partition of Lot 31, as shown on map recorded in Book 60, page 6, of Miscellaneous Records, in the office of said Recorder;

95. Thence northerly along said westerly line of Lot 24 to the westerly prolongation of the north line of Section 16, Township 2 South, Range 11 West, S.B.B. U M.;

96. Thence easterly along said westerly prolongation and along the north line of said Section 16, to the northeast corner of said Section 16;

97. Thence southerly in a direct line to the northeasterly corner of the City of Whittier, said northeasterly corner being also the northeasterly corner of that certain annexation to said City of Whittier designated Annexation of 1907;

98. Thence southerly along the boundary line of said City of Whittier to its intersection with the north line, or its westerly prolongation, of Section 22, said last mentioned Township and Range;

99. Thence easterly along said north line of Section 22, or along said westerly prolongation and said north line of Section 22, to the northeast corner of said Section 22;

100. Thence southerly along the east line of said Section 22 to the west quarter corner of Section 23, said last mentioned Township and Range;

101. Thence easterly along the east and west quarter section lines of said Section 23 to the east quarter corner of said Section 23;

102. Thence southerly along the east line of said Section 23 to the northwest corner of Section 25, said last mentioned Township and Range;

103. Thence easterly along the north line of said Section 25 to the westerly line of Tract No. 2390 as shown on map recorded in Book 23, page 29, of Maps, in the office of said Recorder;

104. Thence northerly along said westerly line of Tract No. 2390, to the northwesterly corner of said Tract;

105. Thence easterly along the northerly line of said Tract No. 2390 to the northeasterly corner of said Tract;

106. Thence southerly along the easterly line of said Tract No. 2390 to the southeasterly corner of said Tract, said corner also being in northerly line of Lot 3 of the New England Oil Company Tract, as shown on map recorded in Book 17, page 131, of Maps, in the office of said Recorder;

107. Thence easterly and southerly along the northerly and easterly lines of said Lot 3 to the southeasterly corner of said Lot 3, said corner also being in the southerly line of said New England Oil Company Tract;

108. Thence easterly and northerly along the southerly and easterly lines of said New England Oil Company Tract to the northeasterly corner of Lot 13 of said last mentioned Tract, said northeasterly corner also being in the southerly line of Lot 5, Tract No. 4380, as shown on map recorded in Book 48, pages 46 and 47, of Maps, in the office of said Recorder;

109. Thence easterly along said southerly line of Lot 5 to the southeasterly corner of said Lot 5;

110. Thence easterly in a direct line to the southwesterly corner of Lot 2, Tract No. 3422, as shown on map recorded in Book 37, page 51, of Maps, in the office of said Recorder;

111. Thence easterly along the southerly line of said Lot 2, to the easterly line of Rancho La Habra, as shown on map recorded in Book 1, pages 275 and 276, of Patents, in the office of said Recorder;

112. Thence southerly along said easterly line of Rancho La Habra to its intersection with the southerly boundary line of the County of Los Angeles;

113. Thence westerly along said southerly boundary line of the County of Los Angeles and continuing along the boundary line of said County of Los Angeles, following all its various courses and curves to the point of beginning.

The boundary line of the County of Los Angeles and the boundary line of the City of Los Angeles referred to herein, except where otherwise expressly designated, are such boundary lines as the same existed at 12:00 noon on October 31, 1958.

APPENDIX 2

CURRENT VERSION OF WATER RIGHT HOLDERS

Central Basin Water rights Holders

Party ID	Party	Allowed Pumping Allocation (APA)
0020	A B C Unified School District	298.00
0107	American Textile Maintenance Company	65.00
0125	Angeles Abbey Memorial Park, Inc	4.00
0127	Aqua Capital Management LP	3,760.00
0120	Arco Metals Co, American Brass	0.00
0150	Artesia Cemetery District	12.00
0160	Artesia, City of	24.00
0210	Atkinson Brick Company	9.00
0220	Atlantic Richfield Company	0.00
0229	Automobile Club of Southern California	6.00
0265	Baker Commodities, Inc	60.00
0387	Bell Gardens, City of	1,914.00
0420	Bellflower Home Garden Water Company	306.00
0430	Bellflower Unified School District	89.00
0410	Bellflower, City of	1,380.00
0445	Bellflower-Somerset Mutual Water Company	4,312.88
0642	Boy Scouts of America, Long Beach Area	1.00
0657	Buell, Mary Dolores	1.00
0679	California-American Water Company	2,067.00
0681	California Domestic Water Company	87.00
0686	California, State of	50.00
0740	California Water Service Company	11,774.00
0742	California Water Service Company (Dominguez)	6,480.00
0795	Central Basin Municipal Water District	50.65
0826	Cerritos, City of	4,680.03
0830	Cerritos Community College District	147.00
0855	Chang, I-Hsin and Associates	1.00
0885	Chevron U S A, Inc	94.00
0970	Coast Packing Company	530.00
1017	Commerce, City of	5,081.00
1020	Compton, City of	5,780.00
1030	Compton Unified School District	38.00
1115	Corning Trust	3.75
1165	Crandell, F.J.	1.00
1236	Darling-Delaware Company, Inc	117.00
1385	Dolan, J.E., P.A., & T.P.	2.00

Central Basin Water rights Holders

Party ID	Party	Allowed Pumping Allocation (APA)
1450	Downey, City of	16,553.62
1550	El Rancho Unified School District	55.00
1560	Emoto, John H	2.00
1572	Equilon Enterprises, LLC	6.00
1597	Exide Technologies	62.00
1606	Farmers & Merchants Trust Co of Long Beach	14.00
1700	Flesch, Elizabeth, et al	14.00
1719	Footbridge 1 Trust	3.75
1720	Ford Motor Company	4.50
1726	Frampton, Harvey	10.00
1735	Frampton, William H	25.00
1843	Golden State Water Company	16,439.20
1960	Gordon, Robert E	4.00
1988	Graham, Hugh W or Marcia K, Trustees	6.00
2155	Harada Brothers	6.00
2209	Hathaway, Jesse R	4.07
2211	Hathaway, Merrie F	1.86
2212	Hathaway, Richard F, Jr.	4.07
2213	Hathaway, William A	4.07
2214	Hathaway, Loline	4.08
2378	Huntington Park, City of	3,853.00
2440	Inglewood Park Cemetery	317.00
2493	Jones Company, The	0.00
2710	Kotake, Masao	27.97
2749	La Habra Heights County Water District	2,596.00
2770	Lakewood, City of	9,432.00
2884	Lincoln Memorial Park, Inc	34.00
2890	Little Lake Cemetery District	14.00
2910	Long Beach, City of	32,692.00
2920	Los Angeles, City of	15,000.00
2930	Los Angeles County Rancho Los Amigos	490.00
3010	Lunday-Thagard Oil Company	212.00
3040	Lussman, Paul H, Jr., et al	7.00
3060	Lynwood, City of	5,337.00
3080	Lynwood Park Mutual Water Company	222.00
3140	Martin, Mary	28.00

Central Basin Water rights Holders

Party ID	Party	Allowed Pumping Allocation (APA)
3170	Maywood Mutual Water Company No 1	741.00
3180	Maywood Mutual Water Company No 2	912.00
3190	Maywood Mutual Water Company No 3	1,407.00
3210	Mellano, G, et al	13.00
3301	Mitsuuchi, Mary F Trust	11.00
3351	Montebello, City of	386.50
3360	Montebello Land and Water Company	1,694.00
3501	Nancy Dee Keane Living Trust	4.00
3514	New England Mutual Life Insurance Company	2.00
3517	Newark Group, Inc., The	257.00
3545	Northrop Grumman Systems Corporation	4.50
3550	Norwalk, City of	2,273.00
3560	Norwalk-La Mirada Unified School District	378.00
3578	O N K Farms	8.00
3605	Oltmans Construction Company	3.00
3640	Orchard Dale Water District	1,254.00
3705	PABCO Building Products, LLC	500.00
3745	Paradise Memorial Park	16.00
3755	Paramount, City of	5,883.00
3760	Paramount Unified School District	46.00
3780	Park Water Company	2.30
3787	Patrician Associates Inc/Majestic Realty Company	12.00
3828	Petersburg, L.P.	300.00
3847	Pico Boys Baseball, Inc	13.00
3853	Pico Rivera, City of	5,579.00
3850	Pico Water District	3,624.00
3958	Puente Basin Water Agency	365.00
3994	Randall, Villis Family Trust	4.00
4108	Rippy, Francine	4.07
4115	Rockview Dairies, Inc	101.00
4116	Rocky Mountain Industries, Inc	0.00
4150	Roman Catholic Archbishop of Los Angeles	347.00
4160	Rosales, Elvira C	3.00
4165	Rosing, L S Trust and P Schwartz	6.00
4175	Rowland Water District	1.00
4300	St John Bosco School	42.00

Central Basin Water rights Hold..s

Party ID	Party	Allowed Pumping Allocation (APA)
4330	San Gabriel Valley Water Company	2,565.35
4335	Santa Fe Springs, City of	4,035.78
4345	Sativa - Los Angeles County Water District	474.00
4349	Scantlebury, Robert P	4.00
4378	September Properties, LLC	22.00
4450	Signal Hill, City of	2,022.00
4473	Simmons Survivor's Trust	33.00
4590	South Gate, City of	11,183.00
4540	South Montebello Irrigation District	1,268.00
4549	Southern California Edison Company	670.00
4685	Statewide Stations, Inc	1.00
4810	Suburban Water Systems	3,721.00
4915	Taurek, Mary	1.00
4934	Tesoro Logistics Operations	54.00
4980	Tract Number One Hundred and Eighty Water Co	2,137.00
4990	Tract 349 Mutual Water Company	423.00
5019	Tucker, W and/or Bobby Robertson	8.00
5358	Vangrootheest, Ernest A	10.00
5460	Vernon, City of	7,539.00
5490	Virginia Country Club	274.00
5610	Walnut Park Mutual Water Company	996.00
5528	WEMS, Inc.	8.00
5660	Whittier, City of	895.00
5670	Whittier Union High School District	100.00
5750	Wolfsberger, Helen and Christine Joseph	2.00
5800	Yamamoto, George and Alice	14.00
5903	Zane Living Trust	0.00
	Central Basin Total	**217,367.00**

Appendix 3

CENTRAL BASIN SMALL WATER PRODUCERS GROUP

As used in the Central Basin Judgment, the "Small Water Producers Group" shall refer to a voluntary group consisting of parties to the Central Basin Judgment with an Annual Pumping Allocation no greater than 5,000 acre-feet, acting jointly to represent its members with regards to interests specific to them and their constituents and/or customers concerning the management of the Central Basin and the administration and enforcement of this Judgment. Membership in the Small Water Producers Group may be modified from time to time by affirmative vote of the then-current composition of said Group, provided that each member thereof shall hold no greater than 5,000 acre-feet of Allowed Pumping Allocation.

Any benefit or right attributed to the Group by the Judgment, including the reserved seat on the Water Rights Panel, shall be valid and enforceable, so long as the Group's membership consists of a minimum of 5 parties to the Central Basin Judgment who are Water Purveyors., .

As of the time of entry of this Third Amended Judgment, the Small Water Producers Group consists of:

Bellflower-Somerset Mutual Water Company
La Habra Heights County Water District
Montebello Land and Water Company
City of Norwalk
Orchard Dale Water District
Pico Water District
Sativa -- Los Angeles County Water District
South Montebello Irrigation District

Appendix 4

PERMITTED EXISTING EXPORTS

The Agreement among Rowland Water District, on the one hand, and La Habra Heights County Water District and Orchard Dale Water District, on the other hand, allowing for maximum production of 2,500 acre-feet per year.

The Agreement between Puente Basin Water Agency and California Domestic Water Company, allowing for maximum production of 2,500 acre-feet per year.

PROOF OF SERVICE

STATE OF CALIFORNIA, COUNTY OF LOS ANGELES

I am employed in the county of LOS ANGELES, State of California. I am over the age of 18 and not a party to the within action; my business address is: **301 North Lake Avenue, 10th Floor, Pasadena, California 91101**

On DECEMBER 27, 2013, I served the foregoing document described as **THIRD AMENDED JUDGMENT** on **INTERESTED PARTIES** in this action

☑ by placing the true copies thereof enclosed in sealed enveloped addressed as stated on the attached mailing list:

☐ by placing ☐ the original ☐ a true copy thereof enclosed in sealed envelopes addressed as follows:

SEE ATTACHED MAILING LIST

☑ BY MAIL

☐ I deposited such envelope in the mail at PASADENA, California.
The envelope was mailed with postage thereon fully prepaid.

☑ I caused such envelope to be deposited in the mail at PASADENA, California.
The envelope was mailed with postage thereon fully prepaid.
I am "readily familiar" with firm's practice of collection and processing correspondence for mailing. It is deposited with U.S. postal service on that same day in the ordinary course of business. I am aware that on motion of party served, service is presumed invalid if postal cancellation date or postage meter date is more than 1 day after date of deposit for mailing in affidavit.

Executed on DECEMBER 27, 2013, at PASADENA, California.

☐ ** (BY PERSONAL SERVICE) I delivered such envelope by hand to the offices of the addressee.
Executed on _____ at _____, California.

☑ (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 that I am employed in the office of a member of the bar of this court at whose direction the service was made.

PAMELA J. CHILDRESS
(NAME)

Pamela J. Childress

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CENTRAL BASIN SERVICE LIST - CASE NO. C 786 656

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CENTRAL BASIN SERVICE LIST - CASE NO. C 786 656

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A SouthWest Water Company

Appendix J: Suburban's Tariff Rule & Schedule No. 14.1

Suburban Water Systems | 2020 Urban Water Management Plan

Rule No. 14.1

WATER SHORTAGE CONTINGENCY PLAN (C)

Suburban Water System's water supply may be interrupted or reduced due to a variety of circumstances, for instance, a drought or a catastrophic event, such as an earthquake or fire that damages water delivery and storage facilities, or a power outage that affects water treatment or the pumping of water to customers, or in response to legal or court imposed restrictions. This Water Shortage Contingency Plan ("Plan") enables Suburban Water System ("Suburban") to respond effectively to a wide variety of water supply conditions or catastrophic events that cause severe water shortages from time to time. (C)

A. GENERAL INFORMATION

This rule is applicable within all areas served by Suburban.

Should supply conditions or government directives dictate, prior to, or in response to, a declaration of emergency issued by a water wholesaler or other government agency, Suburban may request permission from the California Public Utilities Commission ("CPUC") to add a Schedule No. 14.1 – Staged Water Shortage Contingency Plan setting forth charges for water waste and drought surcharge rates applicable to quantities of water consumed.

All expenses incurred, and penalties received by Suburban to implement Rule No. 14.1 and Schedule No. 14.1 and requirements of the California State Water Resources Control Board ("SWRCB") that have not been authorized for recovery in a General Rate Case or other proceeding shall be accumulated in a separate memorandum account, authorized in Resolution W-4976, for disposition as directed or authorized from time to time by the Commission.

To the extent that a Stage of Water Shortage Contingency Plan in Schedule No. 14.1 has been activated, and a provision of this Rule is inconsistent with the activated Stage in Schedule No. 14.1, the provisions of Schedule No. 14.1 apply.

Suburban shall make available to its customers water conservation kits as required by Rule 20. Suburban shall notify all customers, at least annually, of the availability of conservation kits and other helpful information via bill inserts, bill messages, or direct mailers.

B. DEFINITIONS

1. "Authorizing Agency" means any agency that supplies, controls or allocates the water supply to Suburban or any governmental body that authorizes Suburban to produce and sell water in the service area, or Suburban itself if acting in accordance with Section E of this Rule. (C)

(Continued)

Rule No. 14.1
(Continued)

WATER SHORTAGE CONTINGENCY PLAN (C)

B. DEFINITIONS (Continued) (C)

2. "Commission" means the California Public Utilities Commission.
3. "Conservation" means normal actions necessary to reduce the purchase, production, or consumption of potable water, including applicable Best Management Practices, while maintaining customary levels of service and public health and safety.
4. "Flow Restrictor" means a device placed into the water distribution system by Suburban that restricts the volume of flow to the customer with a minimum of three hundred cubic feet ("ccf"; one ccf = 748 gallons) per person, per month, based upon the U.S. Census calculation of the average number of people in a household in the area.
5. "Measurable rainfall" means any amount of precipitation of more than one-tenth of an inch (0.1")
6. "Person" means any natural person or persons, corporation, public or private entity, governmental agency or institution, or any other user of water provided by Suburban.
7. "Potable water" means water that is suitable for drinking.
8. "Recycled water" means the reclamation and reuse of non-potable water for beneficial use as defined in Title 22 of the California Code of Regulations.

C. WATER SHORTAGE CONTINGENCY PLAN

Wasteful water use practices, as outlined in Section D of this Rule, are prohibited at all times except where necessary to address an immediate health or safety need or to comply with a term or condition in a permit issued by a state or federal agency. Notwithstanding these prohibitions, Suburban may elect to enact additional prohibited uses as needed. No customer shall use Suburban supplied water for non-essential or prohibited uses as identified by the Commission or Suburban.

1. Prior to, or in response to, a declaration of emergency issued by a government agency or the need to reduce usage in an effort to stay within governmental or court ordered restrictions; Suburban may request, via a Tier 2 advice letter, a Schedule No. 14.1 – Staged Water Shortage Contingency Plan Tariff. Suburban may also request in the advice letter a lost revenue and/or conservation implementation cost memorandum account(s) to record related variances from that previously considered in a General Rate Case or other proceeding. (C)

(Continued)

Rule No. 14.1
(Continued)

WATER SHORTAGE CONTINGENCY PLAN (C)

C. WATER SHORTAGE CONTINGENCY PLAN (Continued) (C)

2. Suburban shall file a Tier 2 advice letter to request activation of Schedule No. 14.1-Staged Water Shortage Contingency Plan Tariff, unless Suburban requests activation of Schedule No. 14.1 at the same time as requesting modification of the current Rule No. 14.1 or establishment of a new Rule No. 14.1 as per paragraph C.1 above.
3. Once a Schedule No. 14.1 is activated, Suburban can file a Tier 2 advice letter to designate a particular stage of the Staged Water Shortage Contingency Plan under the following circumstances:

    a. If Suburban is unable to meet the production limitations as set by governmental and/or court orders under the currently implemented plan level, or

    b. If the Commission, or other government agency declares an emergency requiring mandatory water use restrictions, or

    c. If a government agency declares a state of emergency in response to severe drought conditions, earthquake or other catastrophic event that severely reduces Suburban's water supply, or

    d. If conservation levels set by the Commission, Suburban, or government agency are insufficient.

4. After Schedule No. 14.1 has been activated and Suburban determines that water supplies are again sufficient to meet demands, and staged reduction measures are no longer necessary, Suburban shall seek Commission authority via a Tier 2 advice letter to de-activate the particular stage of reduction that was previously authorized. (C)

(Continued)

Rule No. 14.1
(Continued)

WATER SHORTAGE CONTINGENCY PLAN (C)

D. STAGE 1 WATER CONSERVATION - Non-Essential or Unauthorized Water Use (C)

The following are non-essential or prohibited water uses. Non-essential and prohibited use restrictions are in effect at all times until Commission authorizes deactivation.

a. Outdoor Irrigating Restrictions (Stage 1)

i. Irrigating ornamental landscapes with potable water is limited to no more than three (3) days per week, on a schedule established and posted by Suburban on its website or otherwise provided to customers by bill message, bill insert, direct mail, or email, or as follows:

1. Customer with even-numbered addresses may irrigate on Mondays, Wednesdays, and Saturdays.
2. Customers with odd-numbered addresses may irrigate on Tuesdays, Thursday, and Sundays.
3. For governmental entities irrigating parks, any given station may be watered only three (3) times per week.
4. Customers without a street address may irrigate on Saturdays, Tuesdays, and Thursdays.
5. Notwithstanding the foregoing restrictions, irrigation of special landscape areas or commercial nurseries may occur as needed, provided that the customer who wishes to irrigate a special landscape area or commercial nursery presents Suburban with a plan to achieve water use reductions commensurate with those that would be achieved by complying with foregoing restrictions.
6. Notwithstanding the foregoing restrictions, when a city, a county, or other local public agency in one of Suburban's service areas duly adopts restrictions on the number of days or hours of the day that customers may irrigate which are different than those adopted by Suburban, Suburban may enforce the city, county, or other local public agency's restrictions.

ii. Irrigating ornamental landscape with potable water is prohibited during the hours between 8:00 a.m. and 6:00 p.m. (C)

(Continued)

Rule No. 14.1
(Continued)

WATER SHORTAGE CONTINGENCY PLAN (C)

D. STAGE 1 WATER CONSERVATION - Non-Essential or Unauthorized Water Use (C)
(Continued)

iii. Watering or irrigating of any lawn, landscape, or other vegetated area with potable water during and for 48 hours following measurable rainfall is prohibited.

iv. The foregoing restrictions do not apply to:

1. Landscape irrigation zones that exclusively use drip irrigation systems and/or micro spray irrigation system;

2. Irrigating ornamental landscapes with the use of a hand-held bucket or similar container, with a continuously monitored hose which is fitted with an automatic shut-off nozzle or device attached to it that causes it to cease dispensing water immediately when not in use or monitored, or for the express purpose of adjusting or repairing an irrigation system. Landscape that is irrigated with recycled water.

b. Excessive water flow or run-off.
Watering or irrigating of any lawn, landscape or other vegetated area in a manner that causes or allows excessive water flow or runoff such that water flows onto adjacent property, non-irrigated areas, private and public walkways, roadways, parking lots, or structures is prohibited.

c. Washing vehicles.
The use of a hose that dispenses potable water to wash a motor vehicle, except where the hose is fitted with a shut-off nozzle or device attached to it is prohibited. Use of water for washing commercial aircraft, cars, buses, boats, trailers or other commercial vehicles at any time is prohibited, except at commercial or fleet vehicle or boat washing facilities operated at a fixed location where equipment using water is properly maintained to avoid wasteful use.

d. Washing down hard or paved surfaces.
Use of potable water for washing buildings, structures, driveways, patios, parking lots, tennis courts, or other hard surfaced areas is prohibited, except in cases where health and safety are at risk.

e. Re-circulating water required for water fountains and decorative features.
Operating a water fountain or other decorative feature that does not use re-circulated water is prohibited. (C)

(Continued)

Rule No. 14.1
(Continued)

WATER SHORTAGE CONTINGENCY PLAN (C)

D. STAGE 1 WATER CONSERVATION - Non-Essential or Unauthorized Water Use (C)
(Continued)

f. Commercial businesses, including restaurants and other food service providers can only serve drinking water to customers on request.

g. Hotel/motel operators must provide guests with the option of choosing not to have towels and linens laundered daily. Information about this option must be prominently displayed.

h. Unmetered water from fire hydrants cannot be used for any reason other than fire suppression or Suburban's system maintenance purposes.

i. Waste caused by correctable leaks, breaks or malfunctions.
This loss of potable water may be cited for water waste after a five-day period has passed in which the leak or malfunction could have been corrected.

j. There cannot be unreasonable or excessive use of potable water for dust control or earth compaction.

k. Operation of commercial car washes that do not recycle the potable water used as required by the California Water Code Sections 10950-10953 is prohibited.

l. Other wasteful practices may be identified from time to time by the Commission, Suburban, or governmental agency.

When wasteful uses of water are reported to Suburban or when Suburban observes wasteful uses of water, Suburban shall provide the customer with a written notice of violation. Written notices of violation provided to customers pursuant to this Rule shall document the verified violation and alert the customer to the fact that future violations may result in penalties and after the fourth violation the installation of a flow restrictor. If Suburban verifies that the customer has used potable water for non-essential, wasteful uses after having been notified of the first violation, Suburban shall provide the customer with a second written notice of violation and the customer will be charged a waste of water penalty at varying amounts depending on the stage then in effect. A third violation will result in a further increased waste of water penalty. Suburban shall not be held liable for any injuries, damages, and/or consequences arising from the installation of a flow restrictor.

Subsequent continued wasteful water use practices may lead to the termination of water service to the premises pursuant to Tariff Rule No. 11. (C)

(Continued)

SLIP/SUB SHEET

Rule No. 14.1
(Continued)

WATER SHORTAGE CONTINGENCY PLAN (C)

E. ENFORCEMENT STAGES OF WATER SHORTAGE CONTINGENCY PLAN (C)

1. Notice Requirements for Stages 1 – 4:
   a. Suburban shall provide written notice of enforced water use restrictions to every Customer via first-class mail at least thirty (30) days before the activation of an enforcement stage.

2. Enforcement Stages shall be implemented according to a need as determined by Suburban. Activation will be requested through the filing of a Tier 2 advice letter, and Suburban shall notify its customers and provide each customer with the requirements of a particular stage by means of bill insert, bill message or direct mailing, and by message on Suburban's website. Notification shall take place prior to imposing any penalties associated with this plan.

3. If activation of Schedule No. 14.1 occurs one year or more since the public hearing associated with adding Schedule No. 14.1 to its tariffs, then Suburban shall conduct a public hearing pursuant to California Water Code Section 351 prior to activating a stage of its Water Shortage Contingency Plan.

F. STAGE 1 - WATER SHORTAGE CONTINGENCY PLAN

1. Conservation Measures: Prohibition on the non-essential or unauthorized uses of water identified in Section D.
2. Stage 1 Triggers:
   a. Stage 1 shall be in effect at all times.
3. Rates: Staged Water Shortage Contingency Plan Schedules shall not be in place in this stage.

(C)

(Continued)

Rule No. 14.1
(Continued)

WATER SHORTAGE CONTINGENCY PLAN (C)

G. STAGE 2 - WATER SHORTAGE CONTINGENCY PLAN (C)

1. A Stage 2 condition exists when it is determined that due to drought or other water supply conditions, a water supply shortage or threatened shortage exists and a further consumer demand reduction is necessary to make more efficient use of water and appropriately respond to existing water conditions. Stage 2 of the Water Shortage Contingency Plan will be enacted upon a determination that water usage should be further reduced from then current levels, that a temporary water emergency exists necessitating implementation or that the requirements in Stage 1 are insufficient in complying with the necessary reduction; and/or that a government agency requests implementation of this stage to meet physical supply limitations.
2. Additional Water Shortage Contingency Plan Measures: In addition to the non-essential or unauthorized uses of water identified in Stage 1, the following water use restriction requirements apply during Stage 2 of the Water Shortage Contingency Plan, except where necessary to address an immediate health or safety need or to comply with a term or condition in a permit issued by a state or federal agency:
    a. Obligation to Fix Leaks, Breaks or Malfunctions: All leaks, breaks, or other malfunctions in the water user's plumbing or distribution system must be repaired within seventy-two (72) hours of notification from Suburban.
3. Rates: Suburban shall implement a Commission-approved Schedule No. 14.1 Staged Water Shortage Contingency Plan.

(C)

(Continued)

Rule No. 14.1
(Continued)

WATER SHORTAGE CONTINGENCY PLAN (C)

H. STAGE 3 - WATER SHORTAGE CONTINGENCY PLAN (C)

1. A Stage 3 Water Shortage Contingency Plan condition exists when it is determined that due to drought or other water supply conditions, a water supply shortage or threatened shortage exists and a further consumer demand reduction is necessary to make more efficient use of water and appropriately respond to existing water conditions. Stage 3 will be enacted upon a determination that water usage should be reduced further from then current levels, that a temporary water emergency exists, necessitating implementation or that the requirements in Stage 1 and 2 are insufficient in complying with the necessary reduction. Additional Water Shortage Contingency Plan measures: In addition to the prohibited uses of water identified in Stage 1,and 2, the following additional water restrictions apply during a declared Stage 3 Water Shortage Contingency Plan except where necessary to address an immediate health or safety need or to comply with a term or condition in a permit issued by a state or federal agency:

   a. Watering Days: Watering or irrigating of lawn, landscape or other vegetated area with potable water is limited to two (2) days per week. Maintenance of vegetation, including trees and shrubs, watered by use of a hand-held bucket or similar container, hand-held hose equipped with a positive self–closing water shut-off nozzle or device is permitted. The watering days restriction does not apply to the following categories of use, unless Suburban has determined that recycled water is available and may be applied to the use:

      i. Maintenance of existing landscape necessary for fire protection;
      ii. Maintenance of existing landscape for soil erosion control;
      iii. Maintenance of plant materials identified to be rare or essential to the well-being of protected species;
      iv. Recycled water is in use.

This overall provision does not apply to landscape irrigation zones that exclusively use very low flow drip type irrigation systems when no emitter produces more than two (2) gallons of water per hour.

1. Requirements imposed by Stage 1 and Stage 2 shall remain in force during Stage 3.
2. Customers shall not use potable water for dust control purposes except by prior approval.
3. Rates: Suburban shall continue to implement Commission approved Schedule No. 14.1 – Staged Water Shortage Contingency Plan. (C)

(Continued)

Rule No. 14.1
(Continued)

WATER SHORTAGE CONTINGENCY PLAN (C)

I. STAGE 4 - WATER SHORTAGE CONTINGENCY PLAN (C)

1. A Stage 4 Water Shortage Contingency Plan condition is also referred to as an "Emergency" Condition. A Stage 4 condition exists when it is determined that a critical water shortage emergency exists or that the measures in Stage 1 through 3 are ineffective in complying with a necessary reduction and/or that a governmental agency requests implementation of this stage to meet physical supply limitations.
2. All requirements imposed by Stages 1 through 3, except for rates, shall remain in force during Stage 4. In addition, the following water conservation requirements apply during Stage 4 except where necessary to address an immediate health or safety need or to comply with a term or condition in a permit issued by a state or federal agency:
   a. Obligation to Fix Leaks, Breaks, or Malfunctions: All leaks, breaks, or other malfunctions in the water user's plumbing or distribution system must be repaired immediately upon notification from Suburban unless other arrangements are made with Suburban.
   b. Flow restrictors.
      Suburban is authorized to install a flow restrictor on the customer's service line. The installation of a flow restrictor is subject to the following conditions:
      i. The device shall be capable of providing the premise with a minimum of 3 Ccf per person, per month, based upon the U.S. Census calculation of the average number of people in a household in the area.
      ii. The device may only be removed by Suburban, and only after a minimum three-day period has elapsed.
      iii. Any tampering with the device may result in the discontinuation of the customer's water service and the customer being charged for any damage to Suburban's equipment or facilities and any required service visits. (C)

(Continued)

SUPPLEMENT

Rule No. 14.1
(Continued)

WATER SHORTAGE CONTINGENCY PLAN (C)

I. STAGE 4 - WATER SHORTAGE CONTINGENCY PLAN (Continued) (C)

i. After the removal of the device, if Suburban verifies that the customer is using potable water for non-essential, wasteful uses, Suburban may install another flow restrictor without prior notice. This device may remain in place until water supply conditions warrant its removal. If, despite the installation of the device, Suburban verifies that the customer is using potable water for non-essential and unauthorized wasteful uses, then Suburban may discontinue the customer's water service as provided in its Rule No. 11.

a. Flow restrictor removal charges.
The charge to customers for removal of a flow restrictor installed pursuant to this rule is $100 during normal business hours, and $150 for the device to be removed outside of normal business hours.

b. Rates: Suburban shall continue to implement the Commission approved Schedule No. 14.1 – Staged Water Shortage Contingency Plan.

J. ENFORCEMENT

1. Each Stage of this rule establishes certain restrictions on the use of potable water. Violating the restrictions set forth in a particular Stage while it is in effect is declared a non-essential, wasteful use of potable water.
2. Suburban will work closely with local law enforcement and public agencies charged with enforcing the mandatory water use restrictions.
3. When it is verified by Suburban personnel or a Suburban contractor that a customer is using water for any non-essential or unauthorized use as defined in Stages 1 through 4 above, Suburban will provide the customer with a written notice of violation. Suburban may then begin to issue penalties in accordance with its Water Shortage Contingency Plan Schedule No. 14.1.

(C)

(Continued)

SLIP/SUB SHEET

Rule No. 14.1
(Continued)

WATER SHORTAGE CONTINGENCY PLAN (C)

J. ENFORCEMENT (Continued) (C)

1. After a series of written notices and penalties, Suburban may elect to install a flow restrictor on a customer's service line. The customer will be notified that the flow restrictor may be installed for the duration of the enforcement stage of the Water Contingency Plan.
2. The flow restrictor shall not restrict water delivery by greater than 50% of normal flow and shall be capable of providing the premise with a minimum of 3 Ccf/person/month based upon the U.S. Census calculations of the average number of people in a household in the area. The restricting device may only be removed by Suburban after a minimum three-day period has elapsed, and only after payment of the appropriate removal charge as set forth in Schedule No. 14.1.
3. Tampering with the flow restrictor further violations of prohibited uses may result in discontinuance of water service under Rule 11.
4. All monies collected by Suburban through surcharges, shall be booked to the Water Revenue Adjustment Mechanism (WRAM) balancing accounts or a memorandum account to offset recovery of lost revenues. All expenses incurred, and penalties received by Suburban to implement Rule No. 14.1 and Schedule No. 14.1 that have not been authorized for recovery in a General Rate Case or other proceeding, shall be recoverable by Suburban if determined to be reasonable by Commission. These additional monies shall be accumulated by Suburban in a memorandum account for disposition as directed or authorized from time to time by the Commission.

K. APPEAL PROCEDURE

1. Any customer who seeks a variance from any of the provisions of this water conservation and water use restriction plan, including any health and safety exceptions, or seeks a remedy to any of the actions of Suburban in regards to this plan, shall notify Suburban in writing, explaining in detail the reason for such a variance or remedy. Suburban shall respond to each such request in writing. (C)

(Continued)

Rule No. 14.1
(Continued)

WATER SHORTAGE CONTINGENCY PLAN (C)

(C)

L. PUBLICITY

a. When Suburban requests authorization of Schedule No. 14.1 – Water Shortage Contingency Plan tariff, via a Tier 2 advice letter, it shall provide notice of the Tier 2 advice letter and associated public meeting provided to customers, per Resolution W-4976, and shall comply with all requirements of Sections 350-358 of the California Water Code (CWC), including but not limited to the following:

   a. In order to be in compliance with both General Order 96B and CWC, Suburban shall provide notice via both newspaper and bill message/direct mailing.

   b. Suburban shall file one notice for each advice letter filed, that includes both notice of the filing of the Tier 2 advice letter as well as the details of the public meeting (date, time, place, etc.).

   c. The public meeting shall be held after Suburban files the Tier 2 advice letter, and before the Commission authorizes implementation of the tariff.

(C)

(Continued)

Rule No. 14.1
(Continued)

WATER SHORTAGE CONTINGENCY PLAN (C)

(C)

L. PUBLICITY (Continued)

b. In the event that the Schedule No. 14.1 - Water Shortage Contingency Plan is triggered, and Suburban requests activation through the filing of a Tier 2 advice letter, Suburban shall notify its customers and provide each customer with the additional requirements of the particular stage by means of bill insert, bill message or direct mailing. Notification shall take place prior to imposing any penalty rates associated with this plan.

c. Suburban shall notify Customers via press releases, and messages on Suburban's website, of the effective date of any change in Stages either moving up Stages, e.g. from Stage 2 to Stage 3, or moving down Stages, e.g. from Stage 3 to Stage 1. Notification will occur at least one week before any penalties are levied or drought surcharges are enacted. In addition, Suburban shall maintain communication with Customers regarding the ongoing water supply situation and related conservation requirements. (C)

Suburban
Water Systems
A SouthWest Water Company

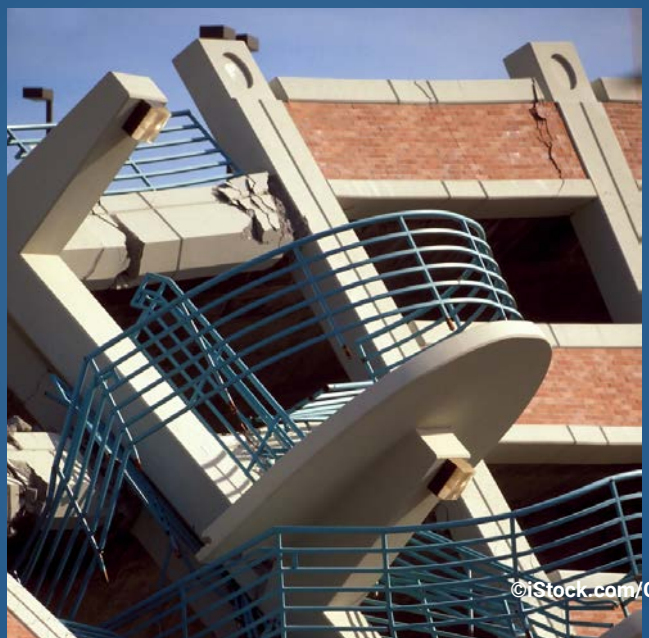
Appendix K: 2019 County of Los Angeles All-Hazards Mitigation Plan

Suburban Water Systems | 2020 Urban Water Management Plan

PUBLIC DRAFT

2019 County of Los Angeles All-Hazards Mitigation Plan

Chief Executive Office - Office of Emergency Management



2019 COUNTY OF LOS ANGELES ALL-HAZARDS MITIGATION PLAN

TABLE OF CONTENTS

LIST OF APPENDICES

LIST OF FIGURES

LIST OF TABLES

LIST OF ACRONYMS AND ABBREVIATIONS

°F	degrees Fahrenheit
AECOM	AECOM Technical Services, Inc.
AB	Assembly Bill
AHMP	All-Hazards Mitigation Plan
Cal FIRE	California Department of Forestry and Fire Protection
Cal OES	California Office of Emergency Services
CFR	Code of Federal Regulations
CGS	California Geological Survey
CWPP	Community Wildfire Protection Plans
CPG	Comprehensive Preparedness Guide
CRS	Community Rating System
DFIRM	Digital Flood Insurance Rate Map
DHS	Department of Homeland Security
DMA	Disaster Mitigation Act
DR	Disaster Declaration Number
DSOD	Division of Safety of Dams
EAP	Emergency Action Plan
EPA	Environmental Protection Agency
EQ	Earthquake
FEMA	Federal Emergency Management Agency
FHSZ	Fire Hazard Severity Zones
GIS	Geographic Information System
IPCC	Intergovernmental Panel on Climate Change
LACMA	Los Angeles County Museum of Art
LRA	Local Responsibility Area
M	Magnitude
MARAC	Mutual Aid Regional Advisory Committee
NFIP	National Flood Insurance Program
NHM	Los Angeles County Natural History Museum
OEM	Office of Emergency Management
PGA	Peak Ground Acceleration

RL	Repetitive Loss
SFHA	Special Flood Hazard Area
SRA	State Responsibility Area
U.S.	United States
USACE	United States Army Corps of Engineers
USGS	U.S. Geological Survey
WUI	wildland-urban interface

1 INTRODUCTION

1.1 HAZARD MITIGATION PLANNING

As defined in Title 44 of the Code of Federal Regulations (CFR), Subpart M, Section 206.401, hazard mitigation is "any action taken to reduce or eliminate the long-term risk to human life and property from natural hazards." As such, hazard mitigation is any work to minimize the impacts of any type of hazard event before it occurs. Hazard mitigation aims to reduce losses from future disasters. It is a process that identifies and profiles hazards, analyzes the people and facilities at risk, and develops mitigation actions to reduce or eliminate hazard risk. The implementation of the mitigation actions, which include short- and long-term strategies that may involve planning, policy changes, programs, projects, and other activities, is the end result of this process.

In recent years, local hazard mitigation planning has been driven by a federal law, known as the Disaster Mitigation Act of 2000 (DMA 2000). On October 30, 2000, Congress passed the DMA 2000 (Public Law 106-390), which amended the Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1988 (Stafford Act) (Title 42 of the United States Code Section 5121 et seq.) by repealing the act's previous mitigation planning section (409) and replacing it with a new mitigation planning section (322). This new section emphasized the need for state, tribal, and local entities to closely coordinate mitigation planning and implementation efforts. This new section also provided the legal basis for the Federal Emergency Management Agency's (FEMA's) mitigation plan requirements for the Hazard Mitigation Assistance grant programs.

1.2 2019 ALL-HAZARDS MITIGATION PLAN SYNOPSIS

To meet the requirements of the DMA 2000, the Los Angeles County Office of Emergency Management (OEM) has prepared an All- Hazards Mitigation Plan (AHMP) (hereinafter referred to as the 2019 AHMP) to assess risks posed by natural hazards and to develop a mitigation action plan for reducing the risks in Unincorporated Los Angeles County. The 2019 AHMP replaces the AHMP that was approved in 2014.

The 2019 AHMP is organized to follow FEMA's Local Mitigation Plan Review Tool, which demonstrates how local AHMPs meet the DMA 2000 regulations. As such, specific planning elements of this review tool are in their appropriate plan sections.

The 2019 AHMP structure has been updated to including the following sections:

- **Section 2 Planning Process** provides an overview of the 2019 planning process, starting with a plan update timeline. It identifies advisory committee members and describes their involvement with the plan update process. It also details stakeholder outreach, public involvement and continued public involvement. It provides an overview of the existing plans and reports and how they were incorporated into the 2019 AHMP and lastly lays out a plan update method and schedule. Supporting planning process documentation is listed in **Appendix A**.
- **Section 3 Community Profile** describes the planning area for the 2019 AHMP, which includes the unincorporated areas of the county. It touches on the current population and development trends in the county and discusses vulnerable populations in the county, including the growing homeless crisis. Finally, this section lists the county-owned and

county-related critical facilities included in this plan. Supporting community profile information can be found in **Appendix B**.

- **Section 4 Hazard Identification and Risk Assessment** describes each of the eight hazards addressed in this plan. Additionally, it includes impact (i.e., risk assessment) tables for the planning area, vulnerable populations and critical facilities within each hazard area. An overall summary description is also provided for each hazard. **Appendix C** contains supporting hazard identification and risk assessment information.
- **Section 5 Mitigation Strategy** details Los Angeles County's capabilities (authorities, policies, programs and resources) available for hazard mitigation. It also discusses the county's participation in the National Flood Insurance Program (NFIP). Finally, it describes the mitigation strategy, which is the blueprint for how the County will reduce its risks to hazards. The mitigation strategy is made up of three main components: mitigation goal(s); potential mitigation actions and projects; and a mitigation action plan.
- **Section 6 Plan Review, Evaluation and Implementation** discusses the revisions made to the 2019 AHMP to address changes in development, progress made in local mitigation efforts and changes to priorities.
- **Section 7 Plan Adoption** contains a scanned copy of the adoption resolution.

2 PLANNING PROCESS

Section 2 – Planning Process addresses Element A of the Local Mitigation Plan Regulation Checklist.

Regulation Checklist – 44 CFR 201.6 Local Mitigation Plans
Element A: Planning Process
A1. Does the Plan document the planning process, including how it was prepared and who was involved in the process for each jurisdiction? (Requirement §201.6(c)(1))
A2. Does the Plan document an opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, agencies that have the authority to regulate development as well as other interests to be involved in the planning process? (Requirement §201.6(b)(2))
A3. Does the Plan document how the public was involved in the planning process during the drafting stage? (Requirement §201.6(b)(1))
A4. Does the Plan describe the review and incorporation of existing plans, studies, reports, and technical information? (Requirement §201.6(b)(3))
A5. Is there discussion of how the community(ies) will continue public participation in the plan maintenance process? (Requirement §201.6(c)(4)(iii))
A6. Is there a description of the method and schedule for keeping the plan current (monitoring, evaluating and updating the mitigation plan within a 5-year cycle)? (Requirement §201.6(c)(4)(i))

2.1 OVERVIEW OF 2019 AHMP PLANNING PROCESS

The development of the 2019 AHMP was collaborative effort between Los Angeles County OEM, AECOM Technical Services, Inc. (AECOM), an advisory committee, and various county departments and agencies. **Table 2-1** provides a timeline of the major plan update tasks and milestones by month over a 9-month period. **Table 2-2** lists the advisory committee members and how they contributed to the development of the plan.

Table 2-1. AHMP Timeline

Date	Tasks	People Involved
March 2019	Reviewed the 2014 AHMP and decided to continue efforts to streamline the plan Held 2019 AHMP advisory committee kick-off meeting (March 15)	AHMP project manager, advisory committee
April 2019	Determined the hazards to be profiled, including climate change (new to the 2019 AHMP), drought, dam failure, earthquake, flood, landslide, tsunami and wildfire (all addressed in the 2014 AHMP)	AHMP project manager, AECOM
May 2019	Collected local and regional existing plans and reports	AECOM
June 2019	Determined the Geographic Information System (GIS) strategy for risk assessment including land area/geographical boundaries and critical facilities and discussed how to incorporate people experiencing homelessness	AHMP project manager, AECOM, Los Angeles County Office of Emergency Management

Table 2-1. AHMP Timeline

Date	Tasks	People Involved
July 2019	Identified initial list of stakeholders Crafted public outreach messages for the Twitter handle @ReadyLACounty Created draft hazard figures Developed homeless people risk assessment tables Developed land area/geographic boundaries risk assessment tables Rewrote/updated the hazard profiles into a streamlined tabular format Began developing/updating/collecting draft mitigation actions Streamlined and updated the community profile section to only address the planning area, population and development trends and county critical facilities (deleted general County information)	AHMP project manager, AECOM
August 2019	Tweeted public outreach messages about the 2019 AHMP Emailed stakeholders about the 2019 AHMP Conducted conference call with Los Angeles County Regional Planning (August 5) to discuss joint public outreach efforts as well as mitigation strategies Conducted meeting with Los Angeles County Public Works (August 7) to discuss 2019 AHMP, progress made to date, and existing and new mitigation strategies Developed critical facilities risk assessment tables Created draft risk assessment tables Revised plan maintenance approach from quarterly meetings to annual review questionnaires	AHMP project manager, AECOM, Los Angeles County Department of Regional Planning, Los Angeles County Public Works, advisory committee
September 2019	Updated the capability assessment tables Developed a list of potential mitigation actions and prioritized actions based on a new tiered approach Created public outreach flyers in English and Spanish and placed on the Los Angeles County OEM website Documented progress in local mitigation efforts Addressed changes in development since the 2014 AHMP Created Initial Draft AHMP Created Public Draft AHMP	AHMP project manager, AECOM, advisory committee
October 2019	Created Final Draft AHMP	AECOM

Table 2-2. Hazard Mitigation Advisory Committee

Name	Department / Agency, Title	Contribution
Emily Montanez	Office of Emergency Management, AHMP project manager, Senior Program Manager	Led kick-off meeting, reviewed draft hazard figures and risk assessment tables, draft mitigation actions and initial draft plan.
Margaret Carlin	Office of Emergency Management, GIS Project Supervisor	Provided input on GIS, reviewed draft hazard figures and risk assessment tables, draft mitigation actions and initial draft plan.
Stephanie Kim	Office of Emergency Management, Academic Intern	Reviewed and updated the community profile, provided input on people experiencing homelessness, participated on conference calls, attended department meetings, and reviewed the initial draft plan.
Caroline Chen	Los Angeles County Department of Regional Planning, Regional Planner	Attended kick-off meeting, participated on conference call, reviewed draft hazard figures and risk assessment tables, draft mitigation actions, and initial draft plan.
Iris Chi	Los Angeles County Department of Regional Planning, Regional Planner	Attended kick-off meeting, participated on conference call, reviewed draft hazard figures and risk assessment tables, draft mitigation actions and initial draft plan.
Loni Eazell	Los Angeles County Public Works, Disaster Services Specialist	Coordinated August 7 department meeting, reviewed draft hazard figures and risk assessment tables, draft mitigation actions, and initial draft plan.
Frank Forman	Los Angeles County Fire Department, Battalion Chief	Reviewed draft hazard figures and risk assessment tables, draft mitigation actions and initial draft plan.
Andrew Gano	City of Glendale Fire Department, Captain	Attended kick-off meeting, reviewed draft hazard figures and risk assessment tables, draft mitigation actions, and initial draft plan.
Angine Geragoosian	Los Angeles County Public Works, Disaster Services Analyst	Attended kick-off meeting, reviewed draft hazard figures and risk assessment tables, draft mitigation actions, and initial draft plan.
Patricia Hachiya	Regional Planning, Supervising Regional Planner	Attended kick-off meeting, participated on conference call, reviewed draft hazard figures and risk assessment tables, draft mitigation actions, and initial draft plan.
Jack Husted	Department of Public Works, Senior Civil Engineer	Attended August 7 meeting, reviewed draft hazard figures and risk assessment tables, draft mitigation actions, and initial draft plan.
Sheryll Jones	Emergency Services Coordinator, Southern Region Cal OES	Advised Los Angeles County OEM about initial update process and reviewed initial draft plan.
Sinan Khan	Office of Emergency Management, Associate Director	Reviewed draft hazard figures and risk assessment tables, draft mitigation actions and initial draft plan.

Table 2-2. Hazard Mitigation Advisory Committee

Name	Department / Agency, Title	Contribution
Diana Manzano	Area D Disaster Management, Coordinator	Attended kick-off meeting, reviewed draft hazard figures and risk assessment tables, draft mitigation actions, and initial draft plan.
John Eric Pearce	Fire Department, Captain	Reviewed draft hazard figures and risk assessment tables, draft mitigation actions, and initial draft plan.
Christine Shaffer	Sheriff's Department, Deputy	Reviewed draft hazard figures and risk assessment tables, draft mitigation actions, and initial draft plan.
Nathaniel VerGow	Los Angeles Homeless Services Authority, Director of Access and Engagement	Reviewed draft hazard figures and risk assessment tables, draft mitigation actions, and initial draft plan.
Steven Wallace	San Gabriel Fire Department, Interim Fire Chief	Reviewed draft hazard figures and risk assessment tables, draft mitigation actions, and initial draft plan.
Iain Watt	Office of Emergency Management, Emergency Management Coordinator	Participated on conference call, reviewed draft hazard figures and risk assessment tables, draft mitigation actions, and initial draft plan.

2.2 OPPORTUNITIES FOR STAKEHOLDERS

On August 20, 2019, the AHMP project manager reached out to stakeholders about the 2019 AHMP to invite them to participate in the plan update process. The stakeholders were also notified on October 4, 2019, that a copy of the public draft plan was available for review on the Los Angeles County OEM website. Stakeholders include members of the Mutual Aid Regional Advisory Committee (MARAC) for the Southern Region. The MARAC consists of: the California Office of Emergency Services (Cal OES) regional administrator, or deputy, for the Administrative Region encompassing the mutual aid region(s); regional mutual aid coordinators (fire, law enforcement, disaster medical and other established mutual aid systems); a representative from each operational area located in the mutual aid region; representatives from two municipalities (small/large and rotates bi-annually); regional public utility representative; private utility representative; special district representative; and other designee as appointed by an individual MARAC. Stakeholder documentation is located in **Appendix A**.

2.3 PUBLIC INVOLVEMENT

The Los Angeles County OEM engaged the public in the plan update process through various media formats. A flyer about the 2019 AHMP was created in both English and Spanish and placed on the Los Angeles County OEM website. The website also includes a copy of the public draft plan for public comment on October 4, 2019.

https://www.lacounty.gov/emergency/county-of-los-angeles-all-hazards-mitigation-plan/

Additionally, the Los Angeles County OEM used Twitter, @ReadyLACounty, to engage the public through a series of tweets about the 2019 AHMP, hazards in Los Angeles County, hazard mitigation planning, and the public draft plan.

2.4 REVIEW AND INCORPORATION OF EXISTING PLANS AND REPORTS

The consultant reviewed existing relevant information to include in the 2019 AHMP. **Table 2-3** lists the plans and reports reviewed as well as information to be incorporated into the 2019 AHMP.

Table 2-3. Existing Plans and Reports

Plans and Reports	Information to be Incorporated into the 2019 AHMP
Los Angeles County Operational Area Emergency Response Plan (2012)	Appendix K Hazards-Specific to the operational area into Section 4 Hazard Identification and Risk Assessment
Los Angeles County 2035 General Plan (2015)	Safety element mitigation policies into Section 5 Mitigation Strategy
Los Angeles County Floodplain Management Plan (2016)	Flood hazard profile, non-implemented flood mitigation initiatives into Section 4 Hazard Identification and Risk Assessment
County of Los Angeles Floodplain Management Plan Progress Report 2017 – 2018	Non-implemented flood mitigation initiatives into Section 5 Mitigation Strategy, implemented flood mitigation initiatives into Section 6 Plan Review, Evaluation, and Implementation
County of Los Angeles Repetitive Loss Area Analysis Progress Report 2017 – 2018	Non-implemented flood mitigation initiatives into Section 5 Mitigation Strategy, implemented flood mitigation initiatives into Section 6 Plan Review, Evaluation, and Implementation
Unincorporated Los Angeles County Community Climate Action Plan 2020	Climate change mitigation objectives into Section 5 Mitigation Strategy
2019 Greater Los Angeles Homeless Count Results	People experiencing homelessness count into Section 4 Hazard Identification and Risk Assessment
Los Angeles County Fire Department 2018 Strategic Fire Plan	Vegetation management programs into Section 5 Mitigation Strategy
Southern California Earthquake Data Center's Earthquake Catalogs	Historic seismic data into Section 4 Hazard Identification and Risk Assessment
Maritime Tsunami Response Playbooks: Background Information and Guidance for Response and Hazard Mitigation Use (2016)	Historical tsunami information and evaluation data into Section 4 Hazard Identification and Risk Assessment
FEMA Flood Insurance Study, Los Angeles County, California (2018)	Historical flood information and flood hazard areas into Section 4 Hazard Identification and Risk Assessment
U.S. Geological Survey (USGS): Rainfall and Landslides in Southern California (active)	Landslide nature, location, historical and extent information into Section 4 Hazard Identification and Risk Assessment

2.5 CONTINUED PUBLIC PARTICIPATION

A copy of the 2019 AHMP will be kept on the Los Angeles County OEM website along with contact information. The Los Angeles County OEM will also notify residents of any changes or

updates to the 2019 AHMP, including mitigation projects identified in the plan as they are implemented, via @ReadyLACounty on Twitter.

2.6 PLAN UPDATE METHOD AND SCHEDULE

The 2014 AHMP recommended quarterly meetings to discuss and track mitigation projects implemented during the lifespan of the 2014 AHMP. It is unknown how often specific departments/agencies met to track the status of their mitigation actions. For the 2019 AHMP, the plan update method and schedule has been revised to include an annual review and an advisory committee roundtable prior to the 5-year update. Mitigation projects will be monitored via a progress project report. Details are as follows:

- **Annual Review Worksheets**: Every 12 months from plan adoption, the AHMP project manager will email each member of the advisory committee an Annual Review Worksheet to complete. As shown in Appendix A, the Annual Review Worksheet reflects the Local Mitigation Plan Review Tool and includes the following: planning process, hazard profile, risk assessment, and mitigation strategy. Each member of the advisory committee will email completed worksheets back to the AHMP project manager to review. The AHMP project manager will summarize these findings and email them out to the committee. If the AHMP project manager believes that the 2019 AHMP needs to be updated based on the findings, then an invitation will be sent to advisory committee members to attend a formal AHMP update meeting.
- **Mitigation Progress Project Reports**: Mitigation actions will be monitored and updated using the Mitigation Project Progress Report. During each annual review, each department or agency currently administering a mitigation project will submit a progress report to the AHMP project manager. For projects that are being funded by a FEMA mitigation grant, FEMA quarterly reports may be used as the preferred reporting tool. As shown in Appendix A, the progress report will discuss the current status of the mitigation project, including any changes made to the project, identify implementation problems, and describe appropriate strategies to overcome them.
- **Advisory Committee Roundtable**: On the fourth year of the update, the AHMP project manager will reconvene the advisory committee updating membership, if necessary) and lead a tabletop exercise with the advisory committee to: collect the Annual Review Worksheet and any Mitigation Project Progress Reports and FEMA quarterly reports; determine hazards to be included in the 2024 AHMP; develop a new work plan; and begin the plan update process.

3 COMMUNITY PROFILE

3.1 PLANNING AREA

With approximately 4,760.72 square miles, Los Angeles County is geographically one of the largest counties in the country. As shown in **Figure 3-1**, the county stretches along 75 miles of the Pacific coast of Southern California and is bordered to the east by Orange County and San Bernardino County, to the north by Kern County, and to the west by Ventura County. Los Angeles County has two islands, Santa Catalina (75.00 square miles) and San Clemente (60.69 square miles), which are part of an eight-island group called the Channel Islands.

As shown in **Tables 3-1 – 3-6** and **Figures 3-2 – 3-6**, the county is divided into five supervisorial districts, each representing approximately 2 million people in 88 cities and approximately 140 communities or 122 county-wide statistical areas. The five supervisorial districts consist of 4,150 square miles, with 3,014.17 square miles located in the unincorporated areas. The remaining area of Los Angeles County is federal land, including the Los Padres National Forest and Angeles National Forest.

For the 2019 AHMP, the planning area is defined as Unincorporated Los Angeles County. However, the plan's risk assessment includes: Los Angeles County, Unincorporated Los Angeles County, and supervisorial districts 1-5. In addition, specific county-wide statistical area risk assessment information is provided in **Appendix C**.

Table 3-1. Los Angeles County Land Area

Entity	Square Miles
Los Angeles County	4,760.72
Unincorporated Los Angeles County	3,041.17
Supervisorial District 1	246.19
Supervisorial District 2	161.83
Supervisorial District 3	431.21
Supervisorial District 4	439.95
Supervisorial District 5	2,807.00

Table 3-2. Supervisorial District 1

City	County-wide Statistical Area
Azusa	Arcadia
Baldwin Park	Angeles National Forest
Bell	Avocado Heights
Bell Gardens	Azusa
Claremont	Bandini Islands

Table 3-2. Supervisorial District 1

City	County-wide Statistical Area
Commerce	Bassett
Cudahy	Charter Oak
El Monte	Claremont
Huntington Park	Covina
Industry	Covina (Charter Oak)
Irwindale	Duarte
La Puente	East Los Angeles
Maywood	El Monte
Montebello	Florence – Firestone
Monterey Park	Glendora
Pico Rivera	Hacienda Heights
Pomona	La Verne
Rosemead	Lynwood
South El Monte	North Whittier
South Gate	Padua Hills
Vernon	Pellissier Village
Walnut	Pomona
West Covina	Rowland Heights
	San Jose Hills
	South El Monte
	South San Gabriel
	Sunrise Village
	Valinda
	Walnut
	Walnut Park
	West Puente Valley
	West Whittier / Los Nietos
	Whittier
	Whittier Narrows

Table 3-3. Supervisorial District 2

City	County-wide Statistical Area
Carson	Athens Village
Compton	Athens-Westmont
Culver City	Del Aire
Gardena	Del Rey
Hawthorne	East Rancho Dominguez
Inglewood	El Camino Village
Lawndale	Florence – Firestone
Los Angeles (portion)	Hawthorne
Lynwood	Ladera Heights
	Lennox
	Lynwood
	Marina del Rey
	Rancho Dominguez
	Rosewood
	Rosewood/East Gardena
	Rosewood/West Rancho Dominguez
	View Park/Windsor Hills
	Walnut Park
	West Carsen
	West Rancho Dominguez
	Willowbrook
	Wiseburn

Table 3-4. Supervisorial District 3

City	County-wide Statistical Area
Agoura Hills	Angeles National Forest
Beverly Hills	Franklin Canyon
Calabasas	Marina del Rey
Hidden Hills	Miracle Mile
Malibu	Kagel/Lopez Canyons
San Fernando	Santa Monica Mountains
Santa Monica	Universal City
West Hollywood	West LA
Westlake Village	Westhills

Table 3-5. Supervisorial District 4

City	County-wide Statistical Area
Artesia	Cerritos
Avalon	Del Aire
Bellflower	East La Mirada
Cerritos	East Rancho Dominguez
Diamond Bar	East Whittier
Downey	El Camino Village
El Segundo	Hacienda Heights
Hawaiian Gardens	Harbor Gateway
Hermosa Beach	La Habra Heights
La Habra Heights	La Rambla
La Mirada	Lakewood
Lakewood	Lennox
Lomita	Long Beach
Long Beach	Lynwood
Los Angeles (portion)	Marina del Rey
Manhattan Beach	Palos Verdes Peninsula
Norwalk	Rancho Dominguez
Palos Verdes Estates	Rowland Heights
Paramount	San Clemente Island
Rancho Palos Verdes	Santa Catalina Island

Table 3-5. Supervisorial District 4

City	County-wide Statistical Area
Redondo Beach	South Whittier
Rolling Hills	Sunrise Village
Rolling Hills Estates	West Carson
Santa Fe Springs	West Whittier / Los Nietos
Signal Hill	Westfield/Academy Hills
Torrance	Whittier
Whittier	

Table 3-6. Supervisorial District 5

City	County-wide Statistical Area
Alhambra	Acton
Arcadia	Agua Dulce
Bradbury	Altadena
Covina	Anaverde
Duarte	Angeles National Forest
Glendale	Arcadia
Glendora	Azusa
La Canada – Flintridge	Bouquet Canyon
La Verne	Bradbury
Lancaster	Canyon Country
Monrovia	Castaic
Palmdale	Claremont
Pasadena	Covina
San Dimas	Covina (Charter Oak)
San Gabriel	Del Sur
San Marino	Desert View Highlands
Santa Clarita	Duarte
Sierra Madre	East Covina
South Pasadena	East Lancaster
Temple City	East Pasadena
Los Angeles City	Elizabeth Lake
Canoga Park (portion)	Glendora

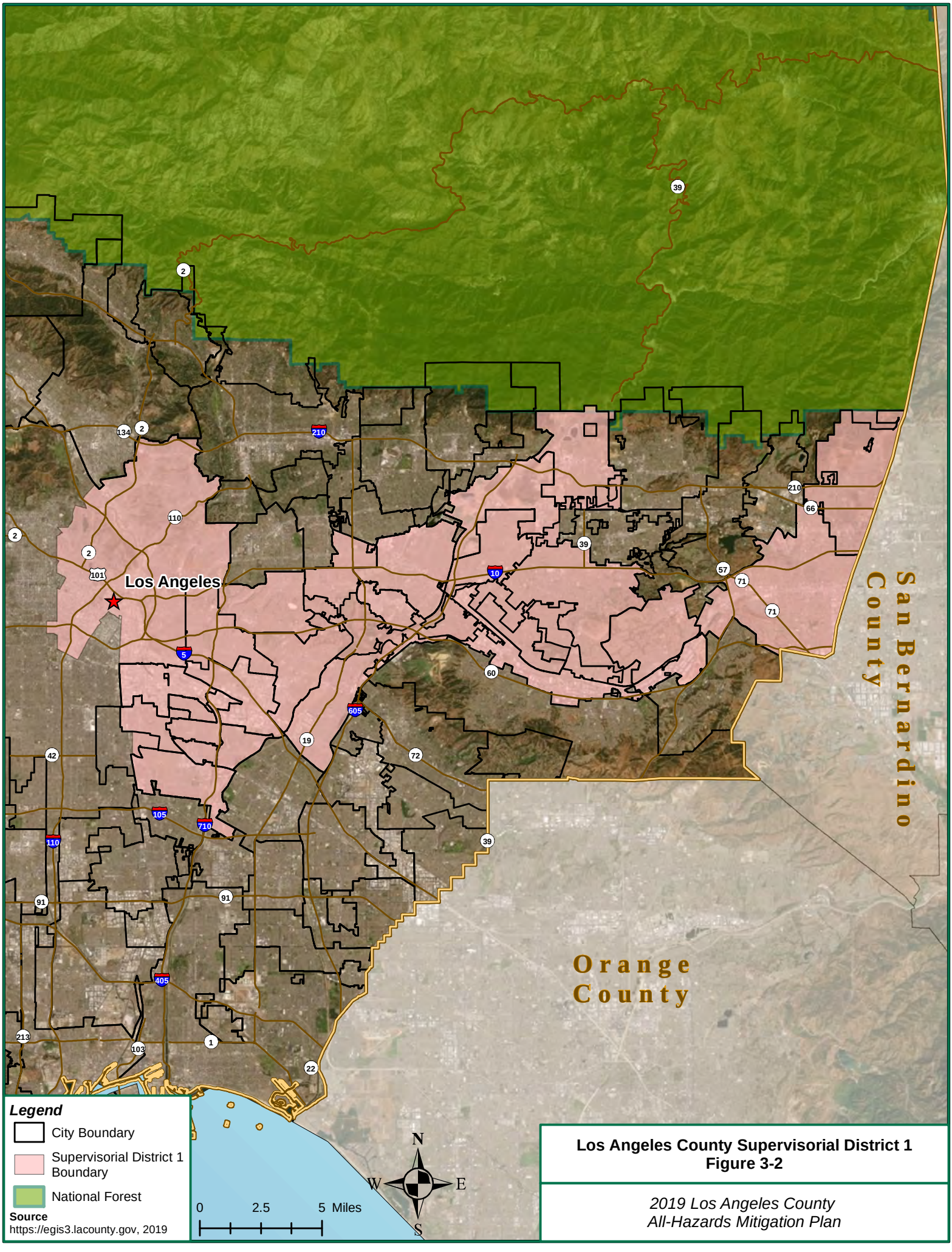
Table 3-6. Supervisorial District 5

City	County-wide Statistical Area
Chatsworth (portion)	Hi Vista
Granada Hills (portion)	Kagel / Lopez Canyons
Hansen Dam (portion)	La Crescenta-Montrose
Lake View Terrace (portion)	La Verne
Mission Hills (portion)	Lake Hughes
Northridge (portion)	Lake Los Angeles
Olive View Hospital (Sylmar)	Lake Manor
Porter Ranch	Leona Valley
Shadow Hills	Littlerock
Sun Valley (portion)	Littlerock/Juniper Hills
Sunland	Littlerock/Pearblossom
Sylmar (portion)	Llano
Tujunga	Monrovia
West Hills (portion)	Newhall
	North Lancaster
	Northeast San Gabriel
	Palmdale
	Pearblossom/Llano
	Placerita Canyon
	Pomona
	Quartz Hill
	Roosevelt
	San Francisquito Canyon/Bouquet Canyon
	San Pasqual
	Sand Canyon
	Saugus
	Saugus/Canyon Country
	South Antelope Valley
	South Edwards
	Southeast Antelope Valley
	Stevenson Ranch
	Sun Village
	Twin Lakes/Oat Mountain

Table 3-6. Supervisorial District 5

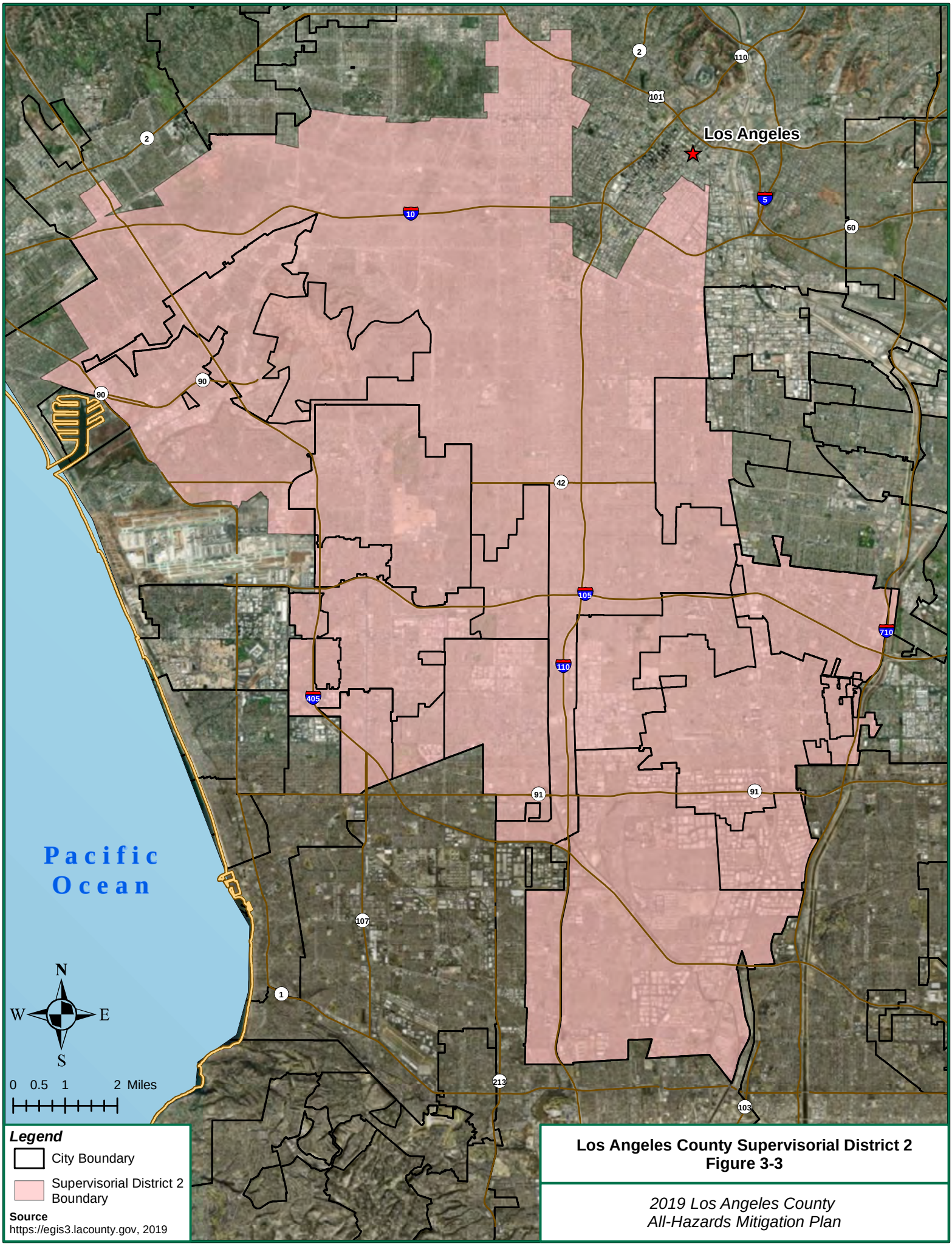
City	County-wide Statistical Area
	Val Verde
	Valencia
	West Antelope Valley
	West Chatsworth
	White Fence Farms


Kern County
Ventura County
San Bernardino County
Orange County
Los Angeles
Pacific Ocean
N
W
E
S
0 2.5 5 10 15 Miles
Legend
Unincorporated County Boundary
National Forest
Source
https://egis3.lacounty.gov, 2019
Los Angeles County
Figure 3-1
2019 Los Angeles County
All-Hazards Mitigation Plan



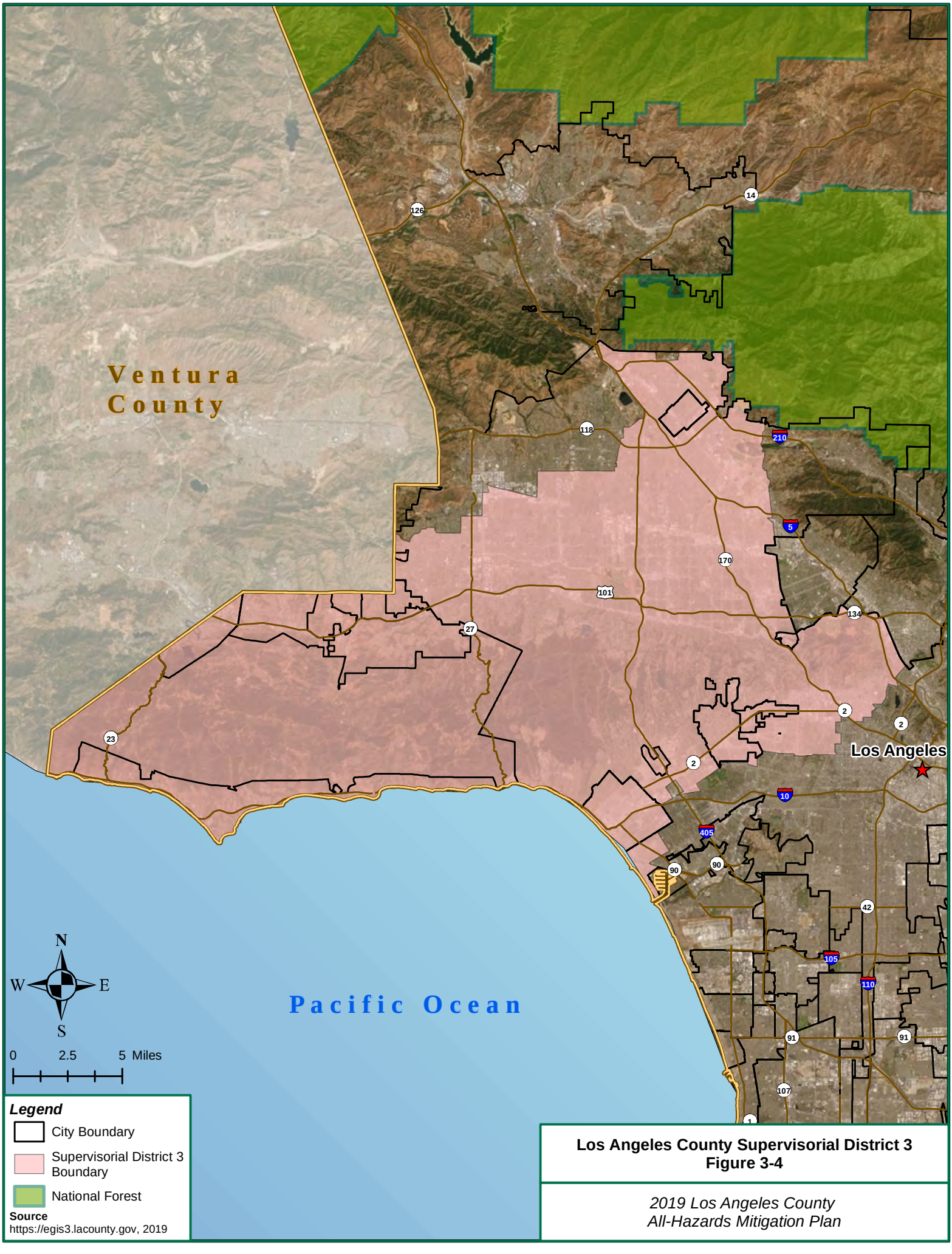
Los Angeles County Supervisorial District 1
Figure 3-2

2019 Los Angeles County
All-Hazards Mitigation Plan



Los Angeles County Supervisorial District 2
Figure 3-3

2019 Los Angeles County
All-Hazards Mitigation Plan


Ventura County
Pacific Ocean
Los Angeles
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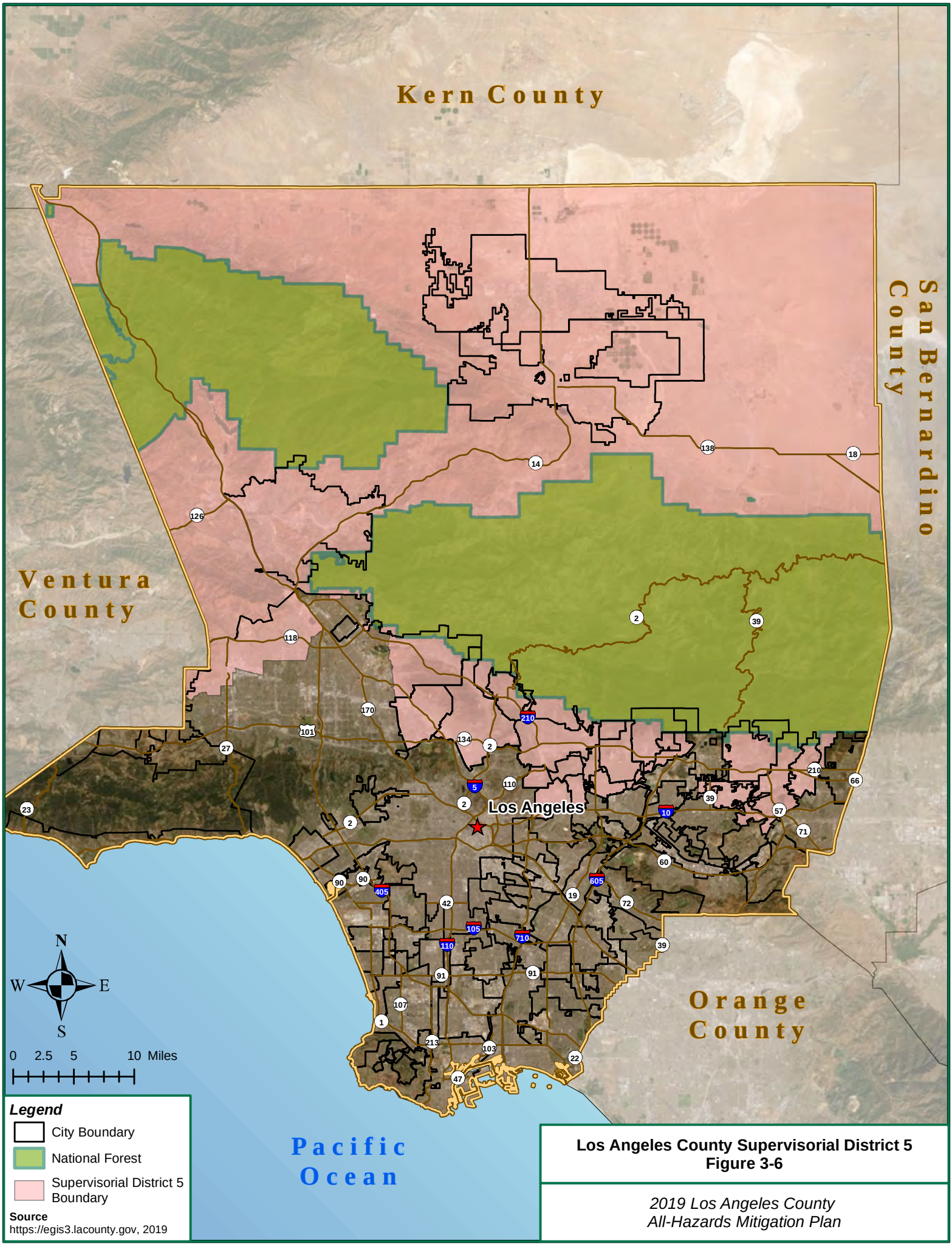
Legend
City Boundary
Supervisorial District 3 Boundary
National Forest
Source
https://egis3.lacounty.gov, 2019
Los Angeles County Supervisorial District 3
Figure 3-4
2019 Los Angeles County
All-Hazards Mitigation Plan

Los Angeles County Supervisorial District 4
Figure 3-5

2019 Los Angeles County
All-Hazards Mitigation Plan



Los Angeles County Supervisorial District 5
Figure 3-6

2019 Los Angeles County
All-Hazards Mitigation Plan

3.2 POPULATION AND DEVELOPMENT TRENDS

Since the drafting of the 2014 AHMP, United States (U.S.) Census Bureau Intercensal Estimates from July 1, 2015, to July 1, 2018, show the number of people residing in Los Angeles County only grew from 10,097,037 to 10,105,518. While the county experienced population growth of 0.50 percent in 2015 and 0.23 percent in 2016, the county population fell by 0.02 percent in 2017 and 0.13 percent in 2018.

The California Department of Finance noted that the decline in population can be linked in part to a decline in birthrate. Researchers at the University of Southern California Lusk Center for Real Estate also suggest that one of the biggest reasons behind Los Angeles County's growth rate slip is due the lack of housing. Despite the city of Los Angeles adding between 15,000 and 17,000 units of housing each year from 2014 to 2018, housing has become prohibitively unaffordable, which has led many young Los Angeles County residents to move out-of-state or put down roots in nearby Inland Empire counties, where thousands of new jobs in distribution hubs and fulfillment centers have fueled more affordable housing development.

For the 2019 AHMP, population and residential buildings are not included in the risk assessment. As 2020 U.S. Census data become available, this information may be included in plan updates.

3.3 VULNERABLE POPULATIONS

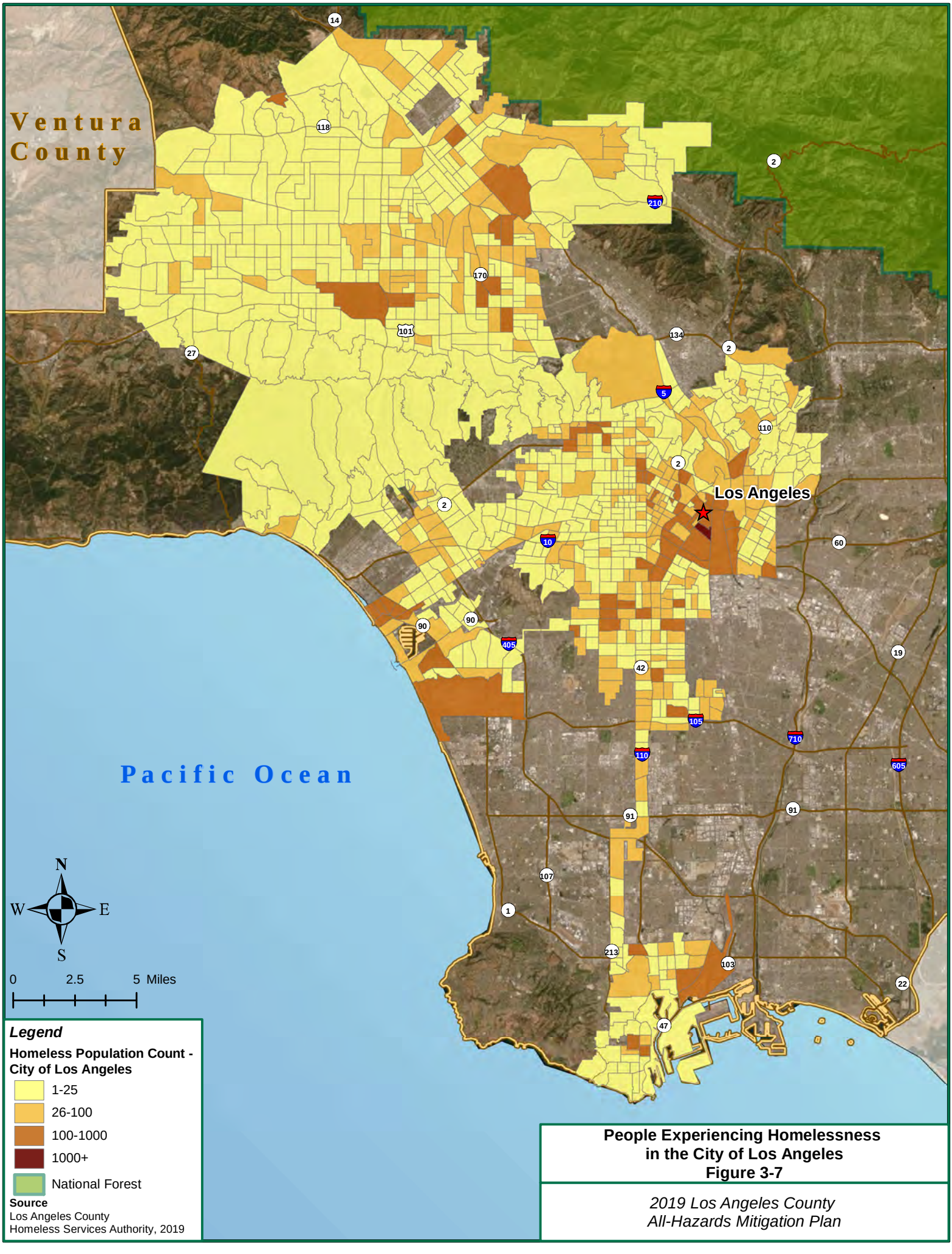
As noted by the Center for Disease Control (CDC), "Everyone must remain safe in an emergency. But for some, it's more difficult." Vulnerable or at-risk groups include people that may have difficulty communicating or accessing medical care, need help maintaining independence, require supervision, and need help accessing transportation.

For the 2019 AHMP, vulnerable population groups addressed in the risk assessment include people experiencing homelessness. People experiencing homelessness have become a regional crisis as the number of this vulnerable population group has risen to nearly 60,000 in Los Angeles County alone. **Table 3-7** and **Figures 3-7 and 3-8** show the total point-in-time number of people experiencing homelessness in the city of Los Angeles and Unincorporated Los Angeles County, as captured for the 2019 Greater Los Angeles Homeless Count.

There are several other vulnerable groups at-risk to hazards in Los Angeles County; future updates of the AHMP will expand vulnerable population categories as the 2020 U.S. Census socioeconomic status, household composition and disability, minority status and language, and housing and transportation date becomes available.

Table 3-7. People Experiencing Homelessness

Entity	Total # of People Experiencing Homelessness (Sheltered and Unsheltered)
City of Los Angeles	32,931
Unincorporated Los Angeles County	5,881


Ventura County
Los Angeles
Pacific Ocean
N
W
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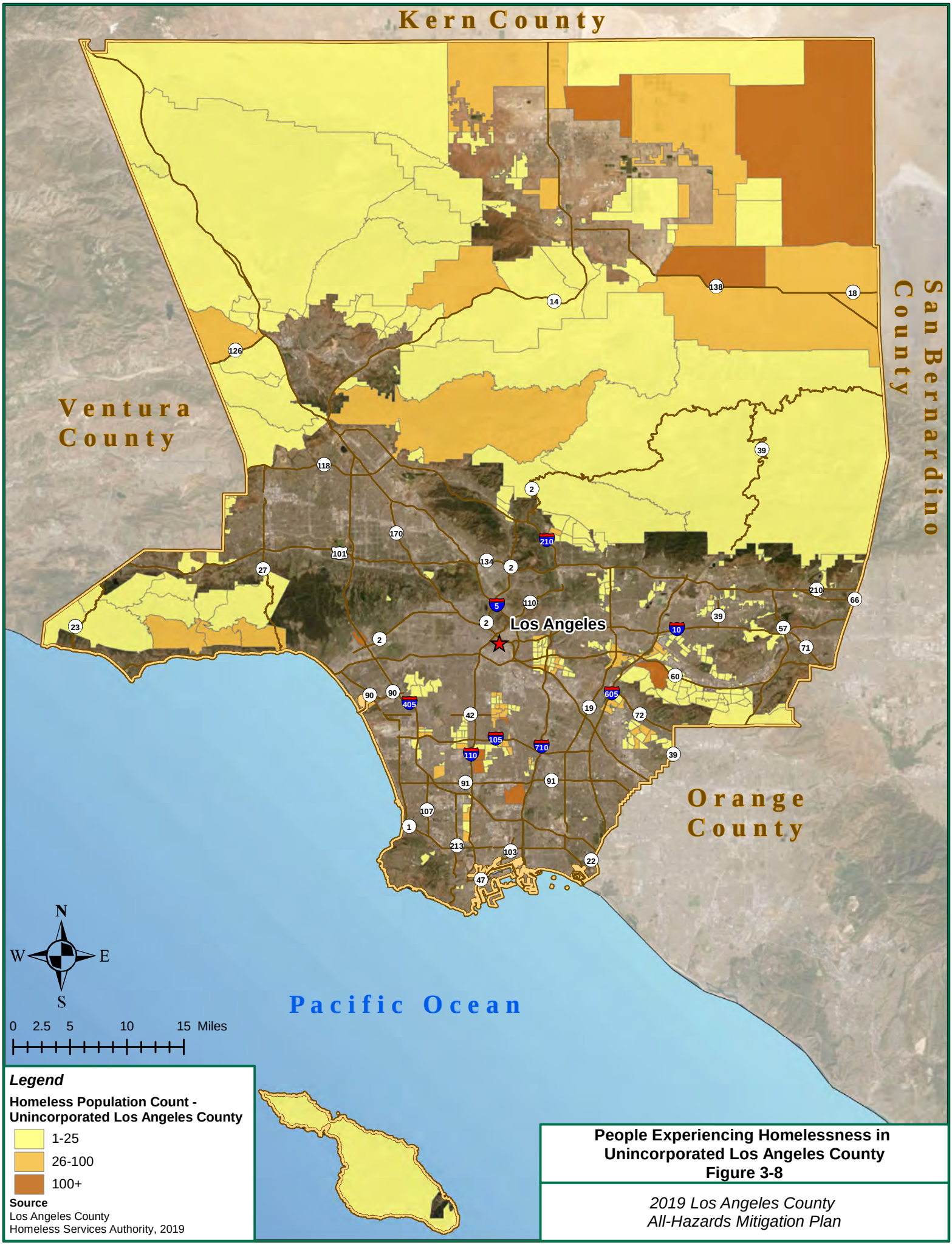
S
0
2.5
5 Miles
Legend
Homeless Population Count - City of Los Angeles
1-25
26-100
100-1000
1000+
National Forest
Source
Los Angeles County Homeless Services Authority, 2019
People Experiencing Homelessness in the City of Los Angeles
Figure 3-7
2019 Los Angeles County All-Hazards Mitigation Plan


Kern County
Ventura County
San Bernardino County
Orange County
Los Angeles
Pacific Ocean
N
W
E
S
0 2.5 5 10 15 Miles
Legend
Homeless Population Count - Unincorporated Los Angeles County
1-25
26-100
100+
Source
Los Angeles County
Homeless Services Authority, 2019
People Experiencing Homelessness in Unincorporated Los Angeles County
Figure 3-8
2019 Los Angeles County
All-Hazards Mitigation Plan

3.4 CRITICAL FACILITIES

A critical facility provides services and functions essential to a community, especially during and after a disaster. Common types of critical facilities include: fire stations, police stations, hospitals, schools, water and waste water systems, and utilities. Critical facilities may also include places that can be used for sheltering or staging purposes, such as community centers and libraries. Critical facilities may also include large public gathering spots.

Los Angeles County does not currently maintain a centralized critical facilities database. For the 2019 AHMP, 915 major county-owned and county-related critical facilities were collected from various county department and agencies and also from the U.S. Department of Homeland Security's (DHS) Homeland Infrastructure-Foundation-Level Data site. Critical facility names and addresses were then geocoded to a location and the resulting geographic features were used for the risk assessment. The results of this process are shown in **Table 3-8** and **Figure 3-9** through **Figure 3-19**. Facility-specific information is provided in **Appendix B**. Some departments and agencies have multiple facilities at the same location; hence there are duplications of facility sites.

The County hopes to implement a coordinated data collection and database system for critical facilities; as such, future updates to this plan will likely include an expanded critical facilities list.

Table 3-8. Los Angeles County-Owned and County-Related Critical Facilities

Department / Agency	# of Facilities
Los Angeles County Animal Care & Control	7
Los Angeles County Fire Department	337*
Los Angeles County Health Services	29
Los Angeles County Library	85
LACMA & NHM	4
Los Angeles County Office of Education	37
Los Angeles County - Other (offices)	24
Los Angeles County Parks & Recreation	117
Los Angeles County Public Health	14
Los Angeles County Public Works	230
Los Angeles County Sheriff's Department	31

Note: The fire stations identified for this plan include those located within the 59 cities and all the unincorporated areas that the Los Angeles County Fire Department serves.


Kern County
Ventura County
San Bernardino County
Orange County
Pacific Ocean
N
W
E
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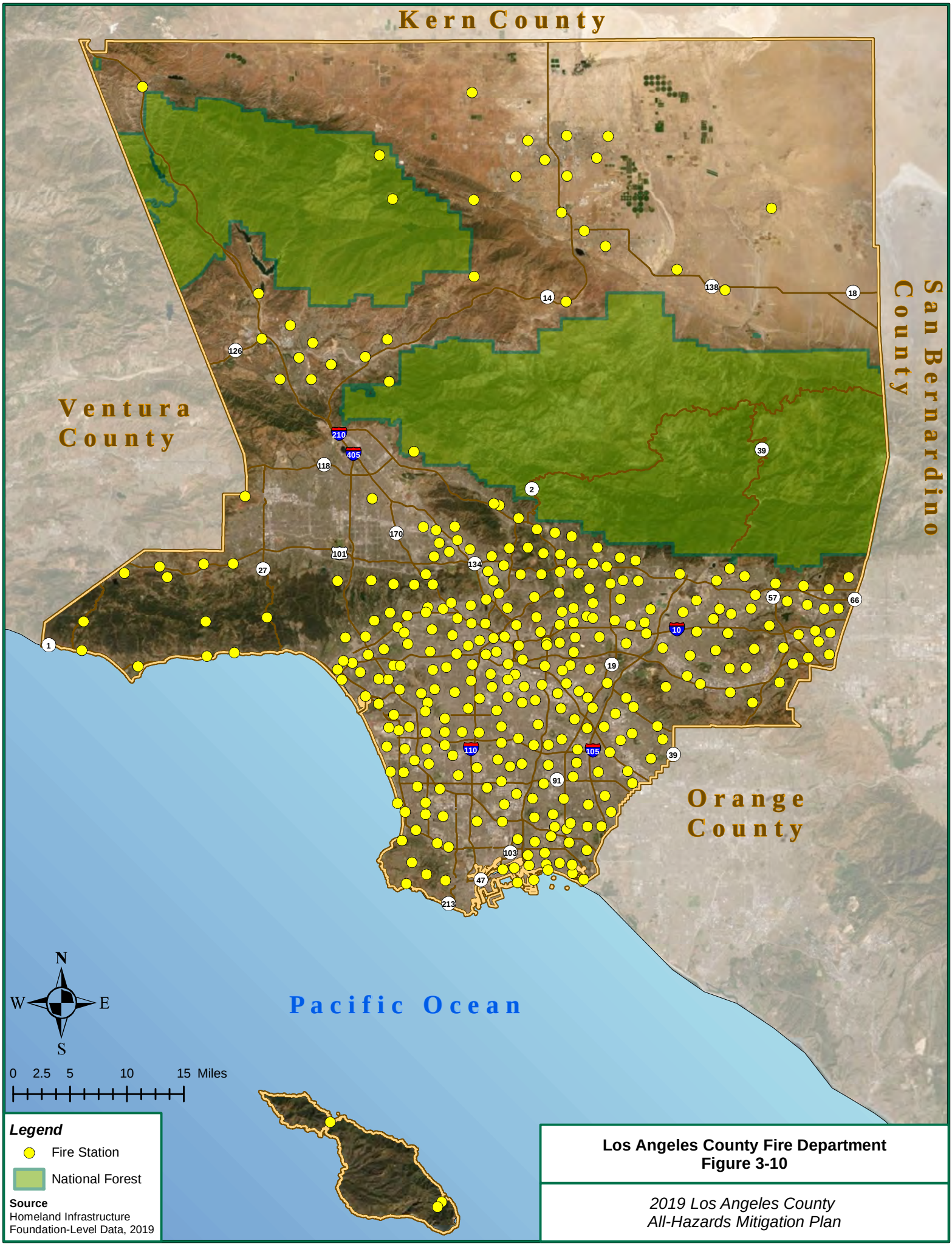
0 2.5 5 10 15 Miles
Legend
Animal Shelter
National Forest
Source
Los Angeles County Animal Care and Control, 2019
Los Angeles County Animal Care & Control
Figure 3-9
2019 Los Angeles County
All-Hazards Mitigation Plan


Kern County
Ventura County
San Bernardino County
Orange County
Pacific Ocean
N
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0 2.5 5 10 15 Miles
Legend
Fire Station
National Forest
Source
Homeland Infrastructure Foundation-Level Data, 2019
Los Angeles County Fire Department
Figure 3-10
2019 Los Angeles County
All-Hazards Mitigation Plan


Kern County
Ventura County
San Bernardino County
Orange County
Los Angeles
Pacific Ocean
N
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S
0 2.5 5 10 15 Miles
Legend
Hospital and Clinic
National Forest
Source
Los Angeles County Department of Human Services, 2019
Los Angeles County Department of Health Services
Figure 3-11
2019 Los Angeles County
All-Hazards Mitigation Plan


Kern County
Ventura County
San Bernardino County
Orange County
Los Angeles
Pacific Ocean
N
W
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0 2.5 5 10 15 Miles
Legend
Library
National Forest
Source
Los Angeles County Library, 2019
Los Angeles County Library
Figure 3-12
2019 Los Angeles County
All-Hazards Mitigation Plan

Los Angeles County Museum of Art and Museum of Natural History
Figure 3-13

2019 Los Angeles County All-Hazards Mitigation Plan

Los Angeles County Office of Education
Figure 3-14

2019 Los Angeles County All-Hazards Mitigation Plan

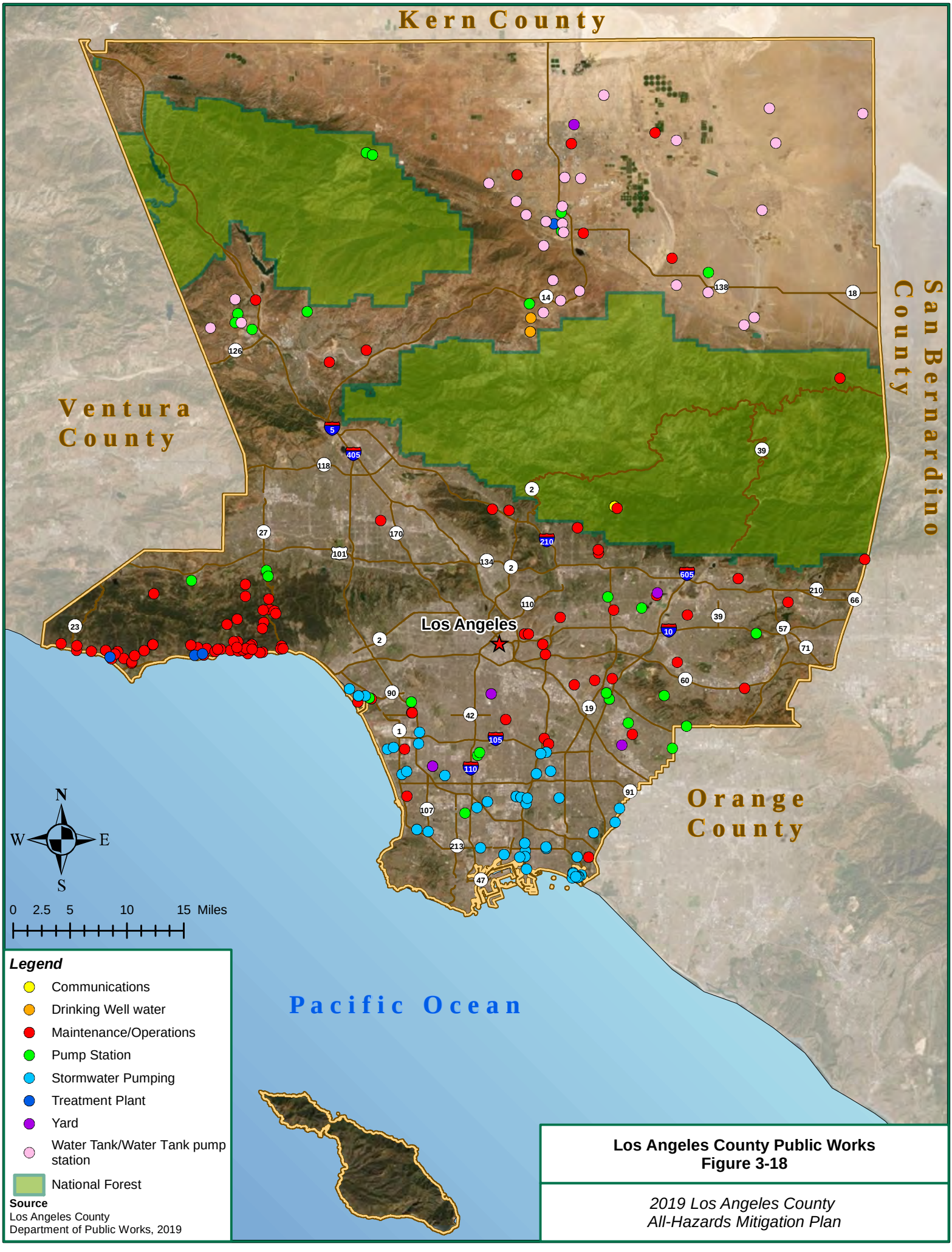
Los Angeles County
Other (Executive/Administration)
Figure 3-15

2019 Los Angeles County
All-Hazards Mitigation Plan

Los Angeles County Parks & Recreation
Figure 3-16

2019 Los Angeles County
All-Hazards Mitigation Plan


Kern County
San Bernardino County
Ventura County
Orange County
Los Angeles
Pacific Ocean
N
W
E
S
0 2.5 5 10 15 Miles
Legend
Clinic
National Forest
Source
Los Angeles County
Department of Public Health, 2019
Department of Public Health
Figure 3-17
2019 Los Angeles County
All-Hazards Mitigation Plan



Los Angeles County Public Works
Figure 3-18

2019 Los Angeles County
All-Hazards Mitigation Plan

Los Angeles County Sheriff's Department
Figure 3-19

2019 Los Angeles County
All-Hazards Mitigation Plan

4 HAZARD IDENTIFICATION AND RISK ASSESSMENT

Section 4 – Hazard Identification and Risk Assessment addresses Element B of the Local Mitigation Plan Regulation Checklist.

Regulation Checklist – 44 CFR 201.6 Local Mitigation Plans
Element B: Hazard Identification and Risk Assessment
B1. Does the Plan include a description of the type, location, and extent of all natural hazards that can affect each jurisdiction(s)? (Requirement § 201.6(c)(2)(ii))
B2. Does the Plan include information on previous occurrences of hazard events and on the probability of future hazard events for each jurisdiction? (Requirement § 201.6(c)(2)(i))
B3. Is there a description of each identified hazard's impact on the community as well as an overall summary of the community's vulnerability for each jurisdiction? (Requirement §201.6(c)(2)(ii))
B4. Does the Plan address NFIP insured structures within the jurisdiction that have been repetitively damaged by floods? (Requirement §201.6(c)(2)(ii))

For the 2019 AHMP, the AHMP project manager and consultant revisited the hazards addressed in the 2014 AHMP. It was determined that the primary focus of the 2019 AHMP should be natural hazards and secondary hazards, as a result of a natural hazard. In addition, it was decided that climate change should be included in the plan, as increasing surface temperatures will likely result in more droughts and subsequently the risk of wildfires. Therefore, climate change, dam failure, drought, earthquake, flood, landslide, tsunami, and wildfire are profiled in the 2019 AHMP.

Hazard identification consists of describing the nature of the hazard, disaster history, location, extent/severity, and probability of future events. Hazard identification profiles have been developed for each of the eight hazards addressed in **Section 4.1** through **Section 4.8**. Additionally, impact (i.e., risk assessment) tables have been created for each hazard. Quantitative impact tables were prepared using GIS analysis for climate change (sea level rise), dam failure, earthquake, flood, landslide, tsunami, and wildfire, while a qualitative impact table was prepared for drought. Impacts considered include: land area, vulnerable populations and critical facilities. Overall summary descriptions have been developed as well. NFIP insured structures are discussed in **Table 4-23**. **Appendix C** contains unincorporated area-specific and critical facility-specific impact tables.

According to the *Comprehensive Preparedness Guide* (CPG) *201: Threat and Hazard Identification and Risk Assessment Guide—Second Edition* (CPG 201) drought, earthquake, flood, landslide, tsunami, and wildfire are classified natural hazards, while dam failure is classified as a technological hazard (but is often a secondary hazard of other natural hazards). CPG 201 does not classify climate change. As such, the hazards profiled for this AHMP are discussed in alphabetical order and not by CPG 201 classification. **The order does not signify level of risk.**

4.1 CLIMATE CHANGE

Table 4-1. Climate Change Identification Profile

Profile	Description
Nature	Climate change is defined as the average statistics of weather, which includes temperature, precipitation, and seasonal patterns in a particular region. Climate change refers to the long-term and irrevocable shift in these weather-related patterns, either regionally or globally. The Earth and its natural ecosystem are very closely tied to the climate and any permanent climate change will lead to an imbalance in the existing ecosystem, impacting the way people live, the food they grow, their health, the wildlife, the availability of water, and much more. Research indicates that much of this warming is due to human activities, primarily burning fossil fuels and clearing forests, that release carbon dioxide (CO_2) and other gases into the atmosphere, trapping in heat that would otherwise escape into space. Once in the atmosphere, these heat-trapping emissions remain there for many years (for example, CO_2 lasts about 100 years. If left unchecked, by the end of the century, CO_2 concentrations could reach levels three times higher than pre-industrial times. According to most climatologists, the planet is starting to experience shifts in climate patterns and increased frequency of extreme weather events at both the global and local levels. Over the next century, increasing atmospheric greenhouse gas concentrations are expected to cause a variety of changes to local climate conditions, including sea level rise and storm surge in coastal areas, reduced mountain snow pack, increased riverine flooding, and more frequent, higher temperatures (leading to extreme heat events and wildfires), particularly inland, decreasing air quality, and extended periods of drought. These effects of climate change are expected to negatively impact water and electricity demand and supplies in Los Angeles County. Decreasing air quality and extreme heat days will degrade public health, as well as and increase wildfire risk. And low-lying water front areas may flood or be underwater from sea level rise.
Location	According to the National Climate Assessment, the entire Pacific coastal region, including Los Angeles County, has been affected by climate change.
History	The history of the scientific discovery of climate change began in the early 19th century, when ice ages and other natural changes in paleoclimate were first suspected and the natural greenhouse effect first identified. In the late 19th century, scientists first argued that human emissions of greenhouse gases could change the climate. Many other theories of climate change were advanced, involving forces from volcanism to solar variation. In the 1960s, the warming effect of carbon dioxide gas became increasingly convincing, although some scientists also pointed out that human activities, in the form of atmospheric aerosols (e.g., "pollution"), could have cooling effects as well. During the 1970s, scientific opinion increasingly favored the warming viewpoint. By the 1990s, as a result of improving fidelity of computer models and observational work confirming the Milankovitch theory of the ice ages, a consensus position formed: greenhouse gases were deeply involved in most climate changes, and human emissions were bringing serious global warming. Since the 1990s, scientific research on climate change has included multiple disciplines and has expanded, significantly increasing our understanding of causal relations, links with historic data, and ability to numerically model climate change. The most recent work has been summarized in the Assessment Reports by the Intergovernmental Panel on Climate Change (IPCC). Climate change is a significant and lasting change in the statistical distribution of weather patterns over periods ranging from decades to millions of years. It may be a change in average weather conditions, or in the distribution of weather around the average conditions (i.e., more or fewer extreme weather events). Climate change is caused by factors that include oceanic processes (such as oceanic circulation), biotic processes, variations in solar radiation received by Earth, plate

Table 4-1. Climate Change Identification Profile

Profile	Description
	tectonics and volcanic eruptions, and human-induced alterations of the natural world; these latter effects are currently causing global warming, and "climate change" is often used to describe human-specific impacts.
Extent / Severity	Over the next century, weather patterns that are considered extreme today are expected to become the norm. The average summer temperature will rise, and in inland areas 100-plus degree Fahrenheit (°F) days will occur more frequently. A temperature change map (**Figure 4-1**) produced by the California Nevada Climate Applications Program predict that the average temperature in the region is expected to rise between 2.5 and 8°F. Drier conditions will also make wildfires more frequent and intense. The National Oceanic and Atmospheric Administration has produced a sea level rise view that shows the impacts of predicted sea level rise. As shown in **Figure 4-2**, a sea level rise of just 3 feet above mean higher high tide (approximate year 2050 – 2060) will result in coastal flooding of 2.25 square miles of Los Angeles County and 0.03 square miles of unincorporated areas of Los Angeles County, while a sea level rise of 6 feet above mean higher high tide (approximate year 2100) will result in coastal flooding of 6.13 square miles of Los Angeles County and 0.15 square miles of unincorporated areas of Los Angeles County.
Recurrence Probability	The specific probability of the extent and frequency climate change induced impacts is uncertain and depends on various climate modeling assumptions. While there is some uncertainty about the rate of climate of change and the severity and frequency of extreme weather events, the IPCC, in its Fifth Assessment of Climate Change (2014), concluded that: …warming of the climate system is unequivocal, and since the 1950s, many of the observed changes are unprecedented over decades to millennia. The atmosphere and ocean have warmed, the amounts of snow and ice have diminished, sea level has risen, and the concentrations of greenhouse gases have increased…It is extremely likely that human influence has been the dominant cause of the observed warming since the mid-20th century.

Table 4-2. Climate Change Impact on Land Area

	3 Ft. Sea Level Rise		6 Ft. Sea Level Rise	
Entity	# of Sq. Miles	% of Sq. Miles	# of Sq. Miles	% of Sq. Miles
Los Angeles County	2.25	0.05	6.13	0.13
Unincorporated Los Angeles County	0.03	0.00	0.15	0.00
Supervisorial District 1	0.00	0.00	0.00	0.00
Supervisorial District 2	0.03	0.02	0.07	0.04
Supervisorial District 3	0.14	0.03	0.34	0.08
Supervisorial District 4	1.98	0.45	5.58	1.27
Supervisorial District 5	0.00	0.00	0.00	0.00

Table 4-3. Climate Change Impact on Vulnerable Populations – People Experiencing Homelessness

	3 Ft. Sea Level Rise		6 Ft. Sea Level Rise	
Entity	# of Homeless	% of Homeless	# of Homeless	% of Homeless
City of Los Angeles	51	0.15	126	0.38
Unincorporated Los Angeles County	0	0.00	2	0.04

Table 4-4. Climate Change Impact on County Critical Facilities

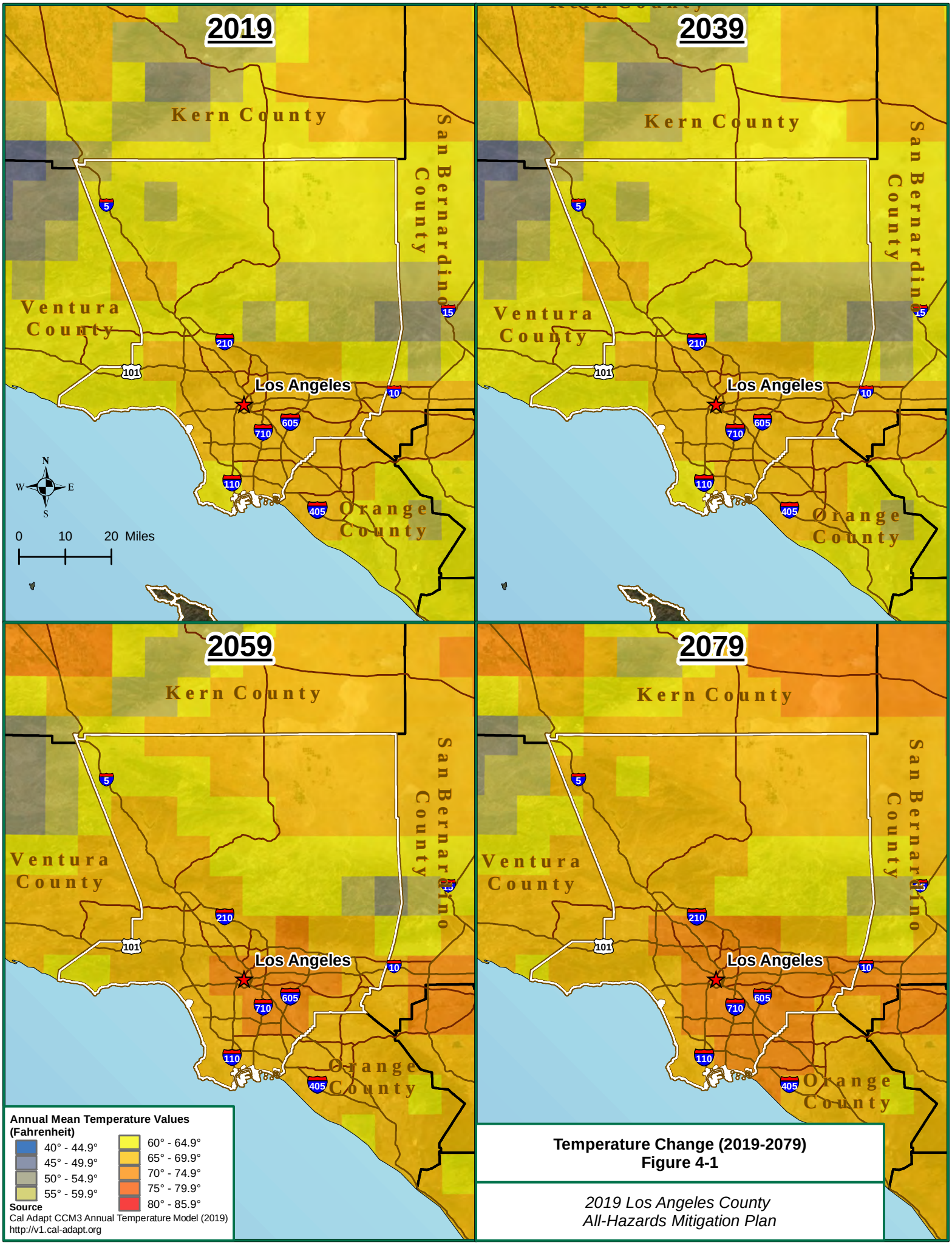
Department/ Agency	3 Ft. Sea Level Rise		6 Ft. Sea Level Rise	
	# of Facilities	% of Facilities	# of Facilities	% of Facilities
Los Angeles County Animal Care & Control	0	0.00	0	0.00
Los Angeles County Fire Department	1	0.00	5	1.4
Los Angeles County Health Services	0	0.00	0	0.00
Los Angeles County Library	0	0.00	0	0.00
LACMA & NHM	0	0.00	0	0.00
Los Angeles County Office of Education	0	0.00	0	0.00
Los Angeles County - Other (offices)	0	0.00	0	0.00
Los Angeles County Parks & Recreation	0	0.00	0	0.00
Los Angeles County Public Health	0	0.00	0	0.00
Los Angeles County Public Works	3	1.30	6	2.61
Los Angeles County Sheriff's Department	1	3.23	0	0.00

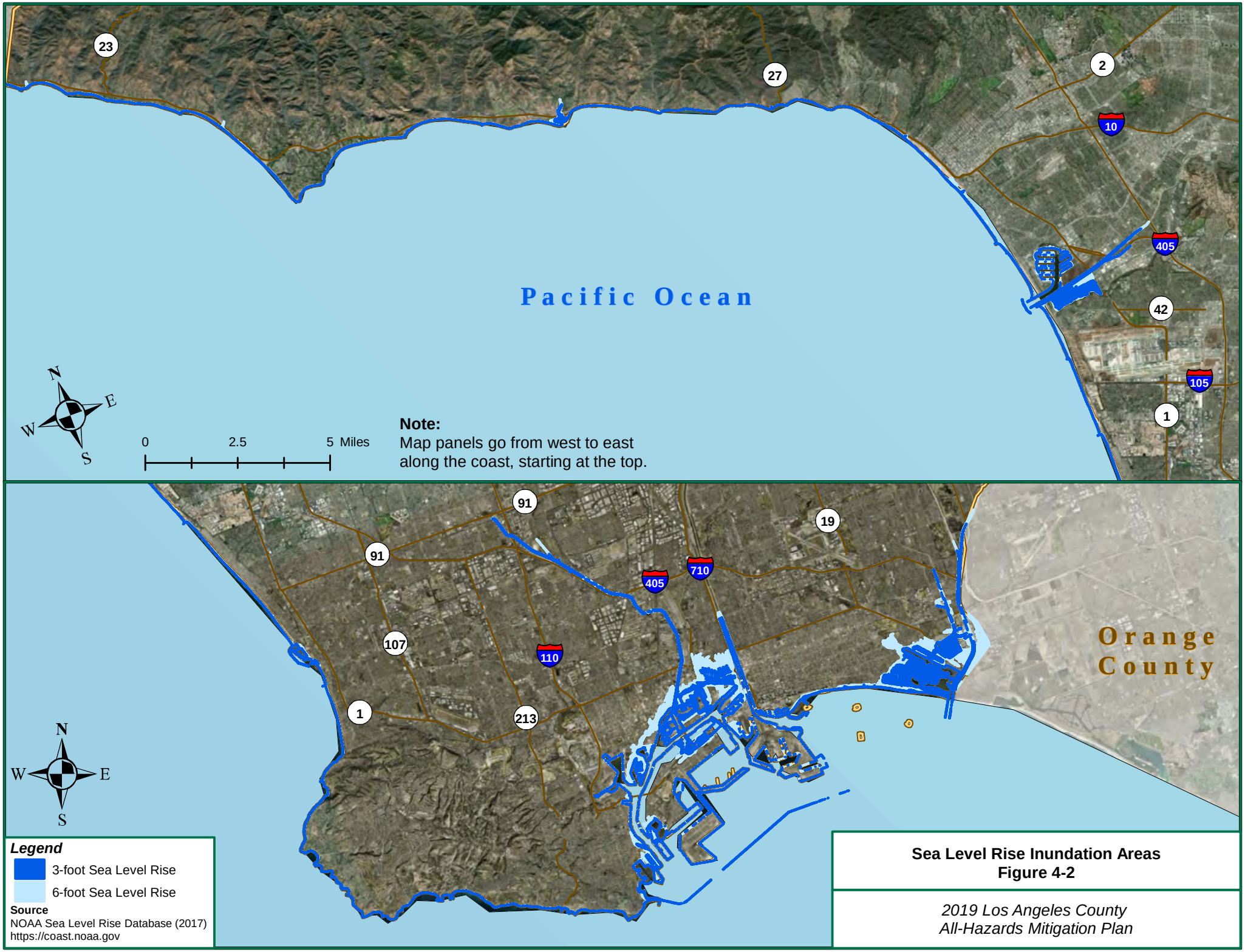
LACMA = Los Angeles County Museum of Art

NHM = Natural History Museum

Table 4-5. Overall Summary of Vulnerability to Climate Change

Climate Change	
Summary	Climate change will affect every person and every area of Los Angeles County. As noted above, the number of extreme heat days will rise, and inland county areas will experience days with temperatures in excess of 100°F more frequently. Extreme heat can trigger a variety of heat stress conditions, such as heat stroke. Higher temperatures can also contribute to the build-up of harmful pollutants and cause respiratory issues. Drier, hotter conditions will also make wildfires more frequent and intense, particularly in the High and Very High Fire Hazard Severity Zones (FHSZ). Wildfires can: burn homes, businesses, and critical facilities; interrupt transportation and utilities; and cause death to people and animals. In addition, mega storms that are linked to climate change will cause severe flooding in cities and form lakes in the Central Valley and Mojave Desert. Along the coast, deadly and destructive storm surges will push farther inland than they once did, which means more frequent nuisance flooding. Los Angeles County is addressing climate change through the implementation of the 2015 Community Climate Action Plan. The plan describes how the County will address the impacts of climate change by reducing greenhouse gas emissions from community activities in the unincorporated areas of Los Angeles County by at least 11% below 2010 levels by 2020. Additionally, in April 2019 the mayor of Los Angeles released the city's Green New Deal, which "sets aggressive goals for the city's sustainable future, tackles the climate emergency with accelerated targets… and sets L.A. on course to be carbon neutral by 2050."


2019
2039
2059
2079
Kern County
San Bernardino County
Ventura County
Orange County
Los Angeles
5
15
210
101
10
605
710
110
405
N
W
E
S
0 10 20 Miles
Annual Mean Temperature Values (Fahrenheit)
40° - 44.9°
45° - 49.9°
50° - 54.9°
55° - 59.9°
60° - 64.9°
65° - 69.9°
70° - 74.9°
75° - 79.9°
80° - 85.9°
Source
Cal Adapt CCM3 Annual Temperature Model (2019)
http://v1.cal-adapt.org
Temperature Change (2019-2079)
Figure 4-1
2019 Los Angeles County
All-Hazards Mitigation Plan



Sea Level Rise Inundation Areas
Figure 4-2

2019 Los Angeles County
All-Hazards Mitigation Plan

4.2 DAM FAILURE

Table 4-6. Dam Failure Identification Profile

Profile	Description
Nature	Dam failure is the structural collapse of a dam that releases the water stored in the reservoir behind the dam. A dam failure is usually the result of the age of the structure, inadequate spillway capacity used in construction, or structural damage caused by an earthquake or flood. When a dam fails, a large quantity of water is suddenly released with a great potential to cause human casualties, economic loss, and environmental damage. This type of disaster is especially dangerous because it can occur suddenly, providing little warning and evacuation time for the people living downstream. The flows resulting from dam failure generally are much larger than the capacity of the downstream channels and therefore lead to extensive flooding. Flood damage occurs as a result of the momentum of the flood caused by the sediment-laden water flooding over the channel banks and impact debris carried by the flow.
Location	According to the California Department of Water Resource's Division of Safety of Dams (DSOD), there are 90 dams under State jurisdiction in Los Angeles County. A dam breach inundation map shows flooding that could result from a hypothetical failure of a dam or its critical appurtenant structure. In 2017, the California Legislature passed a law requiring all State jurisdictional dam owners, except for owners of low-hazard dams, to develop inundation maps approved by DSOD and emergency action plans approved by Cal OES. At the time of the drafting of this plan in early July 2019, 12 State jurisdictional dams in Los Angeles County had approved dam breach inundation maps, including: • Castaic Lake Dam: an earthen dam with a storage capacity of 323,700 acre-feet in Warm Springs Mountain • Pyramid Dam: an earthen and rock dam with a storage capacity of 178,700 acre-feet in Black Mountain • Chevy Chase 1290: an earthen dam with a storage capacity 17 acre-feet of in Pasadena • Elysian Dam: and earthen dam with a storage capacity of 167 acre-feet in Los Angeles • Lower San Fernando Dam: hydraulic fill dam with a storage capacity of 9,843 acre-feet in San Fernando • Eagle Rock Dam: an earthen dam with a storage capacity of 254 acre-feet in Pasadena • Santa Ynez Canyon Dam: an earthen dam with a storage capacity 356 acre-feet in Topanga • Devils Gate Dam: a gravity dam with a storage capacity of 2,600 acre-feet Pasadena • Palos Verdes Reservoir: an earthen dam with a storage capacity of 1,100 acre-feet in Torrance • Littlerock – Palmdale Dam: a roller-compacted concrete dam with a storage capacity of 4,600 acre-feet in Pacifico Mountain • Harold Reservoir: an earthen dam with a storage capacity of 3,870 acre-feet in Palmdale • Westlake Reservoir: an earthen dam with a storage capacity of 9,200 acre-feet in Westlake Village

Table 4-6. Dam Failure Identification Profile

Profile	Description
History	Los Angeles County was the scene of the worst dam failure in United States history. The St. Francis Dam was built in San Francisquito Canyon, approximately 40 miles northwest of downtown Los Angeles, in 1924. On the night of March 12-13, 1928, the dam catastrophically failed, releasing approximately 12.4 billion gallons of water. At least 411 people were killed. Subsequent investigations determined that the dam failed as a result of defective foundations that had been built upon an unstable rock formation. As a result of the disaster, the State of California increased dam safety legislation and oversight, and created a state Board of Registration for civil engineers to regulate the industry.
Extent / Severity	The Federal Guidelines for Inundation Mapping of Flood Risks Associated with Dam Incidents and Failures (FEMA P-946, July 2013) defines downstream hazards for dam incidents. Downstream hazards are based "solely on the potential downstream impacts to life and property should the dam fail when operating with a full reservoir." FEMA has developed three categories in increasing severity for downstream hazards: Low, Significant, and High. DSOD adds a fourth category of Extremely High. In Los Angeles County there are 40 dams that are classified as High, with the potential impact expected to cause loss of at least one human life, and 30 dams classified as Extremely High, with the potential impact expected to cause considerable loss of human life or result in an inundation area with a population of 1,000 or more. As noted in **Figure 4-3**, nine Extremely High hazard dams and three High hazard dams in the county have approved dam breach inundation maps for a total of 45.70 square miles (0.96 %) in Los Angeles County, and a total of 13.37 square miles (0.44 %) in the unincorporated areas of Los Angeles County.
Recurrence Probability	Dams fail for a variety of reasons, including Sub-standard construction materials/techniques, spillway design error, geological instability, poor maintenance, and earthquakes, and therefore recurrence probabilities are unknown. State jurisdiction dams are regulated by the DSOD and each dam undergoes inspection on an annual basis to ensure it is safe, performing as intended, and is not developing issues. However, in 2017, the United States Army Corps of Engineers (USACE) discovered that the Whittier Narrows Dam was structurally unsafe and that an intense storm could prematurely open the dam's massive spillway and flood the area below from Pico Rivera to Long Beach. The USACE has reclassified the dam as the agency's highest dam priority nationally because of the risk of "very significant loss of life and economic impacts." Construction on the dam is expected to start in 2021 and conclude by 2025.

Table 4-7. Dam Failure Impact on Land Area

Entity	Dam Breach Inundation	
	# of Sq. Miles	% of Sq. Miles
Los Angeles County	45.70	0.96
Unincorporated Los Angeles County	13.37	0.44
Supervisorial District 1	1.40	0.57
Supervisorial District 2	0.00	0.00
Supervisorial District 3	24.84	5.76
Supervisorial District 4	0.67	0.15
Supervisorial District 5	18.00	0.64

Table 4-8. Dam Failure Impact on Vulnerable Populations – People Experiencing Homelessness

Entity	Dam Breach Inundation	
	# of Homeless	% of Homeless
City of Los Angeles	1,193	3.62
Unincorporated Los Angeles County	13	0.22

Table 4-9. Dam Failure Impact on County Critical Facilities

Department / Agency	Dam Breach Inundation	
	# of Facilities	% of Facilities
Los Angeles County Animal Care & Control	1	14.29
Los Angeles County Fire Department	3	0.89
Los Angeles County Health Services	2	6.90
Los Angeles County Library	1	1.18
LACMA & NHM	0	0.00
Los Angeles County Office of Education	2	5.41
Los Angeles County - Other (offices)	0	0.00
Los Angeles County Parks & Recreation	2	1.71
Los Angeles County Public Health	0	0.00
Los Angeles County Public Works	1	0.43
Los Angeles County Sheriff's Department	3	9.68

Table 4-10. Overall Summary of Vulnerability to Dam Failure

Dam Failure	
Summary	There are 90 dams in Los Angeles County under State jurisdiction. Seventy dams are classified as High and Extremely High hazard and failure of these types of dams will cause loss of human life and/or result in an inundation area with a population of 1,000 or more. As of June 2017, all dams except those classified as Low hazard are required by the DSOD to have an Emergency Action Plan (EAP). An EAP identifies incidents that can lead to potential emergency conditions at a dam, identifies the areas that could be affected by the loss of a reservoir and specifies pre-planned actions to be followed to minimize property damage, potential loss of infrastructure and water resources, and potential loss of life due to failure or misoperation of a dam. EAPs also require dam breach inundation maps to be prepared. While the State regulates dams to prevent failure, safeguard life, and protect property, some researchers doubt that the "overall safety of aging federal flood control systems that were not designed with climate change in mind." They argue that as California experiences more intense storms, the aging dams in the area could fail and/or prematurely open and flood homes, schools, businesses, and roads. In 2016, Climate-Safe Infrastructure Bill (Assembly Bill [AB] 2800) became law and "established the Climate-Safe Infrastructure Working Group to develop recommendations to the California legislature on how to build and design our infrastructure to be safer for Californians in the face of growing climate extremes." The Working Group's 2018 report identified nearly 700 High hazard dams in California needing repairs and upgrades.


Kern County
Ventura County
San Bernardino County
Orange County
Pacific Ocean
Pyramid
Castaic
Harold Reservoir
Littlerock
Lower San Fernando
Chevy Chase 1290
Devils Gate
Eagle Rock
Westlake Reservoir
Santa Ynez Canyon
Los Angeles
Elysian
Palos Verdes Res
N
W
E
S
0 2.5 5 10 15 Miles
Legend
Dams With Inundation Mapping
Dam Inundation
National Forest
Source
Department of Water Resources
Database (2019)
https://fmds.water.ca.gov
Dam Breach Inundation Areas
Figure 4-3
2019 Los Angeles County
All-Hazards Mitigation Plan

Table 4-11. Drought Identification Profile

Profile	Description
Nature	Drought is a normal, recurrent feature of virtually all climatic zones, including areas of both high and low rainfall, although characteristics will vary significantly from one region to another. Drought differs from normal aridity, which is a permanent feature of the climate in areas of low rainfall. Drought is the result of a natural decline in the expected precipitation over an extended period of time, typically one or more seasons in length. Other climatic characteristics, such as high temperature, high wind, and low relative humidity, impact the severity of drought conditions. Four common definitions for drought are provided as follows: • **Meteorological drought** is defined solely on the degree of dryness, expressed as a departure of actual precipitation from an expected average or normal amount based on monthly, seasonal, or annual time scales. • **Hydrological drought** is related to the effects of precipitation shortfalls on stream flows and reservoir, lake, and groundwater levels. • **Agricultural drought** is defined principally in terms of soil moisture deficiencies relative to water demands of plant life, usually crops. • **Socioeconomic drought** associates the supply and demand of economic goods or services with elements of meteorological, hydrologic, and agricultural drought. Socioeconomic drought occurs when the demand for water exceeds the supply as a result of weather-related supply shortfall. It may also be referred to as a water management drought. A drought's severity depends on numerous factors, including duration, intensity, and geographic extent, as well as regional water supply demands by humans and vegetation. Due to its multi-dimensional nature, drought is difficult to define in exact terms and poses difficulties in terms of comprehensive risk assessments. Drought differs from other natural hazards in three ways. First, the onset and end of a drought are difficult to determine due to the slow accumulation and lingering of effects of an event after its apparent end. Second, the lack of an exact and universally accepted definition adds to the confusion of its existence and severity. Third, in contrast with other natural hazards, the impact of drought is less obvious and may be spread over a larger geographic area. These characteristics have hindered the preparation of drought contingency or mitigation plans by many governments.
Location	The occurrence of drought is regional in nature and scope, which holds true for Los Angeles County. As such, when drought occurs it typically affects the entire county.
History	Drought is a cyclic part of the climate of California, occurring in both summer and winter, with an average recurrence interval between 3 and 10 years. Droughts in California over the past 100 years are listed as follows. The most recent drought from 2011 to 2015 was the driest 4-year period on record in California since recordkeeping began in 1895. • 1917-1921, Statewide except for central Sierra Nevada and north coast • 1922-1926, Statewide except for central Sierra Nevada • 1928-1937, Statewide • 1943-1951, Statewide • 1959-1962, Statewide • 1976-1977, Statewide, except for southwestern deserts • 1987-1992, Statewide • 2007-2009, Statewide, particularly the central coast • 2011-2015, Statewide

Table 4-11. Drought Identification Profile

Profile	Description
Extent / Severity	The National Drought Mitigation Center produces drought monitor maps for the United States. It classifies droughts into five categories: D0 is the least severe, with abnormally dry conditions; and D4 is the most severe, with exceptional drought conditions. California, including Los Angeles County, was in some form of drought for 376 consecutive weeks from December 20, 2011 until March 14, 2019. As of August 13, 2019, Los Angeles County remains free of drought.
Recurrence Probability	Researchers for California's Fourth Climate Change Assessment have noted that California has a "highly variable climate" with wet or dry periods that can span years and that are "heavily affected by extreme precipitation events." Furthermore, climate scientists also suggest the possibility of longer and more destructive droughts with climate change. As such, California is likely to experience long-term droughts at least every decade.

Table 4-12. Drought Impact

Drought	
Summary	Severe droughts can impact the region's agriculture, forests, hydropower, groundwater supply, recreation, aquatic ecosystems, as well as isolated communities that have limited water supply.

Table 4-13. Overall Summary of Vulnerability to Drought

Drought	
Summary	Climate scientists predict that Los Angeles County and the rest of southern California will get drier and northern California will get hotter. The resulting loss of snowpack in the Sierra Nevada will mean less water for all Californians – farmers, residents, utilities, and even hatchery fish. However, while drought cannot be controlled, according to the USGS, drought can be managed in two ways: through drought planning and in helping communities make the best day-to-day management decisions while the drought is taking place. During the drafting of this plan update, the Governor of California signed an executive order directing specific State agencies to develop a Water Resilience Portfolio to "ensure safe and dependable water supplies, flood protection and healthy waterways for the state's communities, economy and environment."

4.3 EARTHQUAKE

Table 4-14. Earthquake Identification Profile

Profile	Description
Nature	An earthquake is a sudden motion or trembling caused by a release of strain accumulated in or along the edge of Earth's tectonic plates. The effects of an earthquake can be felt far beyond the site of its occurrence. Earthquakes usually occur without warning and can cause massive damage and extensive casualties in a few seconds. Common effects of earthquakes are ground motion and shaking, surface fault ruptures, and ground failure. Ground motion is the vibration or shaking of the ground during an earthquake. When a fault ruptures, seismic waves radiate, causing the ground to vibrate. The severity of the vibration increases with the amount of energy released and decreases with distance from the causative fault or epicenter. Soft soils can amplify ground motions. In addition to ground motion, several secondary natural hazards can occur from earthquakes, such as the following: • **Surface Faulting**: Surface faulting is the differential movement of two sides of a fault at the Earth's surface. Displacement along faults, both in terms of length and width, varies but can be significant (e.g., up to 20 feet), as can the length of the surface rupture (e.g., up to 200 miles). Surface faulting can cause severe damage to linear structures, including railways, highways, pipelines, tunnels and dams. • **Liquefaction**: Liquefaction occurs when seismic waves pass through saturated granular soil, distorting its granular structure, and causing some of the empty spaces between granules to collapse. Liquefaction causes lateral spreads (i.e., horizontal movements of commonly 10 to 15 feet, but up to 100 feet), flow failures (i.e., massive flows of soil, typically hundreds of feet, but up to 12 miles), and loss of bearing strength (i.e., soil deformations causing structures to settle or tip). Liquefaction can cause severe damage to property. • **Landslides/Debris Flows**: Landslides/debris flows occur as a result of horizontal seismic inertia forces induced in the slopes by the ground shaking. The most common earthquake-induced landslides include shallow, disrupted landslides such as rock falls, rockslides, and soil slides. Debris flows are created when surface soil on steep slopes becomes totally saturated with water. Once the soil liquefies, it loses the ability to hold together and can flow downhill at very high speeds, taking vegetation and/or structures with it. Slide risks increase after an earthquake during a wet winter. The two most common measures of earthquake intensity used in the United States are the Modified Mercalli Intensity Scale, which measures felt intensity, and peak ground acceleration (PGA), which measures instrumental intensity by quantifying how hard the earth shakes in a given location. Magnitude (M) is measured by the amplitude of the earthquake waves recorded on a seismograph using a logarithmic scale.

Table 4-14. Earthquake Identification Profile

Profile	Description
Location	As in most of southern and coastal California, the potential for earthquake damage exists throughout Los Angeles County because of the number of active faults in and near the county. These faults are shown on the California Geological Survey (CGS) Fault Activity Map of California. Descriptions of the active faults are provided below. The locations of the active and potentially active faults are shown on **Figure 4-4.** Some of the more significant faults are described below: • **Malibu Coast fault system:** The Malibu Coast fault system includes the Malibu Coast, Santa Monica, and Hollywood faults. The system begins in the Hollywood area, extends along the southern base of the Santa Monica Mountains, and passes offshore a few miles west of Point Dume. The 1973 Point Mugu earthquake is believed to have originated on this fault system. • **Oak Ridge fault system:** The Oak Ridge fault system is a steep (65 degrees) southerly dipping reverse fault that extends from the Santa Susana Mountains westward along the southerly side of the Santa Clara River Valley and into the Oxnard Plain. The system is more than 50 miles long on the mainland and may extend an equal or greater distance offshore. Several recorded earthquake epicenters on land and offshore may have been associated with the Oak Ridge fault system. Portions of the system are zoned by the state as active. • **Pine Mountain thrust fault and Big Pine fault:** These two large faults occur in the mountainous portion of Ventura County north of the Santa Ynez fault; the faults are located 9 and 16 miles north of the city of Ojai, respectively. The Pine Mountain thrust fault is reported to have ruptured the ground surface for 30 miles along its length during the northern Ventura County earthquakes of November 1852. • **San Andreas fault:** San Andreas is the longest and most significant fault in California. Because of clearly established historical earthquake activity, this fault has been designated as active by the State of California. The last major earthquake on this fault near Ventura County was the Fort Tejon earthquake of 1857, which was estimated at magnitude (M) 8.0 and would have caused considerable damage if there had been structures in the southern part of the county. There is a 59 % chance that an M 6.7 quake or larger will occur on this fault in the next 30 years. • **San Cayetano–Red Mountain–Santa Susana fault system:** This fault system consists of a major series of north-dipping reverse faults that extend over 150 miles from Santa Barbara County into Los Angeles County. In this system, the San Cayetano fault is the greatest hazard to Ventura County; it is a major, north-dipping reverse fault that extends for 25 miles along the northern portion of the Ventura Basin. The San Fernando earthquake of 1971, described in the previous section, was caused by activity along this fault. • **Simi–Santa Rosa fault system:** This fault system extends from the Santa Susana Mountains westward along the northern margin of the Simi and Tierra Rejada valleys and along the southern slope and crest of the Las Posas Hills to their westerly termination. • **Ventura-Pitas Point fault:** The western half of this fault is known as the Pitas Point fault, and the eastern half is known as the Ventura fault. The Pitas Point fault extends offshore into the Pacific Ocean and is roughly 14 miles long. The Ventura fault extends into the communities of Ventura and Sea Cliff and runs roughly parallel to portions of U.S. 101 and State Route 126. The fault is roughly 12 miles long and is a left-reverse fault.

Table 4-14. Earthquake Identification Profile

Profile	Description
History	As shown in **Figure 4-5**, according to the USGS, 163 earthquakes M 5.0> have been recorded in southern California since 1769. Four of these earthquakes have been larger than M 7.0 including: • San Juan Capistrano Earthquake (M 7.5), December 8, 1812 • Kern County Earthquake (M 7.5), July 21, 1952 • West Ventura Earthquake (M 7.1), December 21, 1812 • Ridgecrest, (M 7.1), July 6, 2019 In Los Angeles County, significant earthquakes over the past 50 years include: • La Habra (M 5.1), March 28, 2014, resulting in a few injuries and $10 million dollars in damages • Chino Hills (M 5.5), July 29, 2008, resulting in 8 injuries and limited damages • Northridge (M 6.7), January 17, 1994, resulting in 57 deaths, 8,700 injuries and up to $40 billion dollars in damages. • Sierra Madre (M 5.6), June 28, 199, resulting in 1 death, 100+ injuries and up to $40 million dollars in damages. • Upland (M 5.7), February 28, 1990, resulting in 30 injuries and $12.7 million dollars in damages • Whitter (M 5.9), October 1, 1987, resulting in 8 deaths, 200 injuries and $358 million in damages • San Fernando (M 6.6), February 9, 1971, resulting in 58 – 65 deaths, 200 – 2,000 injuries and up to $553 million in damages
Extent / Severity	The strength of an earthquake's ground movement can be measured by PGA. PGA measures the rate in change of motion relative to the established rate of acceleration due to gravity (g = 980 centimeters per second, per second). PGA is used to project the risk of damage from future earthquakes by showing earthquake ground motions that have a specified probability (e.g., 10%, 5%, or 2%) of being exceeded in 50 years. The ground motion values are used for reference in construction design for earthquake resistance and can also be used to assess relative hazard between sites when making economic and safety decisions. In 2008, CGS developed an updated map of earthquake shaking potential for California. The map shows the relative intensity of ground shaking and damage in California from anticipated future earthquakes. Regions near major, active faults are shown in red and pink and experience stronger earthquake shaking more frequently. Regions that are distant from known, active faults are shown in orange and yellow and experience lower levels of shaking less frequently. **Figure 4-6** indicates the level of low-frequency shaking potential in Los Angeles County (in which local soil conditions have greater effect on low frequency). In Los Angeles County there are 3,041.91 (63.90%) square miles with violent low frequency shaking potential; and 711.01 square miles (14.93%) with extreme low frequency shaking potential. In unincorporated areas of Los Angeles County, there are 1,783.57 (58.65%) square miles with violent low frequency shaking potential; and 527.60 square miles (17.35%) with extreme low frequency shaking potential.

Table 4-14. Earthquake Identification Profile

Profile	Description
Recurrence Probability	Ongoing field and laboratory studies suggest the likely maximum magnitudes and recurrence intervals for the major local faults are as follows: • Chatsworth fault: M 6.0-6.8, unknown recurrence interval • Hollywood fault: M 5.8-6.5, recurrence interval approximately every 1600 years • Malibu Coast fault: M 6.7, recurrence interval 2,908 years • Newport-Inglewood fault: M 6.0-7.4, unknown recurrence interval • Oak Ridge fault: M 6.9, recurrence interval 299 years • Palos Verdes fault: M 6.0-7.0 or greater, unknown recurrence interval • Red Hill fault (aka Etiwanda Avenue fault): M 6.0-7.0, unknown recurrence interval • Raymond fault: M 6.0-7.0, recurrence interval approximately 4500 years • San Andreas fault: M 6.8-8.0, recurrence interval of 140 years on Mojave segment to 300 years • San Cayetano fault: M. 6.5-7.3, unknown recurrence interval • San Fernando fault: M 6.0-6.8, recurrence interval approximately every 200 years • San Jose fault: M 6.0-6.5, unknown recurrence interval • Santa Susana fault system: M 6.6, recurrence interval 138 years • Santa Monica fault: M 6.0-7.0, unknown recurrence interval • Sierra Madre fault: M 6.0-7.0, recurrence interval several thousand years • Simi–Santa Rosa fault: M 6.7, recurrence interval 933 years • Verdugo fault: M 6.0-6.8, unknown recurrence interval • Whittier fault: M 6.0-7.2, unknown recurrence interval

Table 4-15. Seismic Hazard Impact on Land Area

	Violent EQ Shaking		Extreme EQ Shaking	
Entity	# of Sq. Miles	% of Sq. Miles	# of Sq. Miles	% of Sq. Miles
Los Angeles County	3,041.91	63.90	711.01	14.93
Unincorporated Los Angeles County	1,783.57	58.65	527.60	17.35
Supervisorial District 1	244.34	99.25	0.00	0.00
Supervisorial District 2	161.74	99.94	0.00	0.00
Supervisorial District 3	379.41	87.99	41.73	9.68
Supervisorial District 4	305.40	69.42	0.00	0.00
Supervisorial District 5	1,950.78	69.50	669.26	23.84

EQ = earthquake

Table 4-16. Seismic Hazard Impact on Vulnerable Populations – People Experiencing Homelessness

	Violent EQ Shaking		Extreme EQ Shaking	
Entity	# of Homeless	% of Homeless	# of Homeless	% of Homeless
City of Los Angeles	31,037	94.25	1,827	5.55
Unincorporated Los Angeles County	5,328	90.60	361	6.14

EQ = earthquake

Table 4-17. Seismic Hazard Impact on County Critical Facilities

Department / Agency	Violent EQ Shaking		Extreme EQ Shaking	
	# of Facilities	% of Facilities	# of Facilities	% of Facilities
Los Angeles County Animal Care & Control	6	85.71	1	14.29
Los Angeles County Fire Department	314	93.18	19	5.64
Los Angeles County Health Services	24	82.76	5	17.24
Los Angeles County Library	79	92.94	5	5.88
LACMA & NHM	3	75.00	1	25.00
Los Angeles County Office of Education	32	86.49	5	13.51
Los Angeles County - Other (offices)	24	100.00	0	0.00
Los Angeles County Parks & Recreation	103	88.03	14	11.97
Los Angeles County Public Health	13	92.86	1	7.14
Los Angeles County Public Works	201	87.39	21	9.13
Los Angeles County Sheriff's Department	28	90.32	2	6.45

EQ = earthquake

Table 4-18. Overall Summary of Vulnerability to Earthquakes

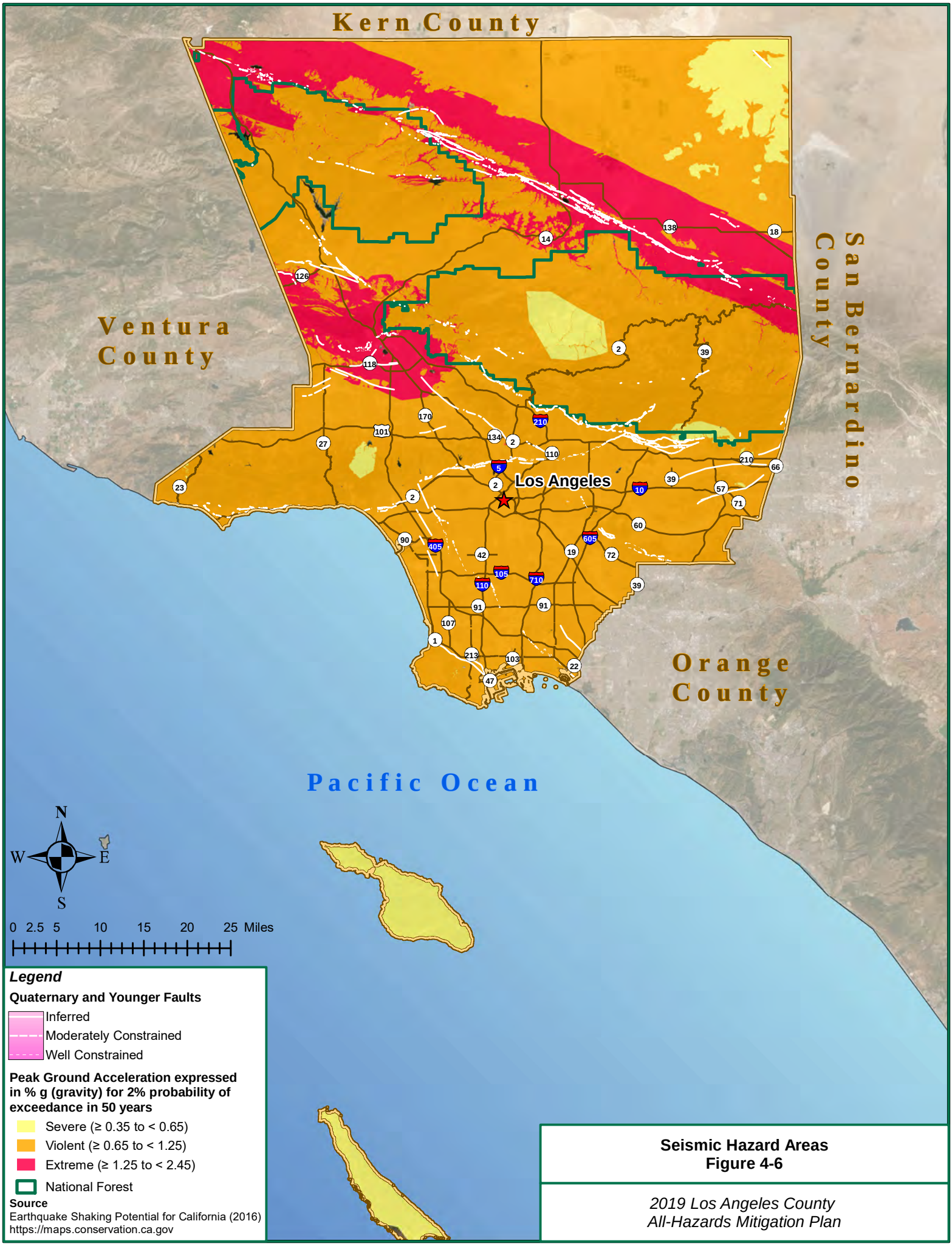
	Earthquake
Summary	Over 75% of unincorporated Los Angeles County is at risk to violent and extreme perceived shaking from future earthquakes. Violent perceived shaking can produce the potential for heavy damage. According to the USGS, this could mean that well-designed framed structures could be thrown out of plumb and substantial buildings could experience partial building collapse. In extreme shaking, the USGS notes that some well-built wooden structures could be destroyed, and most masonry and frame structures with foundations could be destroyed. Many people in California are looking to boost seismic regulations through the implementation of Assembly Bill (AB) 1857 and AB 2681. AB 1857 will instruct the California Building Standards Commission to increase minimum mandatory standards for most types of buildings in the state, such as apartments, office buildings, and commercial spaces, but would exempt single-family houses and duplexes, while AB 2681 will require cities and counties to create an inventory of potentially vulnerable buildings.

Major Faults in Southern California
Figure 4-4

2019 Los Angeles County
All-Hazards Mitigation Plan

Historical Earthquakes (1769-2019)
Figure 4-5

2019 Los Angeles County
All-Hazards Mitigation Plan



Seismic Hazard Areas
Figure 4-6

2019 Los Angeles County
All-Hazards Mitigation Plan

4.4 FLOOD

Table 4-19. Flood Identification Profile

Profile	Description
Nature	A flood occurs when the existing channel of a stream, river, canyon, or other watercourse cannot contain excess runoff from rainfall or snowmelt, resulting in overflow onto adjacent lands. In coastal areas, flooding may occur when high winds or tides result in a surge of seawater into areas that are above the normal high tide line. Secondary hazards from floods can include: • Erosion or scouring of stream banks, roadway embankments, foundations, footings for bridge piers, and other features. • Impact damage to structures, roads, bridges, culverts, and other features from high-velocity flow and from debris carried by floodwaters. Such debris may also accumulate on bridge piers and in culverts, increasing loads on these features or causing overtopping or backwater effects. • Destruction of crops, erosion of topsoil, and deposition of debris and sediment on croplands. • Release of sewage and hazardous or toxic materials when wastewater treatment plants are inundated, storage tanks are damaged, and pipelines are severed. In areas such as Los Angeles County that do not have extended periods of below-freezing temperatures or significant snowfall, floods usually occur during the season of highest precipitation or during heavy rainfalls after prolonged dry periods. Los Angeles County is dry during the late spring, summer, and early fall, and receives most of its rain during the winter months. The rainfall season extends from November through April, with approximately 95% of the annual rainfall occurring during this period. Los Angeles County averages only 15 inches of precipitation per year; less in along the coast and the dessert, and more in the foothills and mountains.
Location	Los Angeles County has an extensive flood control system (**Figure 4-7**) that has eliminated much of their flood hazards. However, major flood sources in Los Angeles County still include Ballona Creek, Los Angeles River, Malibu Creek, Pacific Ocean, Rio Hondo River, San Gabriel River and its tributaries, Santa Clara River, Topanga Canyon, and the Pacific Ocean. In the unincorporated areas of Los Angeles County, flooding sources include: • Little Rock and Big Rock Washes: Flooding occurs when the flows reach the valley floor where the channels flatten out. This allows the flows to spread over great distances, inundating the surrounding areas. • Antelope Valley: Flooding occurs when flows from the mountains reach the broad alluvial plan in the Antelope Valley are northerly from the mountains across the broad alluvial plain. During minor storms, much of the flow percolates into the ground. In major storms, flows reach the lake at the northern county limits, where flood flows pond until evaporated. • Foothills of Santa Clarita: Flooding and mudflows occur in the foothill areas during intense rainfall, usually following fires in the upstream watershed. • Coastline: Flooding is caused by waves generated by winter storms. The occurrence of such a storm event in combination with high astronomical tides and strong winds can cause a significant wave runup and allow storm waves to reach higher than normal elevations along the coastline.

Table 4-19. Flood Identification Profile

Profile	Description
History	The federal government has declared 13 flooding emergencies affecting Los Angeles County, including: • California Flood and Erosion (Disaster Declaration Number [DR]-15), February 5, 1954 • California Flooding (DR-47), December 23, 1955 • California Heavy Rainstorms, Flood (DR-82), April 4, 1958 • California Floods (DR-122), March 6, 1962 • California Severe Storms, Flooding (DR-138), October 24, 1962 • California Severe Storms, Heavy Rains, Flooding (DR-145), February 25, 1963 • California Flooding (DR-270), August 15, 1969 • California Winter Storms Flooding (DR-547), February 15, 1978 • Southern California Winter Storms (DR-615), February 7 and 21, 1980 • Coastal Storms (DR-812), December 21, 1988 • California Winter Storms (DR-935), February 12 and 19, 1992 • California Winter Storms (DR-979), January 7, 1993-February 19, 1993 • California Severe Winter Storms, Flooding, and Mudslides (DR-4305), January 18, 2017-January 23, 2017
Extent / Severity	The magnitude of flooding that is used as the standard for floodplain management in the United States is a flood with a probability of occurrence of 1% in any given year. This flood is also known as the 100-year flood (i.e., base flood). The 100-year flood, as well as the 500-year flood (0.2%), are considered Special Flood Hazard Areas (SFHA) and identified on FEMA's Digit Flood Insurance Rate Maps (DIFRM). The Los Angeles County DFIRM (**Figure 4-8)** identifies 4.19 square miles (0.09%) with a 1% annual chance of flooding, and 243.32 square miles (5.11%) with a 0.2% annual chance of flooding. In the unincorporated areas of Los Angeles County, there are 1.23 square miles (0.04%) with a 1% annual chance of flooding, and an additional 64.77 square miles (2.13 %) with a 0.2% annual chance of flooding.
Recurrence Probability	Floods can occur at any time but are most common with winter storms packed with subtropical moisture.

Table 4-20. Flood Impact on Land Area

Entity	0.2% Annual Chance of Flooding		1% Annual Chance of Flooding	
	# of Sq. Miles	% of Sq. Miles	# of Sq. Miles	% of Sq. Miles
Los Angeles County	243.32	5.11	4.19	0.09
Unincorporated Los Angeles County	64.77	2.13	1.23	0.04
Supervisorial District 1	27.14	11.02	0.90	0.37
Supervisorial District 2	19.32	11.94	0.20	0.12
Supervisorial District 3	4.38	1.01	1.31	0.30
Supervisorial District 4	80.06	18.20	0.32	0.07
Supervisorial District 5	112.39	4.00	1.45	0.05

Table 4-21. Flood Impact on Vulnerable Populations – People Experiencing Homelessness

Entity	0.2% Annual Chance of Flooding		1% Annual Chance of Flooding	
	# of Homeless	% of Homeless	# of Homeless	% of Homeless
City of Los Angeles	1,601	4.86	87	0.26
Unincorporated Los Angeles County	170	2.88	0	0.00

Table 4-22. Flood Impact on County Critical Facilities

Department / Agency	0.2% Annual Chance of Flooding		1% Annual Chance of Flooding	
	# of Facilities	% of Facilities	# of Facilities	% of Facilities
Los Angeles County Animal Care & Control	2	28.57	0	0.00
Los Angeles County Fire Department	46	13.65	0	0.00
Los Angeles County Health Services	5	17.24	0	0.00
Los Angeles County Library	15	17.65	0	0.00
LACMA & NHM	0	0.00	0	0.00
Los Angeles County Office of Education	5	13.51	0	0.00
Los Angeles County - Other (offices)	2	8.33	0	0.00
Los Angeles County Parks & Recreation	8	6.84	0	0.00
Los Angeles County Public Health	0	0	0	0.00
Los Angeles County Public Works	41	17.38	1	0.43
Los Angeles County Sheriff's Department	5	16.13	0	0.000

Table 4-23. Overall Summary of Vulnerability to Floods

Flood	
Summary	Los Angeles County has a long history of moderate to severe flooding during major storms. In the Los Angeles basin area, an extensive flood control system has eliminated much of this problem. However, in the less densely populated areas where relatively few flood controls have been constructed, flooding remains a problem. In areas with alluvial fans, flood flows discharge from the mountainous canyons in an uncontrolled manner onto the desert floor, thereby resulting in widespread damage to agricultural land, buildings, and infrastructure. In the foothill areas that experience intense rainfall, mudflows pose a risk to those downstream. Finally, along the coast, waves generated by winter storms in combination with high astronomical tides and strong winds can cause a significant wave runup, resulting in erosion and coastal flooding to low-lying portions of the shoreline. According to the Los Angeles County Public Works, there are 55 Repetitive Loss (RL) properties in 22 RL areas of unincorporated Los Angeles County as of the last submitted 2019 Community Rating System (CRS) Recertification. A Repetitive Loss (RL) property is any insurable building for which two or more claims of more than $1,000 were paid by the National Flood Insurance Program (NFIP) in any rolling 10-year period, since 1978. Updated location information about RL properties in the unincorporated areas of Los Angeles County were not available during the drafting of this plan. Data from 2011 showed that 26 RL properties were located in the SFHA. At the time, Los Angeles County Public Works stated, "the majority of the repetitive losses are associated with localized urban drainage flood problems, even for properties within a FEMA-designated flood zone." Los Angeles County Public Works oversees RL mitigation projects.

Los Angeles County Flood Control System
Figure 4-7

2019 Los Angeles County
All-Hazards Mitigation Plan

Special Flood Hazard Areas
Figure 4-8

2019 Los Angeles County
All-Hazards Mitigation Plan

4.5 LANDSLIDE

Table 4-24. Landslide Identification Profile

Profile	Description
Nature	Landslide is a general term for the dislodging and fall of a mass of soil or rocks along a sloped surface, or for the dislodged mass itself. The term is used for varying phenomena, including mudflows, mudslides, debris flows, rock falls, rockslides, debris avalanches, debris slides, and slump-earth flows. Landslides may result from a wide range of combinations of natural rock, soil, or artificial fill. The susceptibility of hillside and mountainous areas to landslides depends on variations in geology, topography, vegetation, and weather. Landslides may also occur because of indiscriminate development of sloping ground or the creation of cut-and-fill slopes in areas of unstable or inadequately stable geologic conditions. Additionally, landslides often occur together with other natural hazards, thereby exacerbating conditions, as described below: • Shaking due to earthquakes can trigger events ranging from rock falls and topples to massive slides. • Intense or prolonged precipitation that causes flooding can also saturate slopes and cause failures leading to landslides. • Wildfires can remove vegetation from hillsides, significantly increasing runoff and landslide potential. • Landslides into a reservoir can indirectly compromise dam safety; a landslide can even affect the dam itself. • Another type of landslide occurs in areas cut by perennial streams. As floodwaters erode channel banks, rivers have undercut clay-rich sedimentary rocks along their south bank, thereby destabilizing the ground and causing the ground above it to slide.
Location	In 2011, CGS created a deep-seated landslide grip map to show the relative likelihood of deep landslides in California. The map combines landslide inventory, geology, rock strength, slope, average annual rainfall and earthquake shaking potential layers to create classes of landslide susceptibility. As shown in **Figure 4-9**, the map shows areas of low landslide susceptibility, mainly, the Los Angeles Basin, to areas of high susceptibility, including the Santa Monica Mountains, the San Gabriel Mountains, the Sierra Pelona Mountains, the Baldwin Hills, the Puente Hills, and the Palos Verdes Hills.

Table 4-24. Landslide Identification Profile

Profile	Description
History	Like much of California, Los Angeles County has experienced landslides. Landslides in Los Angeles are generally trigged by intense and/or prolonged rainfall but can also occur after an earthquake. Notable recent landslides in Los Angeles County include: • January 1994, the Northridge earthquake triggered more than 11,000 landslides, with the majority concentrated in the Santa Susana Mountains and the mountains north of the Santa Clara River valley. Most of the triggered landslides were shallow highly disrupted falls and slides. However, the larger disrupted slides were reactivations of previously existing landslides. • March 1995, heavy rains weakened the geologically unstable Pacific Palisades bluffs. A 300-foot section gave way and buried part of Pacific Coast Highway under up to 30 feet of rain-soaked earth, rock, and debris. • March 2005, a slide near Sunset Mesa caused 20,000 cubic yards of debris to cover the Pacific Coast Highway. • January 2018, a hillside in Malibu gave way leaving a house uninhabitable. • December 2018, heavy rain on the Woolsey Fire burned hillsides created debris flows and mudslides in and around Malibu causing several road closures. • January 2019, sections of the Pacific Coast Highway near the Ventura County line were closed due to mudslides.
Extent / Severity	**Figure 4-9** shows deep seated landslide susceptibility areas in Los Angeles County. According to the Susceptibility to Deep-Seated Landslides grip map, there are 750.02 square miles (15.75%) of land in Los Angeles County located in the Classes IX and X. In the unincorporated areas of Los Angeles County, there are 577.63 square miles (18.99%) in this hazard area.
Recurrence Probability	Shallow landslides can occur at any time during the winter but are more likely happen when the ground is nearly saturated. According to the USGS, in Southern California "at least 10 inches of rainfall during the winter is needed to nearly saturate the ground. After this point, a rain burst of 0.2 to 0.25 in in one hour has been observed to trigger abundant shallow landslides." However, deep-seated landslides generally need deep infiltration of rainfall (which can take weeks or months to occur) to be triggered.

Table 4-25. Landslide Impact on Land Area

Entity	Deep Seated Landslide Class IX and X	
	# of Sq. Miles	% of Sq. Miles
Los Angeles County	750.02	15.75
Unincorporated Los Angeles County	577.63	18.99
Supervisorial District 1	17.29	7.02
Supervisorial District 2	2.73	1.68
Supervisorial District 3	114.61	26.58
Supervisorial District 4	105.12	23.89
Supervisorial District 5	509.31	18.14

Table 4-26. Landslide Impact on Vulnerable Populations – People Experiencing Homelessness

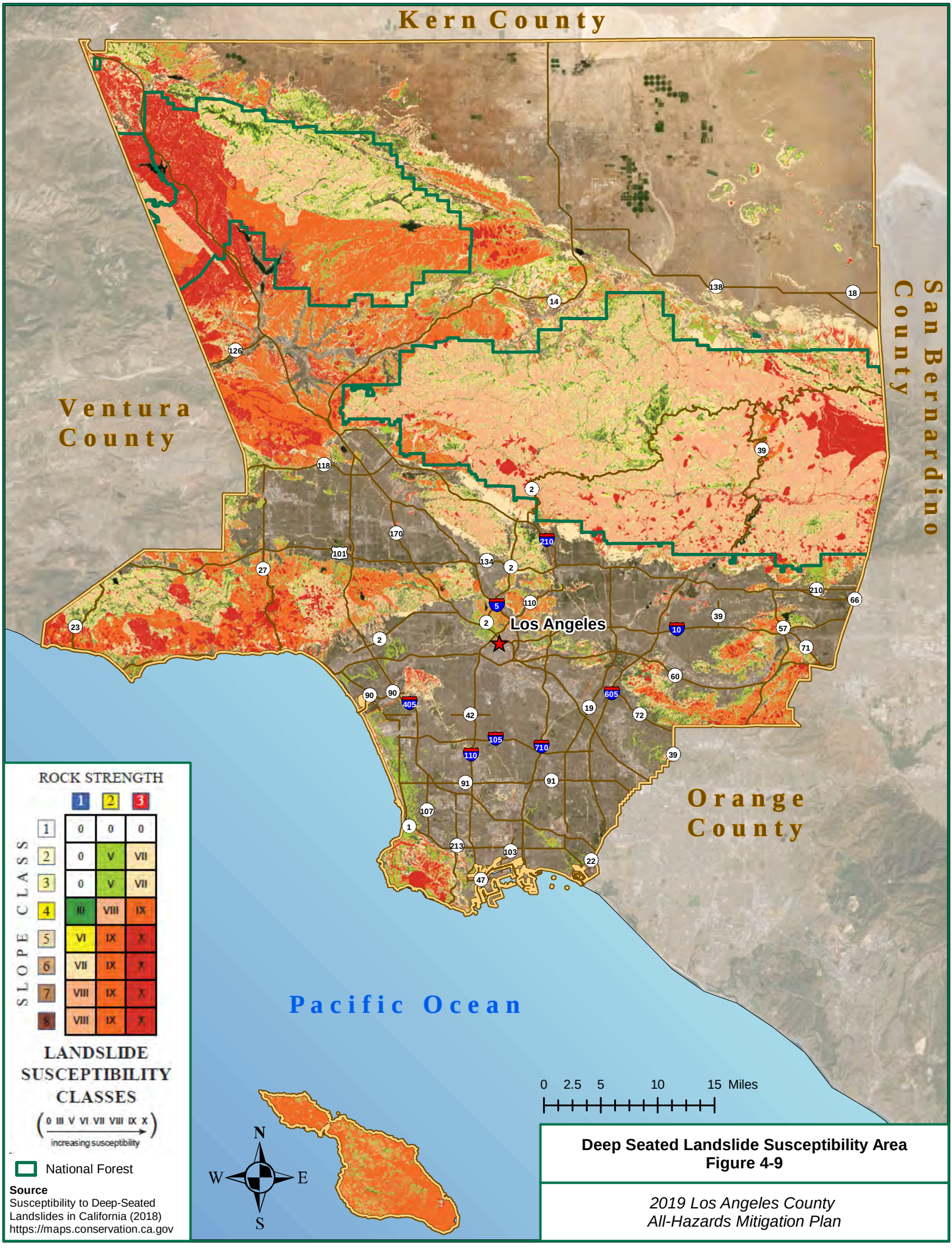
Entity	Deep Seated Landslide Class IX and X	
	# of Homeless	% of Homeless
City of Los Angeles	234	0.71
Unincorporated Los Angeles County	325	5.55

Table 4-27. Landslide Impact on County Critical Facilities

Department / Agency	Deep Seated Landslide Class IX and X	
	# of Facilities	% of Facilities
Los Angeles County Animal Care & Control	0	0.00
Los Angeles County Fire Department	7	2.08
Los Angeles County Health Services	0	0.00
Los Angeles County Library	0	0.00
LACMA & NHM	0	0.00
Los Angeles County Office of Education	1	2.70
Los Angeles County - Other (offices)	0	0.00
Los Angeles County Parks & Recreation	2	1.71
Los Angeles County Public Health	0	0.00
Los Angeles County Public Works	37	16.09
Los Angeles County Sheriff's Department	1	3.23

Table 4-28. Overall Summary of Vulnerability to Landslides

Landslide	
Summary	Areas prone to landslide include existing old landslides, base of slopes, base of minor drainage hollows, base or top of an old fill slope, base or top of a steep cut slope, and developed hillsides where leach field septic systems are used. In Los Angeles County, the majority of landslide-prone areas include the Santa Monica Mountains, the San Gabriel Mountains, the Sierra Pelona Mountains, the Baldwin Hills, the Puente Hills, and the Palos Verdes Hills. Landslides may: cause injury or death to those trapped; break utility lines; block/damage roadways; damage foundations, chimneys, or surrounding land; and lead to flash flooding and additional landsliding. In Los Angeles County, landslide risks are mitigated through the Hillside Management Area Ordinance & Hillside Design Guidelines (**Table 5-3**).


Kern County
Ventura County
San Bernardino County
Orange County
Los Angeles
Pacific Ocean
ROCK STRENGTH
1 2 3
SLOPE CLASS
1 0 0 0
2 0 V VII
3 0 V VII
4 IV VIII IX
5 VI IX X
6 VII IX X
7 VIII IX X
8 VIII IX X
LANDSLIDE SUSCEPTIBILITY CLASSES
0 III V VI VII VIII IX X
increasing susceptibility
National Forest
Source
Susceptibility to Deep-Seated Landslides in California (2018)
https://maps.conservation.ca.gov
0 2.5 5 10 15 Miles
N
W E
S
Deep Seated Landslide Susceptibility Area
Figure 4-9
2019 Los Angeles County
All-Hazards Mitigation Plan

4.6 TSUNAMI

Table 4-29. Tsunami Identification Profile

Profile	Description
Nature	A tsunami is a series of traveling ocean waves of extremely long length, generated by disturbances associated primarily with earthquakes occurring below or near the ocean floor. Subduction zone earthquakes at plate boundaries often cause tsunamis. However, tsunamis can also be generated by underwater landslides or volcanic eruptions, the collapse of volcanic edifices, and—in very rare instances—large meteorite impacts in the ocean. In the deep ocean, a tsunami may have a length from wave crest to wave crest of 100 miles or more, but a wave height of only a few feet or less. Thus, the wave period can be up to several hours, and wavelengths can exceed several hundred miles. Therefore, tsunamis are unlike typical wind-generated swells on the ocean, which might have a period of about 10 seconds and a wavelength of up to 300 feet Tsunamis cannot be felt aboard ships and they cannot be seen from the air or the open ocean. In deep water, the waves may reach speeds exceeding 700 miles per hour. Tsunamis arrive as a series of successive crests (high water levels) and troughs (low water levels). These successive crests and troughs can occur anywhere from 5 to 90 minutes apart; however, they usually occur 10 to 45 minutes apart. Tsunamis not only affect beaches that are open to the ocean, but also bay mouths, tidal flats, and the shores of large coastal rivers. Tsunami waves can also diffract around land masses. Because tsunamis are asymmetrical, the waves may be much stronger in one direction than another, depending on the nature of the source and the surrounding geography. However, tsunamis do propagate outward from their source, so coasts in the shadow of affected land masses are safer.
Location	**Figure 4-10** shows tsunami evacuation area based on Maximum Phase as described in the California Tsunami Evacuation Playbook. This map illustrates coastal land areas that can become submerged due to tsunami run-up. The area of land subject to inundation is a factor of: • Distance of shoreline from the tsunami-generating event • Magnitude of the earthquake causing the event; duration and period of waves • Run-up elevations • Tidal level at time of occurrence • Location along shore and direction of shore in respect to propagated waves • Topography of the seabed In Los Angeles County, areas at risk to the maximum tsunami run up include the ports of Long Beach and Los Angeles, Catalina Island, and areas in the cities of Los Angeles, Long Beach, Manhattan Beach, Redondo Beach, Hermosa Beach, El Segundo, Palos Verdes, Santa Monica, and Malibu. In the unincorporated areas of Los Angeles County, the five coastal zones (i.e., Marin Del Rey, Santa Catalina Island, Santa Monica Mountains, San Clemente Island, and Ballona Wetlands Area A) are subject to inundation.

Table 4-29. Tsunami Identification Profile

Profile	Description
History	Between 1923 and 2011, 11 major tsunami events occurred in Los Angeles County, including: • April 13, 1923, a M 7.2 earthquake in Kamchatka caused a tsunami in Los Angeles. • August 30, 1930, a probable meteotsunami (i.e., a tsunami of meteorological origin) with a 10-foot run-up amplitude hit Santa Monica. • April 1, 1946, a M 8.8 earthquake in the Aleutian Islands caused tsunamis with run-up amplitudes ranging from 1 to 6 feet in Catalina Island, Los Angeles, and Long Beach, breaking ships from their moorings. • November 4, 1952, a M 9.0 earthquake in Kamchatka caused tsunamis with run-up amplitudes ranging from 1 to 2 feet in Santa Monica, Los Angeles, and Long Beach. • March 9, 1957, a M 8.6 earthquake in the Aleutian Islands caused tsunamis with run-up amplitudes ranging from 1 to 2 feet in Santa Monica, Los Angeles, and Long Beach. • May 22, 1960, a M 9.5 earthquake in Chile caused tsunamis with run-up amplitudes ranging from 2 to 5 feet in Catalina Island, Los Angeles, Long Beach, and Santa Monica. One person died, 800 small craft were unmoored, 200 boats were damaged, and 40 boats were sunk. The tsunamis resulting in $1 million dollars in damages. • March 28, 1964, a M 9.2 earthquake in Alaska caused tsunamis with run-up amplitudes ranging from 2 to 3 feet in Catalina Island, Los Angeles, Long Beach, and Santa Monica. One longshoreman was killed, 100 boats were unmoored, and 7 boats were sunk. The tsunamis caused approximately $350 thousand dollars in damages. • November 29, 1975, a M 7.1 earthquake in Hawaii caused a tsunami with a run-up amplitude of 4 feet in Catalina Island, damaging docks and boats. • September 29, 2009, a M 8.0 earthquake in Samoa caused a tsunami with a 1-foot run-up amplitude in Los Angeles. • February 27, 2010, a M 8.8 earthquake in Chile caused tsunamis with run-up amplitudes ranging from 1 to 3 feet in Catalina Island, Los Angeles, Long Beach, and Santa Monica, causing minor damage to docks and boats. • March 11, 2011, a M 9.0 earthquake in Japan caused tsunamis with run-up amplitudes ranging from 2 to 3 feet in Catalina Island, Los Angeles, Long Beach, Redondo Beach, and Santa Monica, damaging docks and boats.
Extent / Severity	**Figure 4-10** shows the maximum considered tsunami runup from a number of extreme tsunami sources. There are 43.35 square miles (0.91%) in Los Angeles County located in this hazard area. In the unincorporated areas of Los Angeles County there are 2.07 square miles (0.07%) at risk to a maximum tsunami runup.
Recurrence Probability	Based on the history of tsunami run-ups in the region and the history of earthquakes in the Pacific Rim, another tsunami event is likely to occur, although the extent and probability is unknown.

Table 4-30. Tsunami Impact on Land Area

Entity	Maximum Tsunami Inundation Area	
	# of Sq. Miles	% of Sq. Miles
Los Angeles County	43.35	0.91
Unincorporated Los Angeles County	2.07	0.07
Supervisorial District 1	0.00	0.00
Supervisorial District 2	0.12	0.08
Supervisorial District 3	2.65	0.61
Supervisorial District 4	18.00	4.09
Supervisorial District 5	0.00	0.00

Table 4-31. Tsunami Impact on Vulnerable Populations – People Experiencing Homelessness

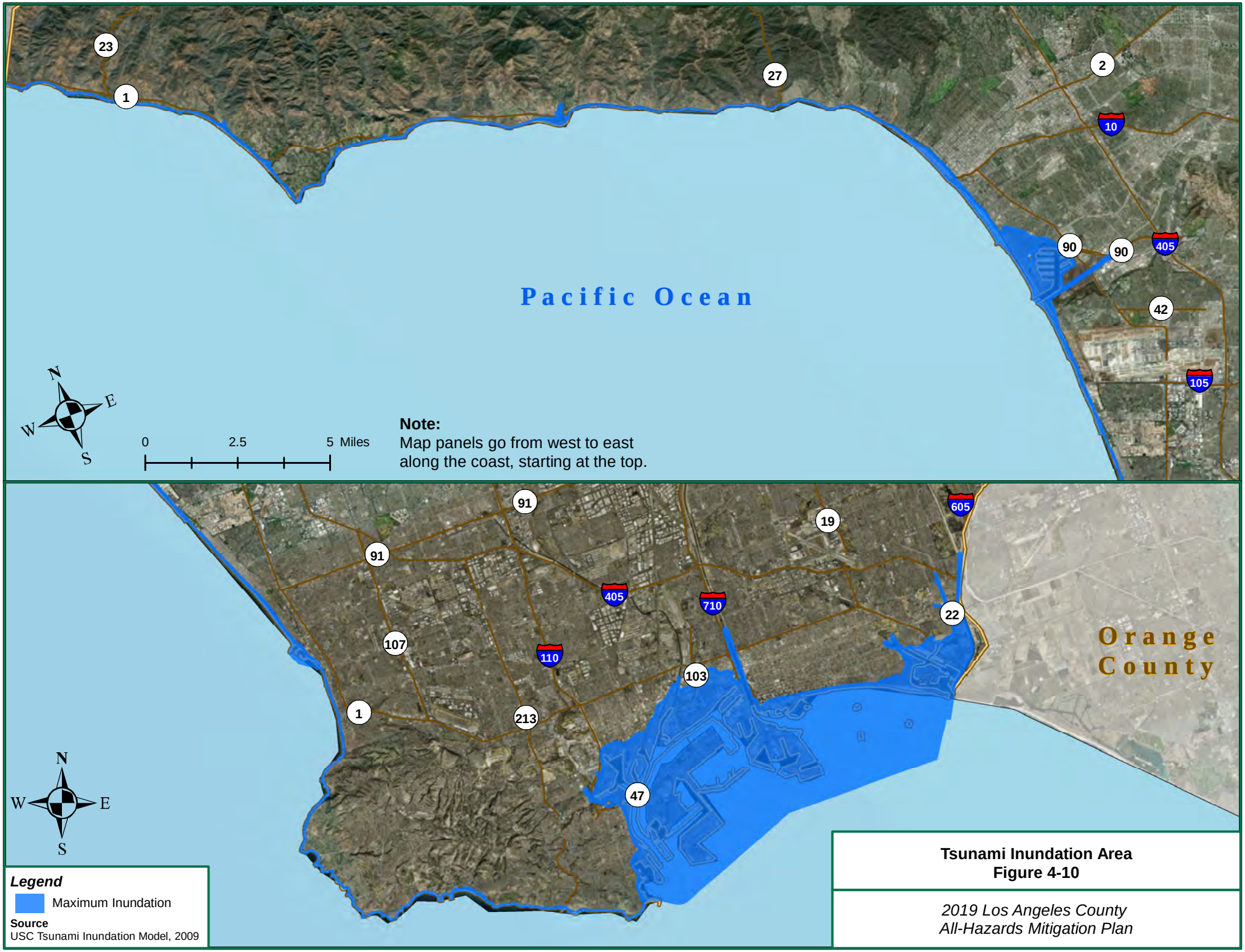
Entity	Maximum Tsunami Inundation Area	
	# of Homeless	% of Homeless
City of Los Angeles	622	1.89
Unincorporated Los Angeles County	20	0.34

Table 4-32. Tsunami Impact on County Critical Facilities

Department / Agency	Maximum Tsunami Inundation Area	
	# of Facilities	% of Square Facilities
Los Angeles County Animal Care & Control	0	0.00
Los Angeles County Fire Department	14	4.15
Los Angeles County Health Services	0	0.00
Los Angeles County Library	1	1.18
LACMA & NHM	0	0.00
Los Angeles County Office of Education	0	0.00
Los Angeles County - Other (offices)	1	4.17
Los Angeles County Parks & Recreation	0	0.00
Los Angeles County Public Health	0	0.00
Los Angeles County Public Works	15	6.52
Los Angeles County Sheriff's Department	1	3.23

Table 4-33. Overall Summary of Vulnerability to Tsunamis

Tsunami	
Summary	In Southern California, an earthquake could trigger an underwater avalanche or submarine landslide in the Santa Monica Bay and produce a tsunami that could inundate low-lying areas of Los Angeles County. In fact, according to researchers a locally generated tsunami could bring water as high as 5 feet in Marina del Rey, 7 feet in Manhattan Beach, 8 feet at the ports, and 11 feet in Redondo Beach. Such a tsunami could flood homes and destroy many small boats in nearby harbors, thereby creating dangerous debris. Researchers warn that California needs to be better prepared for tsunamis and while new deep-sea sensors have helped in tsunami detection, they are better suited for far-away tsunamis rather than local tsunamis. California OES and CGS lead Tsunami Preparedness Week in California annually. During this week, governmental agencies, such as Los Angeles County OEM, and community organizations, participate in exercises, test warning systems and response plans, and host community events to promote tsunami awareness.


23
1
27
2
10
90
90
405
42
105
Pacific Ocean
N
W
E
S
0
2.5
5 Miles
Note:
Map panels go from west to east
along the coast, starting at the top.
91
91
19
605
405
710
22
107
110
103
1
213
47
Orange
County
N
W
E
S
Legend
Maximum Inundation
Source
USC Tsunami Inundation Model, 2009
Tsunami Inundation Area
Figure 4-10
2019 Los Angeles County
All-Hazards Mitigation Plan

4.7 WILDFIRE

Table 4-34. Wildfire Identification Profile

Profile	Description
Nature	Wildfires spread by consuming flammable vegetation. This fire type often begins unnoticed, spreads quickly, and is usually signaled by dense smoke that may be visible from miles around. Wildfires can be caused by human activities (e.g., unattended burns, campfires, or off-road vehicles without spark arresting muffles) or by natural events such as lightning. Wildfires often occur in forests or other highly vegetated areas. In addition, wildfires can be classified as forest, urban, interface or intermix fires, and prescribed burns. The following three factors contribute significantly to wildfire behavior and can be used to identify wildfire hazard areas: • Topography describes slope increases, which influences wildfire spread rate increases. South-facing slopes are also subject to more solar radiation, making them drier and thereby intensifying wildfire behavior. However, ridge tops may mark the end of wildfire spread since fire spreads more slowly or may even be unable to spread downhill. • Fuel is the type and condition of vegetation that plays a significant role in wildfire spread occurrence. Certain plant types are more susceptible to burning or will burn with greater intensity. Dense or overgrown vegetation increases the amount of combustible material available as fire fuel (referred to as the "fuel load"). The living-to-dead plant matter ratio is also important. Certain climate changes may increase wildfire risk significantly during prolonged drought periods, as both living and dead plant matter moisture content decreases. Both the horizontal and vertical fuel load continuity is also an important factor. • Weather is the most variable factor affecting wildfire behavior. Temperature, humidity, wind, and lightning can affect ignition opportunities and fire spread rate. Extreme weather, such as high temperatures and low humidity, can lead to extreme wildfire activity. Climate change increases fire to vegetation ignition susceptibility due to longer dry seasons. By contrast, cooling and higher humidity often signal reduced wildfire occurrence and easier containment. Wildfire frequency and severity sometimes result from other hazard impacts, such as lightning, drought, and infestations (e.g., damage caused by spruce-bark beetle infestations). If not promptly controlled, wildfires may grow into an emergency or disaster. Even small fires can threaten lives and resources and destroy improved properties. In addition to affecting people, wildfires may severely affect livestock and pets. Such events may require emergency water/food, evacuation, and shelter. Indirect wildfire effects can be catastrophic. In addition to stripping the land of vegetation and destroying forest resources, large, intense fires can harm the soil, waterways, and the land itself. Soil exposed to intense heat may lose its capability to absorb moisture and support life. Exposed soils erode quickly and exacerbate river and stream siltation; thereby increasing flood potential, harming aquatic life, and degrading water quality. Vegetation-stripped lands are more susceptible to increased debris flow hazards.
Location	Public Resources Code 4201 4204 and Government Code 51175 89 directed the California Department of Forestry and Fire Protection (Cal FIRE) to map areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors. These FHSZ are represented as very high, high, or moderate. Specifically, the maps were created using data and models describing development patterns, potential fuels over a 30- to 50-year time horizon, expected fire behavior, and expected burn probabilities. The maps are divided into local responsibility areas (LRAs) and state responsibility areas (SRAs). LRAs generally include cities, cultivated agriculture lands, and portions of the desert. LRA fire protection is typically provided by city fire departments, fire protection districts, counties, and by Cal FIRE under contract to the local government. SRA is a

Table 4-34. Wildfire Identification Profile

Profile	Description
	legal term defining the area where the state has financial responsibility for wildfire protection. The Los Angeles County Fire Department is one of six contract counties, which has executed a contract with the State of California to provide wildland fire protection on SRA. **Figure 4-11** displays the areas of Los Angeles County most susceptible to wildfires and indicates areas of local or state responsibility. Very high FHSZs are generally located in mountainous or hillside areas, including the Santa Monica Mountains, San Gabriel Mountains, Palos Verdes Hills, and Puente Hills.
History	As shown in **Figure 4-12**, wildfires are a common occurrence in Los Angeles County. Some of the county's most destructive fires have occurred since 2000, including: • The Grand Prix Fire started on October 21, 2003 and burned a total of 50,618 acres between Claremont and Lytle Creek. The fire destroyed 136 homes and was ruled "accidental but human-initiated." • The Simi Fire started on October 25, 2003 and burned a total of 107,570 acres between Simi Hills and southeastern Simi Valley, in eastern Ventura County and western Los Angeles County, California. It destroyed 37 homes and 278 out buildings. The cause of the fire remains unknown. • The Day Fire started on October 30, 2006 and burned a total of 161,816 acres. The fire primarily burned the Los Padres National Forest. The cause of the fire was human-ignited debris. • The Ranch Fire started on October 20, 2007 and burned a total of 58,410 acres near Townsend Peak in the Angeles National Forest. The cause of the fire was equipment. • The Station Fire started on September 22, 2009 and burned a total of 160,883 acres in the Angeles National Forest. The Station Fire is the largest recorded fire in Los Angeles County. It destroyed 89 residences and another 120 buildings of significance. Two firefighters were killed. The cause of the fire was arson. • The Woolsey Fire started November 8, 2018 and burned a total of 96,949 acres in Los Angeles and Ventura counties including Thousand Oaks, Agoura Hills, Calabasas, the Santa Monica Mountains, Malibu, and West Hills. A total of 1,643 structures were destroyed and 3 people were killed.
Extent / Severity	As shown on the Cal FIRE FHSZ maps, in Los Angeles County, there are 386.06 square miles (8.11%) located in the very high LRA FHSZ, 625.01 square miles (13.13%) in the very high SRA FHSZ, and 132.77 square miles (2.79%) in the high SRA FHSZ. In the Unincorporated Los Angeles County, this includes: 23.53 square miles (0.77%) of very high LRA FHSZ; 610.94 square miles (20.09%) of very high SRA FHSZ; and 132.06 square miles (4.34%) of high SRA FHSZ.
Recurrence Probability	The climate in Los Angeles County is characterized as Mediterranean dry-summer featuring cool, wet winters and warm, dry summers. High moisture levels during the winter rainy season significantly increase the growth of plants. However, the vegetation is dried during the long, hot summers, decreasing plant moisture content and increasing the ratio of dead fuel to living fuel. As a result, fire susceptibility increases dramatically, particularly in late summer and early autumn. In addition, the presence of chaparral, a drought-resistant variety of vegetation that is dependent on occasional wildfires, is expected in Mediterranean dry-summer climates. The history of plant succession in Los Angeles County is important in predicting fire susceptibility. For several years after a fire has occurred, easily flammable herbaceous species thrive and increase the likelihood of new fires. When woody species become re-established, they contribute to a lower overall level of fire susceptibility for approximately 10 years. However, after this period, the slow aging plant

Table 4-34. Wildfire Identification Profile

Profile	Description
	community becomes ever more likely to burn because of increased levels of dead plant material and lowered plant moisture levels. Additionally, a local meteorological phenomenon, known as the Santa Ana winds, contributes to the high incidence of wildfires in Los Angeles County. These winds originate during the autumn months in the hot, dry interior deserts to the north and east of Los Angeles County. They often sweep west into the county, bringing extremely dry air and high wind speeds that further desiccate plant communities during the period of the year when the constituent species have very low moisture content. The effect of these winds on existing fires is particularly dangerous; the winds can greatly increase the rate at which fires spread. Based on the conditions described above and the history of occurrence in the past, future events are very likely to occur. In the past, fires burning more than 1,000 acres have occurred about every 1 to 3 years. The extent of future events will depend on specific conditions at the time of the fire.

Table 4-35. Wildfire Impact on Land Area

Entity	Very High LRA FHSZ		High SRA FHSZ		Very High SRA FHSZ	
	# of Sq. Miles	% of Sq. Miles	# of Sq. Miles	% of Sq. Miles	# of Sq. Miles	% of Sq. Miles
Los Angeles County	386.06	8.11	132.77	2.79	625.01	13.13
Unincorporated Los Angeles County	23.54	0.77	132.06	4.34	610.94	20.09
Supervisorial District 1	31.42	12.76	0.00	0.00	1.13	0.46
Supervisorial District 2	3.25	2.01	0.00	0.00	0.00	0.00
Supervisorial District 3	140.58	32.60	0.01	0.00	92.18	21.38
Supervisorial District 4	45.78	10.41	1.11	0.25	86.61	19.69
Supervisorial District 5	164.90	5.87	131.65	4.69	444.99	15.85

Table 4-36. Wildfire Impact on Vulnerable Populations – People Experiencing Homelessness

Entity	Very High LRA FHSZ		High SRA FHSZ		Very High SRA FHSZ	
	# of Homeless	% of Homeless	# of Homeless	% of Homeless	# of Homeless	% of Homeless
City of Los Angeles	1,291	3.92	0	0.00	0	0.00
Unincorporated Los Angeles County	88	1.49	58	0.99	465	7.91

Table 4-37. Wildfire Impact on County Critical Facilities

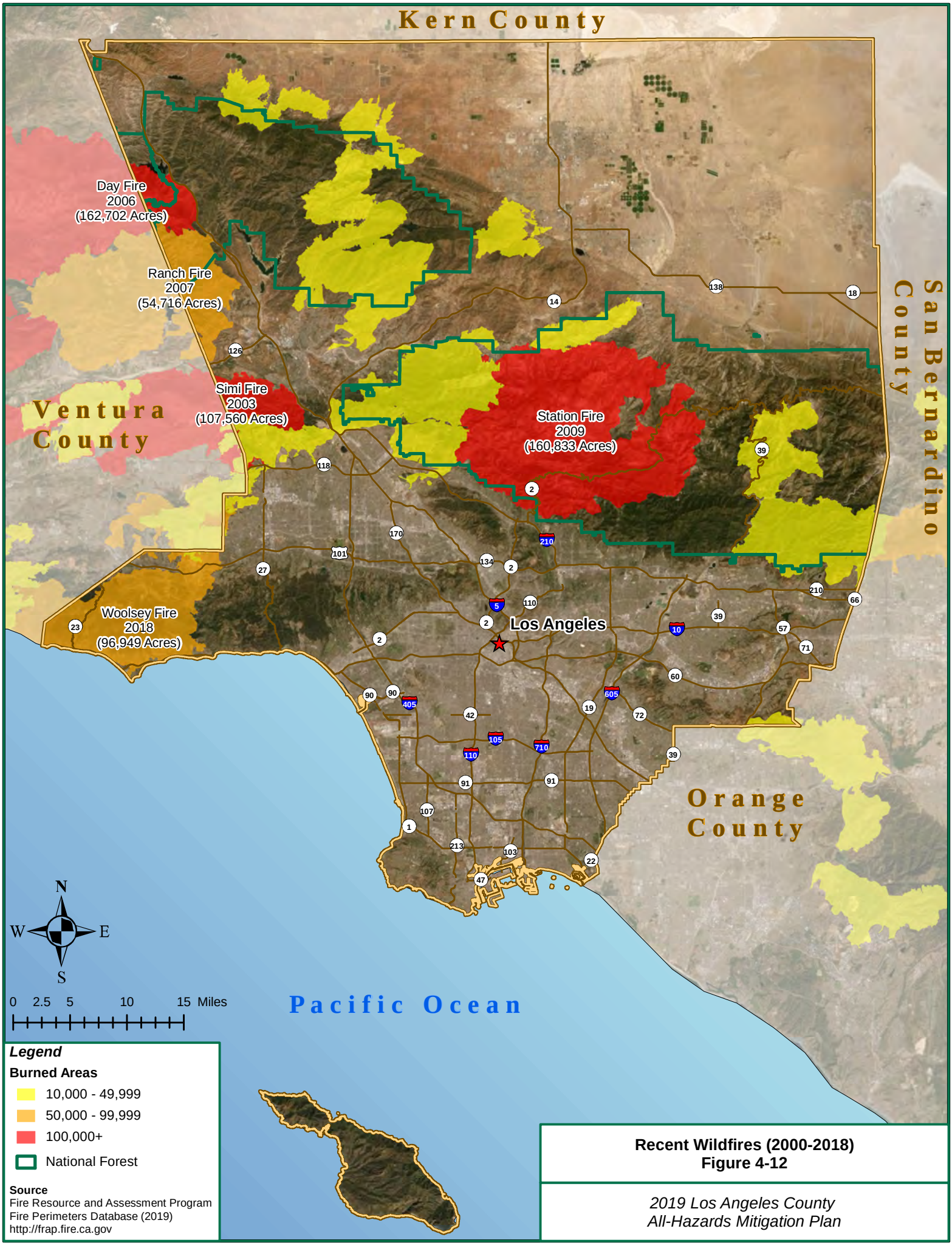
Department / Agency	Very High LRA FHSZ		High SRA FHSZ		Very High SRA FHSZ	
	# of Facilities	% of Facilities	# of Facilities	% of Facilities	# of Facilities	% of Facilities
Los Angeles County Animal Care & Control	1	14.29	0	0.00	1	14.29
Los Angeles County Fire Department	39	11.57	1	0.30	14	4.15
Los Angeles County Health Services	1	3.45	0	0.00	0	0.00
Los Angeles County Library	7	8.24	1	1.18	2	2.35
LACMA & NHM	1	25.00	0	0.00	0	0.00
Los Angeles County Office of Education	3	8.11	0	0.00	3	8.11
Los Angeles County - Other (offices)	0	0.00	0	0.00	0	0.00
Los Angeles County Parks & Recreation	13	11.11	1	0.85	12	10.26
Los Angeles County Public Health	52	22.61	4	1.74	41	17.83
Los Angeles County Public Works	0	0.00	0	0.00	0	0.00
Los Angeles County Sheriff's Department	3	9.68	1	3.23	3	9.68

Table 4-38. Overall Summary of Vulnerability to Wildfires

	Wildfire
Summary	Wildfires are not only capable of burning down vegetation, homes, critical facilities, and infrastructure, but they can also cause loss of life to humans and animals, soil erosion, debris flows, air pollution, serious health problems, and restriction of access to recreational areas. The areas in Los Angeles County that are most susceptible to wildfires are generally located in mountainous or hillside areas, including the Santa Monica Mountains, San Gabriel Mountains, Palos Verdes Hills, and Puente Hills. However, the areas that pose greatest risk to people are generally along the wildland-urban interface (WUI) or intermix. These areas are the transition zones between wildlands and human development and often where areas of housing and vegetation commingle. According to researchers at the United States Forest Service, fires in the WUI areas have not deterred redevelopment. In fact, according to the same researchers, there is a push to return the area to "normal" as soon as possible. California has the strictest fire regulations in the country, which supersede any type of local regulations. However, the rules do not apply to existing homes built before 1991, with the average home in California built decades prior. And unlike earthquakes and floods, there is not a retrofit type of program to encourage homeowners to bring their homes up to current fire requirements.

Fire Hazard Severity Zones
Figure 4-11

2019 Los Angeles County
All-Hazards Mitigation Plan



Recent Wildfires (2000-2018)
Figure 4-12

2019 Los Angeles County
All-Hazards Mitigation Plan

5 MITIGATION STRATEGY

Section 5 – Mitigation Strategy addresses Element C of the Local Mitigation Plan Regulation Checklist.

Regulation Checklist – 44 CFR 201.6 Local Mitigation Plans
Element C: Mitigation Strategy
C1. Does the Plan document each jurisdiction's existing authorities, policies, programs and resources and its ability to expand on and improve these existing policies and programs? (Requirement § 201.6(c)(3))
C2. Does the Plan address each jurisdiction's participation in the NFIP and continued compliance with NFIP requirements, as appropriate? (Requirement § 201.6(c)(3)(i))
C3. Does the Plan include goals to reduce/avoid long-term vulnerabilities to the identified hazards? (Requirement §201.6(c)(3)(i))
C4. Does the Plan identify and analyze a comprehensive range of specific mitigation actions and projects for each jurisdiction being considered to reduce the effects of hazards, with emphasis on new and existing buildings and infrastructure? (Requirement §201.6(c)(3)(ii))
C5. Does the Plan contain an action plan that describes how the actions identified will be prioritized (including cost benefit review), implemented, and administered by each jurisdiction? (Requirement §201.6(c)(3)(iv)); (Requirement §201.6(c)(3)(iii))
C6. Does the Plan describe a process by which local governments will integrate the requirements of the mitigation plan into other planning mechanisms, such as comprehensive or capital improvement plans, when appropriate? (Requirement §201.6(c)(4)(ii))

5.1 AUTHORITIES, POLICIES, PROGRAMS, AND RESOURCES

Los Angeles County's existing authorities, policies, programs and resources available for hazard mitigation are listed in **Table 5-1** through **Table 5-3**. These tables have been updated since the 2014 AHMP to reflect any changes in human, technical, financial, legal, and regulatory resources.

Table 5-1 Human and Technical Resources for Hazard Mitigation

Staff/Personnel	Department / Agency	Principal Activities Related to Hazard Mitigation
Planner(s), engineer(s) and technical staff with knowledge of land development, land management practices, and human-caused and natural hazards.	Los Angeles County Department of Regional Planning	Develops and maintains the Los Angeles County 2035 General Plan, including the safety element. Develops area plans based on the Los Angeles County 2035 General Plan, to provide more specific guidance for the development of more specific areas. Reviews private development projects and proposed capital improvements projects and other physical projects involving property for consistency and conformity with the Los Angeles County 2035 General Plan. Anticipates and acts on the need for new plans, policies, and code changes. Applies the approved plans, policies, code provisions, and other regulations to proposed land uses.
Engineer(s), Building Inspectors/Code Enforcement Officers or other professional(s), and technical staff trained in construction requirements	Los Angeles County Public Works	Oversees the effective, efficient, fair, and safe enforcement of the 2017 County of Los Angeles Building Code.
Engineers, construction project managers, and supporting technical staff	Los Angeles County Public Works	Provides direct or contract civil, structural, and mechanical engineering services, including contract, project, and construction management.
Engineer(s), project manager(s), technical staff, equipment operators, and maintenance and construction staff	Los Angeles County Public Works	Maintains and operates of a wide range of local equipment and facilities and assists members of the public. This includes providing sufficient clean fresh water, reliable sewer services, street maintenance, storm drainage systems, street cleaning, street lights and traffic signals.
Floodplain Administrator	Los Angeles County Public Works	Enforces the floodplain management ordinance, ensures that new development proposals do not increase flood risk, and that new developments are not located below the 100-year flood level. In addition, the floodplain administrator is responsible for planning and managing flood risk reduction projects throughout the county.
Emergency Manager	Los Angeles County Chief Executive Office – Office of Emergency Management	Maintains and updates the Los Angeles County Operational Area Emergency Response Plan for the unincorporated areas of the county. In addition, coordinates local response and relief activities in the Emergency Operation Center, and works closely with local, state, and federal partners to support planning and training and to provide information and coordinate assistance.

Table 5-1 Human and Technical Resources for Hazard Mitigation

Staff/Personnel	Department / Agency	Principal Activities Related to Hazard Mitigation
Procurement Services Manager	Internal Services Department	Provides a full range of municipal financial services, administers several licensing measures, and functions as the county's procurement services manager.
Comptroller	Los Angeles County Auditor - Controller	Provides financial services including grant financial services.
District Attorney	Los Angeles County District Attorney	Provides legal services for the county.
Fire Chief	Los Angeles County Fire Department	Provides fire protection services including response, fire prevention, and mitigation activities for the county.
Sheriff	Los Angeles County Sheriff Department	Provides law enforcement services in the county.

Table 5-2. Financial Resources for Hazard Mitigation

Type	Administrator	Purpose	Amount
General Fund	Chief Executive Office	Program operations and specific projects.	Variable.
General Obligation Bonds	Los Angeles County Auditor-Controller	General obligation bonds are appropriately used for the construction and/or acquisition of improvements to real property broadly available to residents and visitors. Such facilities include but are not limited to: libraries, hospitals, parks, public safety facilities, and cultural and educational facilities.	Variable.
Special Tax and Revenue Bonds	Comptroller	Revenue bonds are used to finance capital projects that: 1) have an identified budgetary stream for repayment (e.g., specified fees, tax receipts); 2) generate project revenue but rely on a broader pledge of general fund revenues to reduce borrowing costs; or 3) finance the acquisition and installation of equipment for the local jurisdiction's general governmental purposes.	Variable.
Vegetation Management Program	Cal FIRE	Cost-sharing program between Cal FIRE and private land owners, which focuses on the use of prescribed fire, mechanical, biological, and chemical means addressing wildland fire fuel hazards and other resource management issues on SRA and LRA lands	Project-specific.
Wildfire Emergency and Mitigation Funds	Cal FIRE	Administers funding from the FEMA, Bureau of Land Management, and U.S. Forest Service for certain types of wildfire emergency and mitigation funding	Project-specific.
California Residential Mitigation Program	California Earthquake Authority	Created by the California Earthquake Authority and the Governor's Office of Emergency Services, Earthquake Brace + Bolt: Funds to Strengthen Your Foundation is the first incentive program offered by the California Residential Mitigation Program.	Project-specific.
Public Health Emergency Preparedness Cooperative Agreement.	Center for Disease Control	Funds are intended to upgrade state and local public health jurisdictions' preparedness and response to bioterrorism, outbreaks of infectious diseases, and other public health threats and emergencies.	Grant award based on specific projects as they are identified.

Table 5-2. Financial Resources for Hazard Mitigation

Type	Administrator	Purpose	Amount
Hazard Mitigation Grant Program	FEMA	Supports pre- and post-disaster mitigation plans and projects. Available to California communities after a presidentially declared disaster has occurred in California, administered by Cal OES.	Grant award based on specific projects as they are identified.
Pre-Disaster Mitigation grant program	FEMA	Supports pre-disaster mitigation plans and projects. Available on an annual basis as a nationally competitive grant, administered by Cal OES.	Grant award based on specific projects as they are identified.
Flood Mitigation Assistance grant program	FEMA	Mitigates repetitively flooded structures and infrastructure. Available on an annual basis, distributed to California communities, administered by Cal OES.	Grant award based on specific projects as they are identified.
Homeland Security Preparedness Technical Assistance Program	FEMA/DHS	Build and sustain preparedness technical assistance activities in support of the four homeland security mission areas (i.e., prevention, protection, response, recovery) and homeland security program management.	Grant award based on specific projects as they are identified.
Assistance to Firefighters Grant Program	FEMA/U.S. Fire Administration	Provides equipment, protective gear, emergency vehicles, training, and other resources needed to protect the public and emergency personnel from fire and related hazards. Available to fire departments and nonaffiliated emergency medical services providers.	Grant awards based on specific projects as they are identified.
Land and Water Conservation Funds	U.S. Department of the Interior	Supports the protection of federal public lands and waters and voluntary conservation on private land.	Project-specific.
Community Action for a Renewed Environment	U.S. Environmental Protection Agency (EPA)	Through financial and technical assistance offers an innovative way for a community to organize and take action to reduce toxic pollution (e.g., stormwater) in its local environment. Through this program, a community creates a partnership that implements solutions to reduce releases of toxic pollutants and minimize people's exposure to them.	Grant award based on specific projects as they are identified.
Clean Water State Revolving Fund	U.S. EPA	A loan program that provides low-cost financing to eligible entities on state and tribal lands for water quality projects, including all types of non-point source, watershed protection or restoration, estuary management projects, and more traditional municipal wastewater treatment projects.	Variable.

Table 5-2. Financial Resources for Hazard Mitigation

Type	Administrator	Purpose	Amount
Community Block Grant Program Entitlement Communities Grants	U.S. Department of Housing and Urban Development	Acquisition of real property, relocation and demolition, rehabilitation of residential and non-residential structures, construction of public facilities and improvements, such as water and sewer facilities, streets, neighborhood centers, and the conversion of school buildings for eligible purposes.	Grant award based on specific projects as they are identified.

Table 5-3. Legal and Regulatory Resources for Hazard Mitigation

Name	Description	Hazards Addressed	Emergency Management	Potential to Affect Development
Los Angeles County 2035 General Plan (2015)	Describes hazard areas and lists goals and policies to reduce the potential risk of death, injuries, and economic damage resulting from natural and human-caused hazards.	Seismic and geotechnical, flood and inundation hazards, and fire hazards.	Mitigation, Preparedness, Response	Yes
Comprehensive Floodplain Management Plan (2016)	Reviews existing floodplain management programs in the county and recommends enhancements to them through 35 mitigation actions.	Flood	Mitigation	Yes
Los Angeles County Fire Department 2018 Strategic Fire Plan	Identifies and prioritizes pre-fire and post-fire management strategies and tactics meant to reduce the loss of values at risk in Los Angeles County.	Wildfire	Preparedness, Mitigation	Yes
Greater Los Angeles County Region Integrated Regional Water Management Plan (2014)	Identifies a comprehensive set of solutions to achieve the several objectives over the 25-year planning horizon including reducing flood risk in flood prone areas by either increasing protection or decreasing needs using integrated flood management approaches and adapting to and mitigate against climate change vulnerabilities.	Flood, Climate Change	Mitigation	Yes
Unincorporated County Community Climate Action Plan 2020 (2015)	Provides a roadmap for successfully implementing greenhouse gas reduction measures in the County. It is a component of the General Plan Air Quality Element, the Community Climate Action Plan actions are closely tied to many of the goals, policies, and programs of the General Plan, as well as to several other existing programs in the County.	Climate Change	Mitigation	Yes
County of Los Angeles Local Coastal Programs	Requires coastal cities and counties to establish coastal resource conservation and development programs.	Climate change, flood	Prevention, Mitigation	Yes
Los Angeles County Floodplain Management Ordinance	Promotes the public health, safety, and general welfare. Additionally, aims to minimize public and private losses due to flood conditions in specific areas by legally enforceable regulations applied uniformly throughout the community to all publicly and privately owned land in flood prone, mudslide (i.e., mudflow) or flood related erosion areas.	Flood	Mitigation	Yes

Table 5-3. Legal and Regulatory Resources for Hazard Mitigation

Name	Description	Hazards Addressed	Emergency Management	Potential to Affect Development
Hillside Management Area Ordinance & Hillside Design Guidelines	Required for development in Hillside Management Areas, which are defined as areas with 25% or greater natural slopes. The guidelines include specific and measurable design techniques that can be applied to residential, commercial, industrial, and other types of projects.	Landslide	Mitigation	Yes
Los Angeles County Fuel Modification Code	Requires the review aspects such as structure location and type of construction, topography, slope, amount and arrangement of vegetation, and overall site settings for a new structure or an addition that is equal to or greater than 50% of the existing square footage. The objective of this approval plan process is to create defensible space necessary for effective fire protection of homes in the FHSZs.	Wildfire	Preparedness, Mitigation	Yes
California Fire Plan	Requires the County of Los Angeles Fire Plan Unit to implement the California Fire Plan, a statewide framework for minimizing costs and losses from wildland fires. The Fire Plan Unit uses a GIS platform to identify high hazard\high value areas and communities at risk in the wildland-urban interface.	Wildfire	Preparedness, Mitigation	Yes
Los Angeles County Brush Clearance Program	Legally declares both improved and unimproved properties a public nuisance, and where necessary, requires the clearance of hazardous vegetation. These measures create “Defensible Space” for effective fire protection of property, life, and the environment. The Brush Clearance Program is a joint effort between the County of Los Angeles Fire Department and the County of Los Angeles Department of Agricultural Commissioner/Weights and Measures, Weed Hazard, and Pest Abatement Bureau (Weed Abatement Division).	Wildfire	Mitigation	No

5.2 NFIP PARTICIPATION

The NFIP aims to reduce the impact of flooding to residential and non-residential buildings. It does so by providing insurance to property owners and by encouraging communities to adopt and enforce floodplain management regulations. Los Angeles County entered the NFIP in 1980, and the first Los Angeles County DFIRM was issued on December 2, 1980. The Los Angeles County Public Works enforces the county's floodplain management ordinance and participate in FEMA's Community Assisted Visits, which occur on a 3- to 5-year cycle. According to Los Angeles County Public Works, as of September 30, 2018, there are 1,553 floodplain policies in force in the unincorporated areas of Los Angeles County.

Los Angeles County also participates in the CRS program. The CRS program is a voluntary program for communities that engage in community floodplain management activities, which exceed the minimum NFIP standards. CRS communities benefit from reduced insurance rates and improved floodplain management programs. Los Angeles County is currently a Class 7 CRS community; therefore, homeowners who live in the SFHA can receive a 5 to 15 percent discount on their flood insurance policy.

5.3 MITIGATION GOALS

Mitigation goals are defined as general guidelines that explain what a community wants to achieve in terms of hazard and loss prevention. Goal statements are typically long-range, policy-oriented statements representing community-wide vision. For the 2019 AHMP, the overarching goal is for Los Angeles County to be a disaster resilient community. A disaster resilient community is able to prepare for, respond to, and recover from adverse hazards and disasters. According to laresilience.org, "in the resilience framework, less emphasis is placed on traditional, individually-focused preparedness efforts… building community resilience is really about making communities stronger."

5.4 POTENTIAL MITIGATION ACTIONS AND PROJECTS

Mitigation actions and projects help achieve the goals of the AHMP. For the 2019 AHMP, potential mitigation actions to be considered are listed below in **Table 5-4** and include the following hazard mitigation categories: education and awareness; natural systems protection; structure and infrastructure projects; preparedness and response; and local plans and regulations. This list addresses every hazard profiled in this plan and is based on the plan's risk assessment as well as lessons learned from recent disasters. It was developed using: FEMA success stories and best management practices; FEMA job aids; local and regional plans and reports; and input from subject matter experts and pertinent Los Angeles County departments and agencies.

Table 5-4. Potential Mitigation Actions and Projects

Red Flag Warning Public Outreach	
Project Description	Create an online and offline public outreach campaign for Red Flag Warnings. Include information about: what is a Red Flag Warning; what land may be closed; and what individuals should do to be prepared as well as what activities should be avoided. Tailor outreach material to various target groups, including people experiencing homelessness, the elderly, the young, and non-English speaking residents.

Table 5-4. Potential Mitigation Actions and Projects

Type of Project	Education and Awareness Programs
Hazard(s) Mitigated	Wildfire
Project Source	Red Flag Working Group, LA County Homeless Initiatives
Pros	Education can help reduce the risk of human-caused fires Public outreach is generally low-cost Public outreach to homeless individuals can help built rapport with county agencies
Cons	Maybe difficult to reach some target groups
Vegetation Management Program	
Project Description	Continue to implement the County's Vegetation Management Program. The Los Angeles County Fire Department Vegetation Management Unit works closely with the Fire Plan Unit and the Air and Wildland Division's Prescribed Fire Office to implement projects. The Vegetation Management Unit provides the State and County with required paperwork for prescribed burning, mechanical, biological and chemical treatment methods used in project areas.
Type of Project	Natural Systems Protection
Hazard(s) Mitigated	Wildfire
Project Source	Los Angeles County Fire Department
Pros	Program has been implemented in Los Angeles County for the last 40 years and are generally cost effective Can be used selectively to treat the most vulnerable areas
Cons	Often requires ongoing maintenance Can cause soil disturbance and increase sedimentation and erosion Prescribed fire and chemical application methods require close supervision
Fireproof Coating of Critical Assets	
Project Description	Fireproof coat critical facilities in Very High FHSZs which will allow structures to extend their strength in the event of a fire.
Type of Project	Structure and Infrastructure Projects
Hazard(s) Mitigated	Wildfire
Project Source	Los Angeles County Public Works
Pros	Generally cost-effective and non-toxic
Cons	None
Auxiliary Power for Critical Facilities	
Project Description	Determine which critical facilities need and do not have auxiliary power in order to remain functional during de-energization or "Public Safety Power Shut-Offs" and/or general loss of power and install auxiliary power systems. Auxiliary power systems may include back-up generators, local Solar Photovoltaic plus storage, and microgrids.
Type of Project	Structure and Infrastructure Projects
Hazard(s) Mitigated	Wildfire specifically, but also applies to all hazards

Table 5-4. Potential Mitigation Actions and Projects

Project Source	Los Angeles County Public Works
Pros	Provides emergency power to keep critical facilities operational and functional
Cons	Diesel generators can be expensive to operate and contribute to air pollution
Earthquake-Resistant Ductile Iron Pipes Replacement	
Project Description	Continue to replace aging critical pipes in extreme or violent shaking hazard areas and Class IX and X landslide hazard areas to improve seismic reliability/safeguard critical water distribution lines against the potential destructive impacts of large-scale earthquakes and accompanying landslides. Los Angeles County Public Works completed its' first earthquake-resistant ductile iron pipe replacement pilot program in 2013.
Type of Project	Structural and Infrastructure Projects
Hazard(s) Mitigated	Landslides, Earthquakes
Project Source	Los Angeles County Public Works
Pros	Improves water reliability Restores those without service more rapidly
Cons	None
Watershed Ecosystem Restoration	
Project Description	Modernize existing flood control retention facilities to improve flood protection, water quality and ecological health. Potential projects include: Arroyo Seco and Compton Creek.
Type of Project	Natural Systems Protection
Hazard(s) Mitigated	Climate Change, Flood, Tsunami
Project Source	County of Loss Angeles Repetitive Property Loss Area Analysis Progress Report (2017 – 2018), OurWaterLA
Pros	Reduces the risk of flooding to the surrounding neighborhoods Provides new recreational space and safety amenities
Cons	Additional studies needed to determine best approaches
Green Streets	
Project Description	Implement the Green Street Master Plan with the goal of identifying 110 feasible sites. A green street is a stormwater management approach that incorporates vegetation, soil, and engineered systems (e.g., permeable pavements) to slow, filter, and cleanse stormwater runoff from impervious surfaces. In addition to the traditional green street approach, incorporate "complete streets" design strategies to provide more room for emergency response vehicles and create defensible space in plaza areas and around buildings.
Type of Project	Natural Systems Protection, Preparedness and Response
Hazard(s) Mitigated	Stormwater/Flood, Climate Change
Project Source	Los Angeles County Public Works, U.S. EPA
Pros	Protects water quality in rivers and streams by removing pollutants

Table 5-4. Potential Mitigation Actions and Projects

	Replenishes groundwater supplies Absorbs carbon Improves air quality and neighborhood aesthetics Improves pedestrian and bicycle safety
Cons	Requires selected site suitability to do utility conflicts, and geotechnical and environmental characteristics
Coordinated Data Collection and Database Systems	
Project Description	Create coordinated data collection and database system in which intake and assessment information can be entered in real time and can support multiple users at the same time. Components can include critical facilities and vulnerable populations.
Type of Project	Preparedness and Response
Hazard(s) Mitigated	All hazards
Project Source	Los Angeles County OEM
Pros	Coordinated systems
Cons	Different data collection needs may require parallel databases
Brush Clearance Program	
Project Description	Expand the County's Brush Clearance Program to include a grant fundable mitigation component for qualified low-income and/or elderly homeowners that have properties that are found to be non-compliant. Instead of warning property owners and imposing infractions for inadequate fire hazard reduction, Los Angeles County will work with the homeowner to develop and implement a fire reduction plan.
Type of Project	Natural Systems Protection, Preparedness and Response
Hazard(s) Mitigated	Wildfire
Project Source	Los Angeles County Fire Department
Pros	Proactive, not reactive approach to working with homeowners to reducing wildfire fuel hazards
Cons	Often requires ongoing maintenance
Wildland Urban-Interface Ordinance	
Project Description	Codifying development standards to guide development in the WUI areas that face a severe threat of wildfires.
Type of Project	Local Plans and Regulations
Hazard(s) Mitigated	Wildfire
Project Source	Draft Safety Element Update for Los Angeles County 2035 General Plan, Los Angeles County Sustainability Plan
Pros	Additional review of development in WUIs will enable best practices are incorporated in the project design.
Cons	Additional regulations may be perceived as too burdensome by property owners.

Table 5-4. Potential Mitigation Actions and Projects

Urban Forest Management Plan	
Project Description	Create Urban Forest Management Plan for Los Angeles County with a well-defined scope that includes s comprehensive tree inventory, assessment of tree health, identification of shade-poor neighborhoods, cost-benefit analysis of tree vs shade-structure interventions, urban forest financing plan, and a plan for sustainable management.
Type of Project	Local Plans and Regulations
Hazard(s) Mitigated	Climate Change, Drought
Project Source	Los Angeles County Sustainability Plan (Los Angeles County Chief Sustainability Office), A Greater L.A. Climate Action Framework (L.A. Regional Collaborative for Climate Action and Sustainability, and Los Angeles County 2035 General Plan
Pros	Extreme heat is the greatest health threat to Los Angeles County residents. Providing shade will help mitigate the effects of extreme heat in disadvantaged neighborhoods. Residents from these communities may not have private vehicles and encounter problems traveling to cooling centers; they may also have limited access to air conditioning.
Cons	The inability of residents to pay for water to establish newly planted trees may hinder the establishment of an urban forest. County-wide water conservation measures during times of drought may also conflict with efforts to establish and maintain an urban forest. In such situations, shade structures may fulfill the same needs.
Community Wildfire Protection Plans	
Project Description	Continue to work with communities to develop Community Wildfire Protection Plans (CWPP). CWPPs enable communities to plan how they will reduce the risk of wildfire by identifying strategic sites and methods for fuel reduction projects across the landscape and jurisdictional boundaries.
Type of Project	Local Plans and Regulations
Hazard(s) Mitigated	Wildfire
Project Source	Los Angeles County Fire Department 2018 Strategic Fire Plan
Pros	Opportunity to establish a localized definition and boundary for the WUI. Priority funding is often given to projects and treatment areas identified in a CWPP.
Cons	May be difficult to get collaboration from stakeholders.

5.5 MITIGATION ACTION PLANS

A mitigation action plan is a prioritized list of proposed mitigation projects and actions that a community hopes to implement to reduce its' risks and vulnerabilities. The 2019 AHMP mitigation action plan, as shown in **Table 5-5 and Table 5-6**, is prioritized into Tier 1 and Tier 2 activities:

- Tier 1 activities are essential to remedy or prevent a major health/safety hazard. They meet FEMA HMA grant criteria, including project eligibility, benefit-cost, and performance period.
- Tier 2 activities are important in building a culture and practice of disaster resilience that will prevent new risks. They do not necessarily require and/or meet FEMA HMA grant criteria (but may qualify for other state and federal funds).

Table 5-5. Tier 1 Mitigation Action Plan

Project Name	Implementation Details
Red Flag Warning Public Outreach	Department/Agency: LAHSA, Los Angeles County OEM, Los Angeles County Fire Department, and Los Angeles County Sheriff's Department Potential Funding Source: FEMA grants Performance Period: 6 months development, implementation prior to every summer/fall
Vegetation Management Program	Department/Agency: Los Angeles County Fire Department Potential Funding Source: Cal FIRE, FEMA grants Performance Period: Ongoing
Fireproof Coating of Critical Facilities	Department/Agency: Los Angeles County Public Works, Los Angeles County Fire Department Potential Funding Source: Cal FIRE, FEMA grants Performance Period: 1-3 years
Auxiliary Power for Critical Facilities	Department/Agency: Los Angeles County Public Works Potential Funding Source: FEMA grants Performance Period: Ongoing
Earthquake-Resistant Ductile Iron Pipes Replacement	Department/Agency: Los Angeles County Public Works Potential Funding Source: FEMA grants Performance Period: Ongoing
Brush Clearance Program	Department/Agency: Los Angeles County Fire Department Potential Funding Source: Cal FIRE, FEMA grants Performance Period: Ongoing
Community Wildfire Protection Plans	Department / Agency: Los Angeles County Fire Department Potential Funding Source: Cal FIRE, FEMA grants Performance Period: Ongoing

Table 5-6. Tier 2 Mitigation Action Plan

Project Name	Implementation Details
Watershed Ecosystem Restoration	Department/Agency: Los Angeles County Public Works Potential Funding Source: U.S. EPA, U.S. Department of Interior grants Performance Period: 3-5 years
Green Streets	Department/Agency: Los Angeles County Public Works Potential Funding Source: U.S. EPA grants Performance Period: 3-5 years
Coordinated Data Collection & Database Systems	Department/Agency: Los Angeles County OEM Potential Funding Source: County funds Performance Period: 1-2years, Ongoing
Wildland Urban-Interface Ordinance	Department/Agency: Los Angeles County Department of Regional Planning, Los Angeles County Fire Department Potential Funding Source: County funds Performance Period: 6 months – 1 year
Urban Forest Management Plan	Department/Agency: Los Angeles County Department of Regional Planning, Los Angeles County Fire Department Potential Funding Source: County funds Performance Period: 1-2 years

5.6 PLAN INTEGRATION

The AHMP project manager will be the lead in working with Los Angeles County departments and agencies to ensure that elements of the 2019 AHMP are incorporated into other relevant county planning documents as they are created or updated.

As such, the AHMP project manager will work with:

- The Los Angeles County Public Works to incorporate the flood risk assessment and flood mitigation actions into the county's Comprehensive Floodplain Management Plan. The Comprehensive Floodplain Management Plan is currently being updated and is expected to be completed in 2021.
- The Los Angeles County Department of Regional Planning to ensure that the 2019 AHMP's hazard profiles and mitigation projects and actions align with those addressed in the General Plan's Safety Element. The Safety Element is currently being updated and is expected to be completed in 2021.
- The Los Angeles County OEM to ensure that the hazard profiles are included in the Los Angeles County Threat and Hazard Identification Risk Assessment and the Los Angeles County Operational Area Emergency Response Plans and Annexes as they are updated.

6 PLAN REVIEW, EVALUATION, AND IMPLEMENTATION

Section 4 – Plan Review, Evaluation, and Implementation addresses Element D of the Local Mitigation Plan Regulation Checklist.

Regulation Checklist – 44 CFR 201.6 Local Mitigation Plans
Element D: Plan Review, Evaluation, and Implementation
D1. Was the plan revised to reflect changes in development? (Requirement § 201.6(d)(3))
D2. Was the plan revised to reflect progress in local mitigation efforts? (Requirement § 201.6(d)(3))
D3. Was the plan revised to reflect changes in priorities? Requirement §201.6(d)(3))

6.1 CHANGES IN DEVELOPMENT

As noted in **Section 3.2**, the slowing population growth is in part due to the lack of housing. Most economists agree that building new housing is key to addressing the state's housing crisis. During the drafting of the 2019 AHMP, nearly 28,000 units were under construction in Los Angeles County. In the city of Los Angeles, developers have targeted properties in older neighborhoods, rather than undeveloped land in the city's outskirts. However, as the State of California pushes for greater growth in order to meet the governor's goal of 3.5 million new units by 2025, there is growing concern that without land-use restrictions, new development will occur in fire-prone and other hazard areas of the county. These concerns are addressed within the 2019 AHMP mitigation strategy.

6.2 PROGESS IN LOCAL MITIGATION EFFORTS

The 2014 AHMP Mitigation Actions Matrix was reviewed by each of the coordinating agencies identified on the matrix in order to determine mitigation action status. Mitigation actions that were identified as not having been implemented or deferred were considered for **Table 5-4**. Mitigation actions that were identified as completed are shown in **Table 6-1.**

In addition, the consultant reviewed the County of Los Angeles Floodplain Management Plan 2018 Progress Report to determine mitigation action status. Flood mitigation actions that were listed as "no progress" were considered for **Table 5-4**. Relevant flood mitigation actions that were listed as "project complete" are shown in **Table 6-1**.

Table 6-1. Completed Local Mitigation Efforts

Coordinating Agency	Project Description
Los Angeles County Department of Coroner	Purchased equipment to set up an off-site mobile morgue. This equipment was incorporated into the business continuity plan in case the main facility is unusable and would help to avoid unnecessary exposure of employees or the public to biological, radiological, or chemical agents.
Los Angeles County Department of Regional Planning	Updated building codes on January 1, 2017.

Table 6-1. Completed Local Mitigation Efforts

Coordinating Agency	Project Description
Los Angeles County Public Works	Continue the seismic upgrade to improve water reliability through earthquake-resistant pipe installation. The work took place on Reseda Boulevard from Roscoe to Strathern; Etiwanda Avenue from Roscoe to Strathern; Cantara Street from Reseda to Etiwanda; and Strathern Street from Reseda to Etiwanda.
Los Angeles County Public Works	In October 2017, the Los Angeles County Public Works mailed 3,551 copies of "Are You Prepared for A Flood?" brochure to property owners and residents in Special Flood Hazard Areas, County Floodways, and possible gaps in floodplain mapping (i.e., areas with possible flood hazards that are not on FEMA or County maps). The County of Los Angeles' National Flood Insurance Program (NFIP) website links were checked and updated. Previously, brochures were distributed to the Malibu, Rosemead, and Castaic Public Libraries. Brochures were distributed to additional public libraries closer to the floodplains including Topanga, Altadena, Duarte, and San Dimas.
Los Angeles County Public Works	In addition to the outreach efforts mentioned in Initiative No. 1 above, the Los Angeles County Public Works mailed 226 copies of CDs containing County of Los Angeles and FEMA publications to all property owners and residents in RL properties and properties in the RL areas.
Los Angeles County Public Works	In December 2017, the Los Angeles County Public Works mailed a letter and outreach materials to owners of critical facilities located in FEMA's-designated Special Flood Hazard Areas. Critical facilities that received outreach materials include schools, hospitals, fire stations, and health care facilities.
Los Angeles County Public Works	County of Los Angeles Office of Emergency Management, Fire Department, Sheriff's Department, and Public Works' Disaster Service Group participated in emergency preparedness events such as Los Angeles County's Preparation throughout this reporting period. Participants at the fair provided attendees with information and resources for preparation, such as the "Are You Prepared for a Flood?", "ALERT LA COUNTY" brochure, "Homeowner's Guide for Flood, Debris, and Erosion Control," and the "Emergency Survival Guide."

6.3 CHANGES IN PRIORITIES

The 2014 AHMP's Mitigation Action Matrix was prioritized using a number ranking system to determine a project's priority. For the 2019 AHMP, mitigation actions were prioritized into two separate groups, which both helped achieve meeting the goal of disaster resiliency. As noted in **Section 5.3**, resilient communities are able to minimize any disaster, making the return to normal life as soon and as effortless as possible. As such, the first part (i.e., first priority) of this goal is to ensure that life-safety needs are addressed as soon as possible. The second part (i.e., second priority) is to implement plans, policies, and programs to reduce current risks and prevent new/future ones.

7 PLAN ADOPTION

Section 6 – Plan Adoption addresses Element E of the Local Mitigation Plan Regulation Checklist.

Regulation Checklist – 44 CFR 201.6 Local Mitigation Plans
Element E: Plan Adoption
E1. Does the Plan include documentation that the plan has been formally adopted by the governing body of the jurisdiction requesting approval? (Requirement §201.6(c)(5)) E2. For multi-jurisdictional plans, has each jurisdiction requesting approval of the plan documented formal plan adoption? (Requirement §201.6(c)(5))

7.1 FORMAL ADOPTION

[To be completed] The 2019 AHMP was formally adopted by the Los Angeles County Board of Supervisors via resolution on [To be completed]. A scanned copy of the resolution is included as **Figure 7-2**. It will also be kept on file with Los Angeles County OEM and additional be sent to Cal OES and FEMA.

ADOPTION RESOLUTION

APPENDIX A – PLANNING PROCESS

From: Stephanie Kim
Sent: Tuesday, August 20, 2019 2:44 PM
To: XXX@monosheriff.org; XXX@ocsd.org; XXX@rivco.org; XXX@ontarioca.gov; XXX@inyocounty.us; XXX@co.imperial.ca.us; XXX@laquintaca.gov; XXX@sbcoem.org; XXX@mono.ca.gov; XXX@lcf.ca.gov; XXX@sa.ocgov.com; XXX@rivco.org; XXX@cbcity.org; XXX@inyocounty.us; XXX@cityofbishop.com; XXX@sandiego.gov; XXX@rivco.org; XXX@octa.net; XXX@sbcsd.org; XXX@sandiego.gov; XXX@octa.net; XXX@rcoe.us; XXX@dgs.ca.gov; XXX@sbcsd.org; XXX@lawa.org; XXX@rivco.org; XXX@lausd.net; XXX@inyocounty.us; XXX@octa.net; XXX@ranchomirageca.gov; XXX@rivco.org; XXX@inyocounty.us; XXX@sbccd.edu; XXX@morongo-nsn.gov; XXX@noaa.gov; XXX@cityofredlands.org; XXX@morongo-nsn.gov; XXX@coachella.org; XXX@ocsd.org; XXX@sbcsd.org; XXX@cityoftemecula.org; XXX@santabarbaraca.gov; XXX@mwdh2o.com; XXX@sbcsd.org; XXX@kerncountyfire.org
Cc: XXX@ceooem.lacounty.gov
Subject: Los Angeles County Hazard Mitigation Plan Update

Dear Stakeholders,

We are reaching out to let you know that the Los Angeles County Office of Emergency Management is in the process of updating its' All-Hazards Mitigation Plan. I'm attaching our public outreach flyer for your information. We will send out an additional email when our draft plan goes out to public comment later this fall. If you have any questions or would like to be part of the plan update process, please contact me!

Emily Montanez

emontanez@ceooem.lacounty.gov

(323) 980-2813

Stephanie Kim
Academic Intern
LA County CEO Office of Emergency Management

2019 County of Los Angeles All-Hazards Mitigation Plan

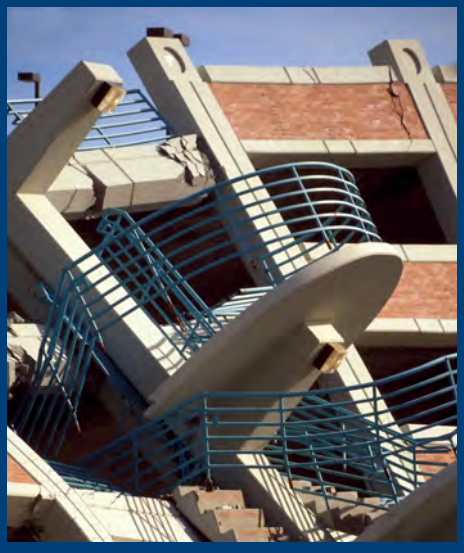
The Los Angeles County Office of Emergency Management is updating the County's All-Hazards Mitigation Plan! Over the next few months, we will re-assess risks posed by natural disasters and review and revise existing strategies as well as develop new ones to protect life and property future events.

Natural disasters addressed in our plan include: climate change, dam failure, drought, flood, earthquake, landslide, tsunami, and wildfire.

Once our plan is completed and approved by FEMA, the County will be re-eligible to apply for and receive certain types of non-emergency disaster assistance, including funding for mitigation projects identified in our plan.

To learn more about hazard mitigation planning, please visit: **https://www.fema.gov/hazard-mitigation-planning**.

To learn more about our plan and/or participate in our planning process, please visit our website **lacounty.gov/emergency** or our Twitter account **@ReadyLACounty**.



Plan de Mitigación para Todos los Peligros del Condado de Los Ángeles 2019

¡La Oficina de Manejo de Emergencias del Condado de Los Ángeles está actualizando el Plan de Mitigación para Todos los Peligros del Condado! En los próximos meses, reevaluaremos los riesgos debidos a los desastres naturales y repasaremos y revisaremos las estrategias existentes, y también desarrollaremos otras nuevas para proteger vidas y propiedades antes de que ocurran incidentes futuros.

Los riesgos discutidos en nuestro plan incluyen: cambios climáticos, falla de presas, sequías, inundaciones, terremotos, deslizamientos de tierra, tsunami e incendios forestales.

Una vez que FEMA complete y apruebe nuestro plan, el Condado volverá a ser elegible para solicitar y recibir ciertos tipos de asistencia por desastre que no sea de emergencia, incluyendo la financiación para proyectos de mitigación identificados en nuestro plan.

Para obtener más información sobre la planificación de mitigación de riesgos, por favor visite: **https://www.fema.gov/hazard-mitigation-planning**.

Para obtener más información sobre nuestro plan y / o participar en nuestro proceso de planificación, visite nuestro sitio web **lacounty.gov/emergency** o nuestra cuenta de Twitter **@ReadyLACounty**.

Ready Los Angeles County on Tv

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Official account of the Los Angeles County Office of Emergency Management for disaster & preparedness information. Please note, messages sent to this account cannot be answered.

Los Angeles, CA

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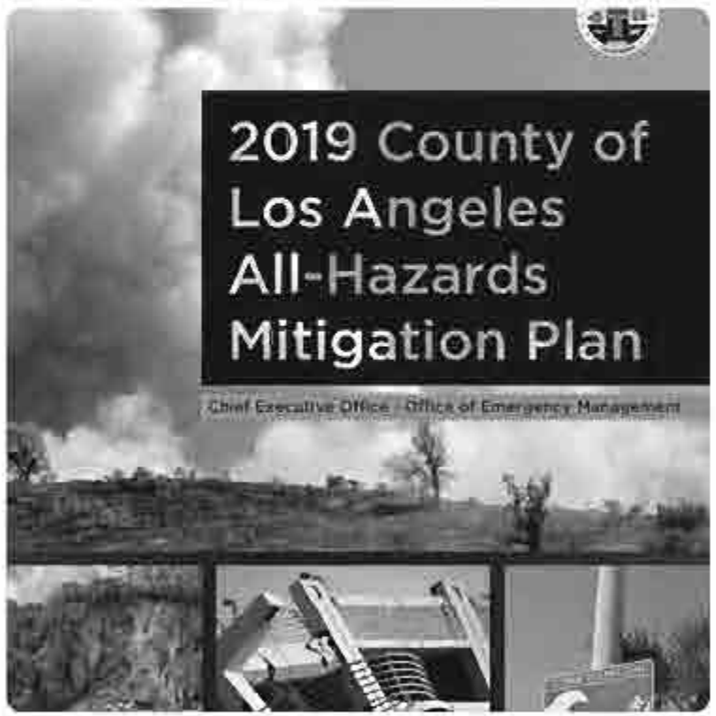
We are updating the County of Los Angeles All-Hazards Mitigation Plan in order to help protect life and property from future disaster events. To learn more about our plan, please follow our Twitter account @ReadyLACounty.



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Our updated All-Hazards Mitigation Plan will address climate change, dam failure, drought, flood, earthquake, landslide, tsunami, and wildfire. What natural hazard concerns you the most?

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A hazard mitigation plan is required to be eligible for certain types of disaster assistance. To learn more about hazard mitigation planning, please visit: fema.gov/hazard-mitigat...

Local Mitigation Planning Handbook

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2019 AHMP - Annual Review Worksheet				
HMP Section	**Questions**	**Yes**	**No**	**Comments**
PLANNING PROCESS	Has your County department/agency (or other type of organization) done any public outreach activities regarding the AHMP or a mitigation project? If yes, please describe.			
	Has your County department/agency (or other type of organization) integrated any of the AHMP's elements into other plans or policies? If yes, please describe.			
HAZARD IDENTIFICATION	Has a disaster occurred in this reporting period that affected your department/agency (or other type of organization)?			
	Do you know of new hazard studies, reports and/or mapping available for Los Angeles County? If so, what are they?			
RISK ASSESSMENT	Does your County department/agency have any new critical assets that should be included in the 2024 AHMP risk assessment?			
	Have there been changes in development trends that could create additional risks?			
MITIGATION STRATEGY	Are there different or additional resources (financial, technical, and human) that are now available for mitigation planning?			
	Should new mitigation actions be added?			

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	Have there been changes in development trends that could create additional risks?			
MITIGATION STRATEGY	Are there different or additional resources (financial, technical, and human) that are now available for mitigation planning?			
	Should new mitigation actions be added?			

2019 AHMP - Mitigation Project Progress Report			
Progress Report Period From (date):		**To (date):**	
Project Title:			
Project ID:			
Description of Project:			
Implementing Department/Agency:			
Supporting Department/Agencies:			
Contact Name:			
Contact E-mail:			
Contact Number:			
Grant/Finance Administrator:			
Total Project Cost:			
Anticipated Cost Overrun/Underrun:			
Date of Project Approval:			
Project Start Date:			
Anticipated Completion Date:			
Summary of Progress of Project for this Reporting Period			
1. What was accomplished during this reporting period?			
2. What obstacles, problems, or delays did the project encounter, if any?			
3. How were the problems resolved?			

APPENDIX B – COMMUNITY PROFILE

Table B-1. County Critical Facilities

Department / Agency	Facility Name
Animal Care & Control	Agoura Animal Care Center
Animal Care & Control	Baldwin Park Animal Care Center
Animal Care & Control	Carson Animal Care Center
Animal Care & Control	Castaic Animal Care Center (Castaic)
Animal Care & Control	Downey Animal Care Center
Animal Care & Control	Lancaster County Animal Care Center
Animal Care & Control	Palmdale Animal Care Center
Fire Department	Bob Hope Airport Fire Department
Fire Department	City of Alhambra Fire Department - Training Facility
Fire Department	City of Alhambra Fire Department Station 71 - Headquarters
Fire Department	City of Alhambra Fire Department Station 72 - Southeast District
Fire Department	City of Alhambra Fire Department Station 73 - Northwest
Fire Department	City of Alhambra Fire Department Station 74 - Southwest
Fire Department	City of Arcadia Fire Department Station 105
Fire Department	City of Arcadia Fire Department Station 106 - Headquarters
Fire Department	City of Arcadia Fire Department Station 107
Fire Department	City of Avalon Fire Department
Fire Department	City of Beverly Hills Fire Department Station 1 - Headquarters
Fire Department	City of Beverly Hills Fire Department Station 2
Fire Department	City of Beverly Hills Fire Department Station 3
Fire Department	City of Burbank Fire Department Station 11 - Headquarters
Fire Department	City of Burbank Fire Department Station 12
Fire Department	City of Burbank Fire Department Station 13
Fire Department	City of Burbank Fire Department Station 14
Fire Department	City of Burbank Fire Department Station 15
Fire Department	City of Burbank Fire Department Station 16
Fire Department	City of Compton Fire Department Station 1 - Headquarters
Fire Department	City of Compton Fire Department Station 2
Fire Department	City of Compton Fire Department Station 3
Fire Department	City of Compton Fire Department Station 4
Fire Department	City of Downey Fire Department Station 1 - Headquarters
Fire Department	City of Downey Fire Department Station 2
Fire Department	City of Downey Fire Department Station 3
Fire Department	City of Downey Fire Department Station 4
Fire Department	City of Glendale Fire Department Station 21
Fire Department	City of Glendale Fire Department Station 22
Fire Department	City of Glendale Fire Department Station 23
Fire Department	City of Glendale Fire Department Station 24
Fire Department	City of Glendale Fire Department Station 25
Fire Department	City of Glendale Fire Department Station 26
Fire Department	City of Glendale Fire Department Station 27
Fire Department	City of Glendale Fire Department Station 28
Fire Department	City of Long Beach Fire Department - Beach Operations
Fire Department	City of Long Beach Fire Department - Headquarters
Fire Department	City of Long Beach Fire Department Station 1
Fire Department	City of Long Beach Fire Department Station 10
Fire Department	City of Long Beach Fire Department Station 11
Fire Department	City of Long Beach Fire Department Station 12
Fire Department	City of Long Beach Fire Department Station 13
Fire Department	City of Long Beach Fire Department Station 14
Fire Department	City of Long Beach Fire Department Station 15
Fire Department	City of Long Beach Fire Department Station 16
Fire Department	City of Long Beach Fire Department Station 17
Fire Department	City of Long Beach Fire Department Station 18
Fire Department	City of Long Beach Fire Department Station 19

Table B-1. County Critical Facilities

Department / Agency	Facility Name
Fire Department	City of Long Beach Fire Department Station 2
Fire Department	City of Long Beach Fire Department Station 20
Fire Department	City of Long Beach Fire Department Station 21
Fire Department	City of Long Beach Fire Department Station 22
Fire Department	City of Long Beach Fire Department Station 24
Fire Department	City of Long Beach Fire Department Station 3
Fire Department	City of Long Beach Fire Department Station 4
Fire Department	City of Long Beach Fire Department Station 5
Fire Department	City of Long Beach Fire Department Station 6
Fire Department	City of Long Beach Fire Department Station 7
Fire Department	City of Long Beach Fire Department Station 8
Fire Department	City of Long Beach Fire Department Station 9
Fire Department	City of Los Angeles Fire Department Station 1
Fire Department	City of Los Angeles Fire Department Station 10
Fire Department	City of Los Angeles Fire Department Station 108
Fire Department	City of Los Angeles Fire Department Station 109
Fire Department	City of Los Angeles Fire Department Station 11
Fire Department	City of Los Angeles Fire Department Station 12
Fire Department	City of Los Angeles Fire Department Station 13
Fire Department	City of Los Angeles Fire Department Station 14
Fire Department	City of Los Angeles Fire Department Station 15
Fire Department	City of Los Angeles Fire Department Station 16
Fire Department	City of Los Angeles Fire Department Station 17
Fire Department	City of Los Angeles Fire Department Station 19
Fire Department	City of Los Angeles Fire Department Station 2
Fire Department	City of Los Angeles Fire Department Station 20
Fire Department	City of Los Angeles Fire Department Station 21
Fire Department	City of Los Angeles Fire Department Station 25
Fire Department	City of Los Angeles Fire Department Station 26
Fire Department	City of Los Angeles Fire Department Station 27
Fire Department	City of Los Angeles Fire Department Station 29
Fire Department	City of Los Angeles Fire Department Station 3
Fire Department	City of Los Angeles Fire Department Station 33
Fire Department	City of Los Angeles Fire Department Station 34
Fire Department	City of Los Angeles Fire Department Station 35
Fire Department	City of Los Angeles Fire Department Station 37
Fire Department	City of Los Angeles Fire Department Station 4
Fire Department	City of Los Angeles Fire Department Station 41
Fire Department	City of Los Angeles Fire Department Station 42
Fire Department	City of Los Angeles Fire Department Station 43
Fire Department	City of Los Angeles Fire Department Station 44
Fire Department	City of Los Angeles Fire Department Station 46
Fire Department	City of Los Angeles Fire Department Station 47
Fire Department	City of Los Angeles Fire Department Station 5
Fire Department	City of Los Angeles Fire Department Station 50
Fire Department	City of Los Angeles Fire Department Station 51
Fire Department	City of Los Angeles Fire Department Station 52
Fire Department	City of Los Angeles Fire Department Station 56
Fire Department	City of Los Angeles Fire Department Station 57
Fire Department	City of Los Angeles Fire Department Station 58
Fire Department	City of Los Angeles Fire Department Station 59
Fire Department	City of Los Angeles Fire Department Station 6
Fire Department	City of Los Angeles Fire Department Station 61
Fire Department	City of Los Angeles Fire Department Station 62
Fire Department	City of Los Angeles Fire Department Station 64

Table B-1. County Critical Facilities

Department / Agency	Facility Name
Fire Department	City of Los Angeles Fire Department Station 65
Fire Department	City of Los Angeles Fire Department Station 66
Fire Department	City of Los Angeles Fire Department Station 67
Fire Department	City of Los Angeles Fire Department Station 68
Fire Department	City of Los Angeles Fire Department Station 7
Fire Department	City of Los Angeles Fire Department Station 71
Fire Department	City of Los Angeles Fire Department Station 76
Fire Department	City of Los Angeles Fire Department Station 80
Fire Department	City of Los Angeles Fire Department Station 82
Fire Department	City of Los Angeles Fire Department Station 9
Fire Department	City of Los Angeles Fire Department Station 92
Fire Department	City of Los Angeles Fire Department Station 94
Fire Department	City of Los Angeles Fire Department Station 95
Fire Department	City of Los Angeles Fire Department Station 97
Fire Department	City of Los Angeles Fire Department Station 99
Fire Department	City of Monterey Park Fire Department Station 61 - Headquarters
Fire Department	City of Monterey Park Fire Department Station 62
Fire Department	City of Monterey Park Fire Department Station 63
Fire Department	City of Santa Fe Springs Fire Department Station 1 - Headquarters
Fire Department	City of Santa Fe Springs Fire Department Station 2
Fire Department	City of Santa Fe Springs Fire Department Station 3
Fire Department	City of Santa Fe Springs Fire Department Station 4
Fire Department	City of Santa Monica Fire Department - Training Facility
Fire Department	City of Santa Monica Fire Department Station 1 - Headquarters
Fire Department	City of Santa Monica Fire Department Station 2
Fire Department	City of Santa Monica Fire Department Station 3
Fire Department	City of Santa Monica Fire Department Station 5
Fire Department	City of Vernon Fire Department Station 2
Fire Department	City of Vernon Fire Department Station 3
Fire Department	City of Vernon Fire Department Station 4
Fire Department	City of West Covina Fire Department Station 1
Fire Department	City of West Covina Fire Department Station 2
Fire Department	City of West Covina Fire Department Station 3
Fire Department	City of West Covina Fire Department Station 4
Fire Department	City of West Covina Fire Department Station 5
Fire Department	Culver City Fire Department Station 1 - Headquarters
Fire Department	Culver City Fire Department Station 2
Fire Department	Culver City Fire Department Station 3
Fire Department	La Verne Fire Department Station 1 - Headquarters
Fire Department	La Verne Fire Department Station 2
Fire Department	Los Angeles County Fire Department - HQ/Heliport/Training Facility
Fire Department	Los Angeles County Fire Department Station 1
Fire Department	Los Angeles County Fire Department Station 10
Fire Department	Los Angeles County Fire Department Station 101
Fire Department	Los Angeles County Fire Department Station 102
Fire Department	Los Angeles County Fire Department Station 103
Fire Department	Los Angeles County Fire Department Station 104
Fire Department	Los Angeles County Fire Department Station 105
Fire Department	Los Angeles County Fire Department Station 106
Fire Department	Los Angeles County Fire Department Station 107
Fire Department	Los Angeles County Fire Department Station 11
Fire Department	Los Angeles County Fire Department Station 110
Fire Department	Los Angeles County Fire Department Station 111
Fire Department	Los Angeles County Fire Department Station 112
Fire Department	Los Angeles County Fire Department Station 114

Table B-1. County Critical Facilities

Department / Agency	Facility Name
Fire Department	Los Angeles County Fire Department Station 115
Fire Department	Los Angeles County Fire Department Station 116
Fire Department	Los Angeles County Fire Department Station 117
Fire Department	Los Angeles County Fire Department Station 118
Fire Department	Los Angeles County Fire Department Station 119
Fire Department	Los Angeles County Fire Department Station 12
Fire Department	Los Angeles County Fire Department Station 120
Fire Department	Los Angeles County Fire Department Station 121
Fire Department	Los Angeles County Fire Department Station 122
Fire Department	Los Angeles County Fire Department Station 123
Fire Department	Los Angeles County Fire Department Station 124
Fire Department	Los Angeles County Fire Department Station 125
Fire Department	Los Angeles County Fire Department Station 126
Fire Department	Los Angeles County Fire Department Station 127
Fire Department	Los Angeles County Fire Department Station 129
Fire Department	Los Angeles County Fire Department Station 130
Fire Department	Los Angeles County Fire Department Station 131
Fire Department	Los Angeles County Fire Department Station 132
Fire Department	Los Angeles County Fire Department Station 134
Fire Department	Los Angeles County Fire Department Station 135
Fire Department	Los Angeles County Fire Department Station 14
Fire Department	Los Angeles County Fire Department Station 140
Fire Department	Los Angeles County Fire Department Station 141
Fire Department	Los Angeles County Fire Department Station 144
Fire Department	Los Angeles County Fire Department Station 145
Fire Department	Los Angeles County Fire Department Station 146
Fire Department	Los Angeles County Fire Department Station 147
Fire Department	Los Angeles County Fire Department Station 148
Fire Department	Los Angeles County Fire Department Station 149
Fire Department	Los Angeles County Fire Department Station 15
Fire Department	Los Angeles County Fire Department Station 151
Fire Department	Los Angeles County Fire Department Station 152
Fire Department	Los Angeles County Fire Department Station 153
Fire Department	Los Angeles County Fire Department Station 154
Fire Department	Los Angeles County Fire Department Station 155
Fire Department	Los Angeles County Fire Department Station 156
Fire Department	Los Angeles County Fire Department Station 157
Fire Department	Los Angeles County Fire Department Station 158
Fire Department	Los Angeles County Fire Department Station 159
Fire Department	Los Angeles County Fire Department Station 16
Fire Department	Los Angeles County Fire Department Station 160
Fire Department	Los Angeles County Fire Department Station 161
Fire Department	Los Angeles County Fire Department Station 162
Fire Department	Los Angeles County Fire Department Station 163
Fire Department	Los Angeles County Fire Department Station 164
Fire Department	Los Angeles County Fire Department Station 165
Fire Department	Los Angeles County Fire Department Station 166
Fire Department	Los Angeles County Fire Department Station 167
Fire Department	Los Angeles County Fire Department Station 168
Fire Department	Los Angeles County Fire Department Station 169
Fire Department	Los Angeles County Fire Department Station 17
Fire Department	Los Angeles County Fire Department Station 170
Fire Department	Los Angeles County Fire Department Station 171
Fire Department	Los Angeles County Fire Department Station 172
Fire Department	Los Angeles County Fire Department Station 173

Table B-1. County Critical Facilities

Department / Agency	Facility Name
Fire Department	Los Angeles County Fire Department Station 18
Fire Department	Los Angeles County Fire Department Station 181
Fire Department	Los Angeles County Fire Department Station 182
Fire Department	Los Angeles County Fire Department Station 183
Fire Department	Los Angeles County Fire Department Station 184
Fire Department	Los Angeles County Fire Department Station 185
Fire Department	Los Angeles County Fire Department Station 186
Fire Department	Los Angeles County Fire Department Station 187
Fire Department	Los Angeles County Fire Department Station 188
Fire Department	Los Angeles County Fire Department Station 19
Fire Department	Los Angeles County Fire Department Station 2
Fire Department	Los Angeles County Fire Department Station 20
Fire Department	Los Angeles County Fire Department Station 21
Fire Department	Los Angeles County Fire Department Station 22
Fire Department	Los Angeles County Fire Department Station 23
Fire Department	Los Angeles County Fire Department Station 24
Fire Department	Los Angeles County Fire Department Station 25
Fire Department	Los Angeles County Fire Department Station 26
Fire Department	Los Angeles County Fire Department Station 27
Fire Department	Los Angeles County Fire Department Station 28
Fire Department	Los Angeles County Fire Department Station 29
Fire Department	Los Angeles County Fire Department Station 3
Fire Department	Los Angeles County Fire Department Station 30
Fire Department	Los Angeles County Fire Department Station 31
Fire Department	Los Angeles County Fire Department Station 32
Fire Department	Los Angeles County Fire Department Station 33
Fire Department	Los Angeles County Fire Department Station 34
Fire Department	Los Angeles County Fire Department Station 35
Fire Department	Los Angeles County Fire Department Station 36
Fire Department	Los Angeles County Fire Department Station 37
Fire Department	Los Angeles County Fire Department Station 38
Fire Department	Los Angeles County Fire Department Station 39
Fire Department	Los Angeles County Fire Department Station 4
Fire Department	Los Angeles County Fire Department Station 40
Fire Department	Los Angeles County Fire Department Station 41
Fire Department	Los Angeles County Fire Department Station 42
Fire Department	Los Angeles County Fire Department Station 43
Fire Department	Los Angeles County Fire Department Station 44
Fire Department	Los Angeles County Fire Department Station 45
Fire Department	Los Angeles County Fire Department Station 47
Fire Department	Los Angeles County Fire Department Station 48
Fire Department	Los Angeles County Fire Department Station 49
Fire Department	Los Angeles County Fire Department Station 5
Fire Department	Los Angeles County Fire Department Station 50
Fire Department	Los Angeles County Fire Department Station 51
Fire Department	Los Angeles County Fire Department Station 53
Fire Department	Los Angeles County Fire Department Station 54
Fire Department	Los Angeles County Fire Department Station 55
Fire Department	Los Angeles County Fire Department Station 56
Fire Department	Los Angeles County Fire Department Station 57
Fire Department	Los Angeles County Fire Department Station 58
Fire Department	Los Angeles County Fire Department Station 59
Fire Department	Los Angeles County Fire Department Station 6
Fire Department	Los Angeles County Fire Department Station 60
Fire Department	Los Angeles County Fire Department Station 61

Table B-1. County Critical Facilities

Department / Agency	Facility Name
Fire Department	Los Angeles County Fire Department Station 62
Fire Department	Los Angeles County Fire Department Station 63
Fire Department	Los Angeles County Fire Department Station 64
Fire Department	Los Angeles County Fire Department Station 65
Fire Department	Los Angeles County Fire Department Station 66
Fire Department	Los Angeles County Fire Department Station 67
Fire Department	Los Angeles County Fire Department Station 68
Fire Department	Los Angeles County Fire Department Station 69
Fire Department	Los Angeles County Fire Department Station 7
Fire Department	Los Angeles County Fire Department Station 70
Fire Department	Los Angeles County Fire Department Station 71
Fire Department	Los Angeles County Fire Department Station 72
Fire Department	Los Angeles County Fire Department Station 73
Fire Department	Los Angeles County Fire Department Station 74
Fire Department	Los Angeles County Fire Department Station 75
Fire Department	Los Angeles County Fire Department Station 76
Fire Department	Los Angeles County Fire Department Station 77
Fire Department	Los Angeles County Fire Department Station 78
Fire Department	Los Angeles County Fire Department Station 79
Fire Department	Los Angeles County Fire Department Station 8
Fire Department	Los Angeles County Fire Department Station 80
Fire Department	Los Angeles County Fire Department Station 81
Fire Department	Los Angeles County Fire Department Station 82
Fire Department	Los Angeles County Fire Department Station 83
Fire Department	Los Angeles County Fire Department Station 84
Fire Department	Los Angeles County Fire Department Station 85
Fire Department	Los Angeles County Fire Department Station 86
Fire Department	Los Angeles County Fire Department Station 87
Fire Department	Los Angeles County Fire Department Station 88
Fire Department	Los Angeles County Fire Department Station 89
Fire Department	Los Angeles County Fire Department Station 90
Fire Department	Los Angeles County Fire Department Station 91
Fire Department	Los Angeles County Fire Department Station 92
Fire Department	Los Angeles County Fire Department Station 94
Fire Department	Los Angeles County Fire Department Station 95
Fire Department	Los Angeles County Fire Department Station 96
Fire Department	Los Angeles County Fire Department Station 97
Fire Department	Los Angeles County Fire Department Station 98
Fire Department	Los Angeles County Fire Department Station 99
Fire Department	Manhattan Beach Fire Department Station 1 - Headquarters
Fire Department	Manhattan Beach Fire Department Station 2
Fire Department	Montebello Fire Department Station 1 - Headquarters
Fire Department	Montebello Fire Department Station 2
Fire Department	Montebello Fire Department Station 3
Fire Department	Pasadena Fire Department Station 31
Fire Department	Pasadena Fire Department Station 32
Fire Department	Pasadena Fire Department Station 33
Fire Department	Pasadena Fire Department Station 34
Fire Department	Pasadena Fire Department Station 36
Fire Department	Pasadena Fire Department Station 37
Fire Department	Pasadena Fire Department Station 38
Fire Department	Pasadena Fire Department Station 39
Fire Department	Redondo Beach Fire Department Station 1 - Headquarters
Fire Department	Redondo Beach Fire Department Station 2
Fire Department	Redondo Beach Fire Department Station 3

Table B-1. County Critical Facilities

Department / Agency	Facility Name
Fire Department	San Gabriel Fire Department Station 1 - Headquarters
Fire Department	San Gabriel Fire Department Station 2
Fire Department	San Marino Fire Department
Fire Department	Sierra Madre Volunteer Fire Department
Fire Department	South Pasadena Fire Department
Fire Department	The City of El Segundo Fire Department Station 1 - Headquarters
Fire Department	The City of El Segundo Fire Department Station 2
Fire Department	Torrance Fire Department Fire Station 1 - Headquarters
Fire Department	Torrance Fire Department Fire Station 2
Fire Department	Torrance Fire Department Fire Station 3
Fire Department	Torrance Fire Department Fire Station 4
Fire Department	Torrance Fire Department Fire Station 5
Fire Department	Torrance Fire Department Fire Station 6
Fire Department	Vernon Fire Department
Health Services	Antelope Valley Health Center
Health Services	Bellflower Health Center
Health Services	Central Public Health Center
Health Services	Curtis R. Tucker Health Center
Health Services	Dollarhide Health Center
Health Services	East Los Angeles Health Center
Health Services	East San Gabriel Valley Health Center
Health Services	Edward R. Roybal Comprehensive Helath Center
Health Services	El Monte Comprehensive Health Center
Health Services	Glendale Health Center
Health Services	H. Claude Hudson Comprehensive Health Center
Health Services	Harbor-UCLA Medical Center
Health Services	High Desert Regional Health Center
Health Services	Hubert H. Humphrey Comprehensive Health Center
Health Services	La Puente Health Center
Health Services	LAC + USC Medical Center
Health Services	Lake Los Angeles Community Clinic
Health Services	Littlerock Community Clinic
Health Services	Long Beach Comprehensive Health Center
Health Services	Martin Luther King, Jr. Outpatient Center
Health Services	Mid Valley Comprehensive Health Center
Health Services	Olive View-UCLA Medical Center
Health Services	Rancho Los Amigos National Rehabilitation Center
Health Services	San Fernando Health Center
Health Services	South Valley Health Center
Health Services	Torrance Health Center
Health Services	Vaughn School Based Health Center
Health Services	West Valley Health Center
Health Services	Wilmington Health Center
Library	A C Bilbrew Library
Library	Acton Agua Dulce Library
Library	Agoura Hills Library
Library	Alondra Library
Library	Angelo M. Iacoboni Library
Library	Anthony Quinn Library
Library	Artesia Library
Library	Avalon Library
Library	Baldwin Park Library
Library	Bell Gardens Library
Library	Bell Library
Library	Carson Library

Table B-1. County Critical Facilities

Department / Agency	Facility Name
Library	Castaic Library
Library	Charter Oak Library
Library	Chet Holifield Library
Library	City Terrace Library
Library	Claremont Helen Renwick Library
Library	Clifton M. Brakensiek Library
Library	Compton Library
Library	Cudahy Library
Library	Culver City Julian Dixon Library
Library	Diamond Bar Library
Library	Dr. Martin Luther King, Jr. Library
Library	Duarte Library
Library	East Los Angeles Library
Library	East Rancho Dominguez Library
Library	El Camino Real Library
Library	El Monte Library
Library	Florence Express Library
Library	Gardena Mayme Dear Library
Library	George Nye Jr. Library
Library	Graham Library
Library	Hacienda Heights Library
Library	Hawaiian Gardens Library
Library	Hawthorne Library
Library	Hermosa Beach Library
Library	Hollydale Library
Library	Huntington Park Library
Library	La Canada Flintridge Library
Library	La Crescenta Library
Library	La Mirada Library
Library	La Puente Library
Library	La Verne Library
Library	Lake Los Angeles Library
Library	Lancaster Library
Library	Lawndale Library
Library	Leland R. Weaver Library
Library	Lennox Library
Library	Littlerock Library
Library	Live Oak Library
Library	Lloyd Taber-Marina del Rey Library
Library	Lomita Library
Library	Los Nietos Library
Library	Lynwood Library
Library	Malibu Library
Library	Manhattan Beach Library
Library	Masao W. Satow Library
Library	Maywood Cesar Chavez Library
Library	Montebello Library
Library	Norwalk Library
Library	Norwood Library
Library	Paramount Library
Library	Pico Rivera Library
Library	Quartz Hill Library
Library	Rivera Library
Library	Rosemead Library
Library	Rowland Heights Library

Table B-1. County Critical Facilities

Department / Agency	Facility Name
Library	San Dimas Library
Library	San Fernando Library
Library	San Gabriel Library
Library	Sorensen Library
Library	South El Monte Library
Library	South Whittier Library
Library	Stevenson Ranch Library
Library	Sunkist Library
Library	Temple City Library
Library	Topanga Library
Library	View Park Bebe Moore Campbell Library
Library	Walnut Library
Library	West Covina Library
Library	West Hollywood Library
Library	Westlake Village Library
Library	Willowbrook Library
Library	Wiseburn Library
Library	Woodcrest Library
Los Angeles County Museum of Arts & Museum of Natural History	La Brea Tarpits
Los Angeles County Museum of Arts & Museum of Natural History	Los Angeles County Museum of Art
Los Angeles County Museum of Arts & Museum of Natural History	Natural History Museum
Los Angeles County Museum of Arts & Museum of Natural History	William S. Hart Museum
Office of Education	Afflerbaugh-Paige Camp
Office of Education	Alma Fuerte Public
Office of Education	Animo City of Champions Charter High
Office of Education	Aspire Antonio Maria Lugo Academy
Office of Education	Aspire Ollin University Preparatory Academy
Office of Education	Central Juvenile Hall
Office of Education	Da Vinci RISE High
Office of Education	Environmental Charter Middle
Office of Education	Environmental Charter Middle - Inglewood
Office of Education	Intellectual Virtues Academy
Office of Education	International Polytechnic High
Office of Education	Jardin de la Infancia
Office of Education	Kirby, Dorothy Camp
Office of Education	L.A. County High School for the Arts
Office of Education	LA's Promise Charter High #1
Office of Education	LA's Promise Charter Middle #1
Office of Education	Lashon Academy
Office of Education	Los Angeles County Special Education
Office of Education	Los Angeles International Charter High
Office of Education	Los Padrinos Juvenile Hall
Office of Education	Magnolia Science Academy
Office of Education	Magnolia Science Academy 2
Office of Education	Magnolia Science Academy 3
Office of Education	Magnolia Science Academy 5
Office of Education	McNair Camp
Office of Education	Nidorf, Barry J.
Office of Education	North Valley Military Institute College Preparatory Academy
Office of Education	Odyssey Charter
Office of Education	Onizuka Camp

Table B-1. County Critical Facilities

Department / Agency	Facility Name
Office of Education	Optimist Charter
Office of Education	Phoenix Academy Residential Education Center
Office of Education	Renaissance County Community
Office of Education	Road to Success Academy at Campus Kilpatrick
Office of Education	Rockey, Glenn Camp
Office of Education	Scott, Joseph Camp
Office of Education	Soleil Academy Charter
Office of Education	Valiente College Preparatory Charter
Other (Office)	1000 S. Fremont Ave.
Other (Office)	1055 Wilshire Blvd.
Other (Office)	1100 North Eastern Ave.
Other (Office)	1104 N. Mission Rd.
Other (Office)	12300 Lower Azusa Rd.
Other (Office)	12400 Imperial Highway
Other (Office)	12860 Crossroads Parkway South
Other (Office)	1320 North Eastern Ave.
Other (Office)	13837 Fiji Way
Other (Office)	1816 S. Figueroa
Other (Office)	210 W. Temple St.
Other (Office)	211 W. Temple St.
Other (Office)	313 N Figueroa St.
Other (Office)	3175 West Sixth St.
Other (Office)	320 West Temple St.
Other (Office)	425 Shatto Place
Other (Office)	550 South Vermont Ave.
Other (Office)	5770 S. Eastern Ave.
Other (Office)	5898 Cherry Ave.
Other (Office)	5905 Wilshire Blvd.
Other (Office)	700 W. Main St.
Other (Office)	7400 East Imperial Highway
Other (Office)	900 South Fremont Ave.
Other (Office)	Kenneth Hahn Hall of Administration
Parks & Recreation	Acton Park
Parks & Recreation	Adventure Park
Parks & Recreation	Adventure Park
Parks & Recreation	Allen J. Martin Park
Parks & Recreation	Alondra Community Regional Park
Parks & Recreation	Alondra Community Regional Park
Parks & Recreation	Amelia Mayberry Park
Parks & Recreation	Amelia Mayberry Park
Parks & Recreation	Amigo Park
Parks & Recreation	Arcadia Community Regional Park
Parks & Recreation	Arcadia Community Regional Park
Parks & Recreation	Athens Park
Parks & Recreation	Athens Park
Parks & Recreation	Bassett Park
Parks & Recreation	Bassett Park
Parks & Recreation	Bassett Park
Parks & Recreation	Belvedere Community Regional Park
Parks & Recreation	Belvedere Community Regional Park
Parks & Recreation	Bodger Park
Parks & Recreation	Carolyn Rosas Park
Parks & Recreation	Castaic Regional Sports Complex
Parks & Recreation	Castaic Regional Sports Complex
Parks & Recreation	Charles S. Farnsworth Park

Table B-1. County Critical Facilities

Department / Agency	Facility Name
Parks & Recreation	Charles S. Farnsworth Park
Parks & Recreation	Charles S. Farnsworth Park
Parks & Recreation	Charles S. Farnsworth Park
Parks & Recreation	Charter Oak Park
Parks & Recreation	City Terrace Park
Parks & Recreation	City Terrace Park
Parks & Recreation	Col. Leon H. Washington Park
Parks & Recreation	Col. Leon H. Washington Park
Parks & Recreation	Crescenta Valley Community Regional Park
Parks & Recreation	Crescenta Valley Community Regional Park
Parks & Recreation	Dalton Park
Parks & Recreation	Del Aire Park
Parks & Recreation	Del Aire Park
Parks & Recreation	Devil's Punchbowl Natural Area and Nature Center
Parks & Recreation	Dexter Park
Parks & Recreation	Dexter Park
Parks & Recreation	Don Knabe Community Regional Park
Parks & Recreation	Don Knabe Community Regional Park
Parks & Recreation	Don Knabe Community Regional Park
Parks & Recreation	East Rancho Dominguez Park
Parks & Recreation	East Rancho Dominguez Park
Parks & Recreation	East Rancho Dominguez Park
Parks & Recreation	El Cariso Community Regional Park
Parks & Recreation	El Cariso Community Regional Park
Parks & Recreation	El Cariso Community Regional Park
Parks & Recreation	Enterprise Park
Parks & Recreation	Eugene A. Obregon Park
Parks & Recreation	Eugene A. Obregon Park
Parks & Recreation	Franklin D. Roosevelt Park
Parks & Recreation	Franklin D. Roosevelt Park
Parks & Recreation	George Lane Park
Parks & Recreation	George Lane Park
Parks & Recreation	George Washington Carver Park
Parks & Recreation	Hacienda Heights Community and Rec Center
Parks & Recreation	Hacienda Heights Community and Rec Center
Parks & Recreation	Hacienda Heights Community and Rec Center
Parks & Recreation	Helen Keller Park
Parks & Recreation	Hollywood Bowl
Parks & Recreation	Jackie Robinson Park
Parks & Recreation	Jackie Robinson Park
Parks & Recreation	Jesse Owens Community Regional Park
Parks & Recreation	Jesse Owens Community Regional Park
Parks & Recreation	John Anson Ford Amphitheatre
Parks & Recreation	John Anson Ford Amphitheatre
Parks & Recreation	Kenneth Hahn State Recreation Area
Parks & Recreation	Ladera Park
Parks & Recreation	Ladera Park
Parks & Recreation	Ladera Park
Parks & Recreation	Lennox Park
Parks & Recreation	Lennox Park
Parks & Recreation	Lennox Park
Parks & Recreation	Loma Alta Park
Parks & Recreation	Loma Alta Park
Parks & Recreation	Los Angeles County Arboretum and Botanic Garden
Parks & Recreation	Manzanita Park

Table B-1. County Critical Facilities

Department / Agency	Facility Name
Parks & Recreation	Mary M. Bethune Park
Parks & Recreation	Mary M. Bethune Park
Parks & Recreation	Mona Park
Parks & Recreation	Mona Park
Parks & Recreation	Pamela County Park
Parks & Recreation	Pamela County Park
Parks & Recreation	Pathfinder Community Regional Park
Parks & Recreation	Pearblossom County Park
Parks & Recreation	Peter F Schabarum Regional County Park
Parks & Recreation	Rimgrove Park
Parks & Recreation	Rowland Heights Park
Parks & Recreation	Roy Campanella Park
Parks & Recreation	Ruben F Salazar Park
Parks & Recreation	Ruben F Salazar Park
Parks & Recreation	Ruben F Salazar Park
Parks & Recreation	San Angelo Park
Parks & Recreation	San Fernando Recreation Park and Aquatic Center
Parks & Recreation	Saybrook Park
Parks & Recreation	Sorensen Park
Parks & Recreation	South Coast Botanic Garden
Parks & Recreation	Stephen Sorensen Park
Parks & Recreation	Sunshine Park
Parks & Recreation	Ted Watkins Memorial Park
Parks & Recreation	Ted Watkins Memorial Park
Parks & Recreation	Tesoro Adobe Historic Park
Parks & Recreation	Val Verde Community Regional Park
Parks & Recreation	Val Verde Community Regional Park
Parks & Recreation	Valleydale Park
Parks & Recreation	Valleydale Park
Parks & Recreation	Vasquez Rocks Natural Area and Nature Center
Parks & Recreation	Veterans Memorial Community Regional Park
Parks & Recreation	Victoria Community Regional Park
Parks & Recreation	Victoria Community Regional Park
Parks & Recreation	Walnut Nature Park
Parks & Recreation	Whittier Narrows Recreation Area
Parks & Recreation	William S. Hart Regional Park
Parks & Recreation	William Steinmetz Park
Parks & Recreation	William Steinmetz Park
Parks & Recreation	William Steinmetz Park
Public Health	Antelope Valley Health Center
Public Health	Central Public Health Center
Public Health	Curtis R. Tucker Health Center
Public Health	Glendale Health Center
Public Health	Hollywood/Wilshire Public Health Center
Public Health	Martin Luther King, Jr. Center for Public Health
Public Health	Monrovia Public Health Center
Public Health	North Hollywood Public Health Center
Public Health	Pacoima Public Health Center
Public Health	Pomona Public Health Center
Public Health	Ruth-Temple Public Health Center
Public Health	Simms/Mann Health and Wellness Center
Public Health	Torrance Public Health Center
Public Health	Whittier Public Health Center
Public Works	Big Dalton Dam
Public Works	Big Tujunga Dam

Table B-1. County Critical Facilities

Department / Agency	Facility Name
Public Works	Brackett Field Airport
Public Works	Cogswell Dam
Public Works	Compton/Woodley Airport
Public Works	Devil's Gate Dam
Public Works	Eaton Wash Dam
Public Works	General Wm. J. Fox Airfield
Public Works	Live Oak Dam
Public Works	Morris Dam
Public Works	Pacoima Dam
Public Works	Puddingstone Dam
Public Works	Puddingstone Diversion Dam
Public Works	PW Headquarters Building
Public Works	PW ITD – Mount Wilson Radio Antenna Tower
Public Works	PW ITD – Mount Wilson Radio Facility Bldg.
Public Works	PW OSD - Eaton Yard – Maintenance Office
Public Works	PW RMD – 518-B Maintenance Yard
Public Works	PW RMD – Baldwin Park Maintenance Yard
Public Works	PW RMD - Div 446 Maintenance Yard
Public Works	PW RMD – Div. #116 Maintenance Yard
Public Works	PW RMD – Div. #141/241 Maintenance Yard
Public Works	PW RMD – Div. #142 Maintenance Yard
Public Works	PW RMD – Div. #232 Maintenance Yard
Public Works	PW RMD – Div. #336 Maint. Yd.
Public Works	PW RMD – Div. #339/539 Agoura Maintenance Yard
Public Works	PW RMD – Div. #417 Maintenance Yard
Public Works	PW RMD – Div. #446 Sub Maintenance Yard
Public Works	PW RMD – Div. #518 Maintenance Yard
Public Works	PW RMD – Div. #519 Maintenance Yard
Public Works	PW RMD – Div. #523 Maintenance Yard
Public Works	PW RMD – Div. #524 Maintenance Yard
Public Works	PW RMD – Div. #526 Maint. Yd.
Public Works	PW RMD – Div. #551 Maintenance Yard
Public Works	PW RMD – Div. #555 Maintenance Yard
Public Works	PW RMD – Div. #558 Maint. Yard
Public Works	PW RMD – Div. #558a Jackson Lake Maintenance Yd.
Public Works	PW RMD – Div. #559b Maintenance Yard
Public Works	PW RMD - Lower Central Yard – Division Administration
Public Works	PW RMD – Maint. District 3 Yard
Public Works	PW RMD – Maintenance District No.4 Yard
Public Works	PW RMD – Palmdale Maintenance Dist. No. 5 Bldg. Yard
Public Works	PW RMD - Upper Central Yard
Public Works	PW RMD – Van Pelt Bridge Maintenance Yard
Public Works	PW SMD - 132ND Street
Public Works	PW SMD - 213TH Street
Public Works	PW SMD - AGAVE
Public Works	PW SMD - Balfour
Public Works	PW SMD - Bradhurst
Public Works	PW SMD - Broadway
Public Works	PW SMD - CAPALLERO
Public Works	PW SMD - Centinela
Public Works	PW SMD – Central Yard
Public Works	PW SMD - Commerce Center Drive
Public Works	PW SMD - Davids Road
Public Works	PW SMD – East Yard
Public Works	PW SMD - Heatherfield

Table B-1. County Critical Facilities

Department / Agency	Facility Name
Public Works	PW SMD – Lake Hughes
Public Works	PW SMD - Lake Hughes - Newvale
Public Works	PW SMD - Lake Hughes - Trail K
Public Works	PW SMD - Lawndale
Public Works	PW SMD - LOWRIDGE
Public Works	PW SMD – Malibu Mesa WWTP
Public Works	PW SMD – Malibu TP
Public Works	PW SMD - Marina Del Rey
Public Works	PW SMD - Maybrook
Public Works	PW SMD - Muscatel
Public Works	PW SMD – North Yard
Public Works	PW SMD - Painter
Public Works	PW SMD – South Yard
Public Works	PW SMD - Surrey Drive
Public Works	PW SMD - Trancas WWTP
Public Works	PW SMD - TYLER
Public Works	PW SMD - Ulmus
Public Works	PW SMD - Viewridge
Public Works	PW SWMD - 120th St. Pump Station
Public Works	PW SWMD - 17th St Pump Station
Public Works	PW SWMD – 83rd St. Maintenance Yard
Public Works	PW SWMD - Alameda Street 3B Pump Station
Public Works	PW SWMD - Alameda Street 3C Pump Station
Public Works	PW SWMD - Alamitos Bay Pump Station
Public Works	PW SWMD – Alamitos Maintenance Yard
Public Works	PW SWMD - Alondra Pump Station
Public Works	PW SWMD - Anaheim St. Pump Station
Public Works	PW SWMD - Appian Way Pump Station
Public Works	PW SWMD - Arena Pump Station
Public Works	PW SWMD - Avalon Pump Station
Public Works	PW SWMD - Belmont Pump Station
Public Works	PW SWMD - Boone Olive Pump Station
Public Works	PW SWMD - Century Frwy Pump Station
Public Works	PW SWMD - Cerritos Pump Station
Public Works	PW SWMD - Claretta Pump Station
Public Works	PW SWMD - Compton Creek Pump Station #1
Public Works	PW SWMD - Compton Creek Pump Station #2
Public Works	PW SWMD - Cordova Walk Pump Station
Public Works	PW SWMD - Dominger Pump Station
Public Works	PW SWMD - Dominguez Pump Station
Public Works	PW SWMD - Doris Pump Station
Public Works	PW SWMD - East Toledo Pump Station
Public Works	PW SWMD – Eaton Maintenance Yard
Public Works	PW SWMD - El Dorado Pump Station
Public Works	PW SWMD - El Segundo Pump Station
Public Works	PW SWMD – El Segundo Yard
Public Works	PW SWMD - Electric Ave Pump Station
Public Works	PW SWMD - Garnet Avenue Pump Station
Public Works	PW SWMD - Hamilton Bowl South Pump Station
Public Works	PW SWMD - Hamilton Bowl West Pump Station
Public Works	PW SWMD - Hill St. Pump Station
Public Works	PW SWMD – Imperial Yard
Public Works	PW SWMD - Johnson Pump Station
Public Works	PW SWMD - Lakewood Pump Station
Public Works	PW SWMD - Lennox Blvd Pump Station

Table B-1. County Critical Facilities

Department / Agency	Facility Name
Public Works	PW SWMD – Longden Yard
Public Works	PW SWMD - Los Altos Pump Station
Public Works	PW SWMD - Lynwood Pump Station
Public Works	PW SWMD - Manhattan Beach Pump Station
Public Works	PW SWMD - Market St. Pump Station
Public Works	PW SWMD - Naples Pump Station
Public Works	PW SWMD - Oxford Pump Station
Public Works	PW SWMD - Paramount Pump Station
Public Works	PW SWMD – Pickens Yard
Public Works	PW SWMD - Redondo Beach Blvd Pump Station
Public Works	PW SWMD – Redondo Yard Office
Public Works	PW SWMD – Rio Hondo Yard
Public Works	PW SWMD – Riverview Maintenance Yard
Public Works	PW SWMD – Rubio Yard
Public Works	PW SWMD – San Dimas Maintenance Yard
Public Works	PW SWMD – Santa Clara Flood Maintenance Yard
Public Works	PW SWMD – Saticoy Yard
Public Works	PW SWMD - Seaside Pump Station
Public Works	PW SWMD - Walteria Lake Pump Station
Public Works	PW SWMD - West Long Beach Pump Station
Public Works	PW SWMD - West Neapolitan Pump Station
Public Works	PW SWMD - West Toledo Pump Station
Public Works	PW SWMD - Wilmington Unit 2 Pump Station
Public Works	PW WWD - 116th street pump station
Public Works	PW WWD - 116th street Tank
Public Works	PW WWD - 168th and G Pump station
Public Works	PW WWD - 27 Tank
Public Works	PW WWD - 37-1 Well
Public Works	PW WWD - 37-3 Well
Public Works	PW WWD - 37-4 Well
Public Works	PW WWD - 39 Tank
Public Works	PW WWD - Adobe Tank
Public Works	PW WWD - Anaverde Tanks and pump station
Public Works	PW WWD - Bev martin tank and Pump Station
Public Works	PW WWD - Blue Rock Tank
Public Works	PW WWD - Butte's Tank
Public Works	PW WWD - City Ranch Tanks
Public Works	PW WWD - Crown Valley Pump station
Public Works	PW WWD - Cuyama Tank
Public Works	PW WWD - Ft. Tejon Tank
Public Works	PW WWD - Hasley Pump Station
Public Works	PW WWD - Hasley Tank
Public Works	PW WWD - Joshua Ranch Tank
Public Works	PW WWD - Kohl's tank
Public Works	PW WWD - Los Valles Pump station and Well
Public Works	PW WWD - M & 7th west Tank site
Public Works	PW WWD - McCennery Tank
Public Works	PW WWD - North Tank
Public Works	PW WWD - Old timers tank and pump station
Public Works	PW WWD - P-10 Pump station
Public Works	PW WWD - Q-9 Tanks
Public Works	PW WWD - Rancho Vista tanks
Public Works	PW WWD - South Tank
Public Works	PW WWD - Tierra Subida Pump Station
Public Works	PW WWD - Tierra Subida Tanks

Table B-1. County Critical Facilities

Department / Agency	Facility Name
Public Works	PW WWD - Vincent Pump station
Public Works	PW WWD #04 – M/5e Water Tank
Public Works	PW WWD #04 – North Administration Building
Public Works	PW WWD #04-M8/75w Water Tank
Public Works	PW WWD #29 - 20858 Regulating Station
Public Works	PW WWD #29 - Big Rock 1010 Tank
Public Works	PW WWD #29 - Big Rock 1200 Tank
Public Works	PW WWD #29 - Big Rock 900 Pump Station
Public Works	PW WWD #29 - Broad Beach Regulating Station
Public Works	PW WWD #29 - Carbon Mesa Tank
Public Works	PW WWD #29 - Entrada Pump Station
Public Works	PW WWD #29 - Entrada Tank
Public Works	PW WWD #29 - Fernwood Tank
Public Works	PW WWD #29 - Guernsey Regulating Station
Public Works	PW WWD #29 - Heather Cliff Regulating Station
Public Works	PW WWD #29 - Horizon Tank
Public Works	PW WWD #29 - Hume Tank
Public Works	PW WWD #29 - La Chusa Feeder Regulating Station
Public Works	PW WWD #29 - La Costa
Public Works	PW WWD #29 - La Costa Regulating Station
Public Works	PW WWD #29 – LADWP Emergency Mindanao Connection
Public Works	PW WWD #29 - Las Flores Pump Station
Public Works	PW WWD #29 - Las Flores Tank
Public Works	PW WWD #29 - Latigo Tank
Public Works	PW WWD #29 - Lower Big Rock 195 Pump Station
Public Works	PW WWD #29 - Lower Busch Pump Station
Public Works	PW WWD #29 - LVMWD , Saddle Peak Interconnection
Public Works	PW WWD #29 - LVMWD, Hume Connection
Public Works	PW WWD #29 - LVMWD, Latigo Connection
Public Works	PW WWD #29 - Malibu Beach Pump Station
Public Works	PW WWD #29 - Malibu Knolls Tank
Public Works	PW WWD #29 - New Summit Tank
Public Works	PW WWD #29 - Nicholas Beach Tank
Public Works	PW WWD #29 - Old Summit Tank
Public Works	PW WWD #29 - Owen Pump Station
Public Works	PW WWD #29 - Pepperdine 545 Pump Station
Public Works	PW WWD #29 - Pepperdine 812 Tank
Public Works	PW WWD #29 - Pepperdine 907 Tank
Public Works	PW WWD #29 - Philip Tank
Public Works	PW WWD #29 - Point Dume Pump Station and Tank
Public Works	PW WWD #29 - Portshead Tank
Public Works	PW WWD #29 - Saddle Peak Tank
Public Works	PW WWD #29 - Santa Maria Tank
Public Works	PW WWD #29 - Serra Pump Station
Public Works	PW WWD #29 - Sumac Ridge Tank
Public Works	PW WWD #29 - Sweetwater Hydro Pump Station
Public Works	PW WWD #29 - Sweetwater Mesa Tank
Public Works	PW WWD #29 - Topanga Beach Pump Station
Public Works	PW WWD #29 - Topanga Beach Tank
Public Works	PW WWD #29 - Topanga Forks Tank
Public Works	PW WWD #29 - Topanga Oaks Tank
Public Works	PW WWD #29 - Topanga Park Pump Station
Public Works	PW WWD #29 - Trancas Tank
Public Works	PW WWD #29 - Upper Big Rock 730 Pump Station
Public Works	PW WWD #29 - Upper Encinal Tank

Table B-1. County Critical Facilities

Department / Agency	Facility Name
Public Works	PW WWD #29 - Winding Wy Tank
Public Works	PW WWD #29 LADWP Emergency Via Dolce Connection
Public Works	San Dimas Dam
Public Works	San Gabriel Dam
Public Works	San Gabriel Valley Airport
Public Works	Santa Anita Dam
Public Works	Thompson Creek Dam
Public Works	Whiteman Airport
Sheriff's Department	Altadena Sheriff's Station
Sheriff's Department	Avalon Sheriff's Station
Sheriff's Department	Carson Sheriff's Station
Sheriff's Department	Century Regional Detention Facility
Sheriff's Department	Century Sheriff's Station
Sheriff's Department	Cerritos Sheriff's Station
Sheriff's Department	Compton Sheriff's Station
Sheriff's Department	Crescenta Valley Sheriff's Station
Sheriff's Department	East Los Angeles Sheriff's Station
Sheriff's Department	Industry Sheriff's Station
Sheriff's Department	Inmate Reception Center
Sheriff's Department	Lakewood Sheriff’s Station
Sheriff's Department	Lancaster Sheriff's Station
Sheriff's Department	Lomita Sheriff's Station
Sheriff's Department	Malibu/Lost Hills Sheriff's Station
Sheriff's Department	Marina Del Rey Sheriff's Station
Sheriff's Department	Men's Central Jail
Sheriff's Department	North County Correctional Facility
Sheriff's Department	Norwalk Sheriff's Station
Sheriff's Department	Palmdale Sheriff's Station
Sheriff's Department	Pico Rivera Sheriff's Station
Sheriff's Department	Pitchess Detention Center East Facility
Sheriff's Department	Pitchess Detention Center North Facility
Sheriff's Department	Pitchess Detention Center South Facility
Sheriff's Department	San Dimas Sheriff's Station
Sheriff's Department	Santa Clarita Valley Sheriff's Station
Sheriff's Department	South Los Angeles Sheriff's Station
Sheriff's Department	Temple Sheriff's Station
Sheriff's Department	Twin Towers Correctional Facility
Sheriff's Department	Walnut/Diamond Bar Sheriff's Station
Sheriff's Department	West Hollywood Sheriff's Station

APPENDIX C – RISK ASSESSMENT

Table C-1: County-wide Statistical Area Hazard Impacts

CSA	S.D.	3 Ft Sea Level Rise	6 Ft Sea Level Rise	Dam Failure	Violent EQ Shaking	Extreme EQ Shaking	0.2% Annual Chance Flooding	1% Annual Chance Flood	Deep Seated Landslide Class IX & X	Max Tsunami Inundation	Very High Wildfire LRA	High Wildfire SRA	Very High Wildfire SRA
Avocado Heights	1				1				1				
Bandini Islands	1				1				1				
Bassett	1				1		1		1				
Charter Oak	1				1		1		1		1		
East Los Angeles	1				1				1				
El Monte	1				1								
North Whittier	1				1				1				
Padua Hills	1				1				1		1		
Pellissier Village	1				1				1				
San Jose Hills	1				1		1		1				
South El Monte	1				1								
South San Gabriel	1				1				1				
Valinda	1				1		1		1				
Walnut	1				1				1				
West Puente Valley	1				1		1						
Whittier Narrows	1				1		1		1				
Athens Village	2				1				1				
Athens-Westmont	2				1				1				
Del Rey	2	1	1		1			1	1				
Hawthorne	2				1								
Ladera Heights	2				1		1		1		1		
Rosewood	2				1								
Rosewood/East Gardena	2				1								
Rosewood/West Rancho Dominguez	2				1								

Table C-1: County-wide Statistical Area Hazard Impacts

CSA	S.D.	3 Ft Sea Level Rise	6 Ft Sea Level Rise	Dam Failure	Violent EQ Shaking	Extreme EQ Shaking	0.2% Annual Chance Flooding	1% Annual Chance Flood	Deep Seated Landslide Class IX & X	Max Tsunami Inundation	Very High Wildfire LRA	High Wildfire SRA	Very High Wildfire SRA
View Park/Windsor Hills	2				1				1		1		
West Rancho Dominguez	2				1								
Willowbrook	2				1		1		1				
Wiseburn	2				1								
Franklin Canyon	3				1		1		1		1		
Miracle Mile	3				1		1						
Santa Monica Mountains	3	1	1	1	1		1	1	1	1	1	1	1
Universal City	3				1				1		1		
West LA	3				1				1				
Westhills	3				1				1		1		1
Cerritos	4				1		1						
East La Mirada	4				1		1		1				
East Whittier	4				1								
Harbor Gateway	4				1								
La Habra Heights	4				1				1				
La Rambla	4				1				1				
Lakewood	4				1		1		1				
Long Beach	4				1		1						
Palos Verdes Peninsula	4				1				1		1		
San Clemente Island	4								1				
Santa Catalina Island	4								1	1	1	1	1
South Whittier	4				1		1		1				
Westfield/Academy Hills	4				1				1		1		
Acton	5				1	1			1		1		1

Table C-1: County-wide Statistical Area Hazard Impacts

CSA	S.D.	3 Ft Sea Level Rise	6 Ft Sea Level Rise	Dam Failure	Violent EQ Shaking	Extreme EQ Shaking	0.2% Annual Chance Flooding	1% Annual Chance Flood	Deep Seated Landslide Class IX & X	Max Tsunami Inundation	Very High Wildfire LRA	High Wildfire SRA	Very High Wildfire SRA
Agua Dulce	5				1	1			1		1	1	1
Altadena	5				1		1		1		1	1	1
Anaverde	5			1	1	1			1			1	1
Bouquet Canyon	5				1	1	1		1		1		1
Bradbury	5				1				1		1		
Canyon Country	5				1				1		1	1	1
Castaic	5			1	1	1	1	1	1		1	1	1
Del Sur	5				1	1	1		1				
Desert View Highlands	5					1							
East Covina	5				1				1				
East Lancaster	5			1	1		1						
East Pasadena	5				1				1		1		1
Elizabeth Lake	5				1	1			1			1	1
Hi Vista	5				1				1				
La Crescenta-Montrose	5				1				1		1		1
Lake Hughes	5				1	1			1				1
Lake Los Angeles	5				1	1			1				
Lake Manor	5				1				1		1		1
Leona Valley	5				1	1	1		1		1	1	1
Littlerock	5			1		1	1		1			1	
Littlerock/Juniper Hills	5			1	1	1	1		1			1	1
Littlerock/Pearblossom	5			1	1	1	1		1			1	
Llano	5				1	1			1			1	1
Monrovia	5				1								
Newhall	5					1			1		1		1
North Lancaster	5				1		1		1				
Northeast San Gabriel	5				1				1				

Table C-1: County-wide Statistical Area Hazard Impacts

CSA	S.D.	3 Ft Sea Level Rise	6 Ft Sea Level Rise	Dam Failure	Violent EQ Shaking	Extreme EQ Shaking	0.2% Annual Chance Flooding	1% Annual Chance Flood	Deep Seated Landslide Class IX & X	Max Tsunami Inundation	Very High Wildfire LRA	High Wildfire SRA	Very High Wildfire SRA
Palmdale	5			1	1	1	1						
Pearblossom/Llano	5				1	1	1		1			1	
Placerita Canyon	5				1	1			1		1		1
Quartz Hill	5				1	1	1		1				
Roosevelt	5				1		1						
San Francisquito Canyon/Bouquet Canyon	5				1	1			1		1		1
San Pasqual	5				1								
Sand Canyon	5				1	1			1		1		1
Saugus	5				1				1		1		1
Saugus/Canyon Country	5				1				1				1
South Antelope Valley	5			1	1	1			1			1	1
South Edwards	5				1		1	1	1				
Southeast Antelope Valley	5			1	1	1			1			1	1
Stevenson Ranch	5			1	1	1			1		1	1	1
Sun Village	5			1	1	1	1		1				
Twin Lakes/Oat Mountain	5				1	1			1		1		1
Val Verde	5			1	1	1			1		1	1	1
Valencia	5				1				1		1	1	1
West Antelope Valley	5				1	1	1	1	1		1	1	1
West Chatsworth	5				1				1		1		1
White Fence Farms	5					1	1						
Florence-Firestone	1 and 2				1								
Walnut Park	1 and 2				1								
Hacienda Heights	1 and 4				1		1		1		1	1	1

Table C-1: County-wide Statistical Area Hazard Impacts

CSA	S.D.	3 Ft Sea Level Rise	6 Ft Sea Level Rise	Dam Failure	Violent EQ Shaking	Extreme EQ Shaking	0.2% Annual Chance Flooding	1% Annual Chance Flood	Deep Seated Landslide Class IX & X	Max Tsunami Inundation	Very High Wildfire LRA	High Wildfire SRA	Very High Wildfire SRA
Rowland Heights	1 and 4				1				1		1	1	1
Sunrise Village	1 and 4				1		1		1				
West Whittier/Los Nietos	1 and 4				1		1		1				
Whittier	1 and 4				1		1		1		1	1	1
Arcadia	1 and 5				1				1				
Azusa	1 and 5				1				1		1		1
Claremont	1 and 5				1				1		1		1
Covina	1 and 5				1		1		1		1	1	1
Covina (Charter Oak)	1 and 5				1				1				
Duarte	1 and 5				1				1				
Glendora	1 and 5				1		1		1		1		1
La Verne	1 and 5				1				1		1		1
Pomona	1 and 5				1				1		1	1	1
Lynwood	1, 2, and 4				1		1		1				
Angeles National Forest	1, 3, and 5			1	1	1	1	1	1		1	1	1
Del Aire	2 and 4				1				1				
East Rancho Dominguez	2 and 4				1		1		1				
El Camino Village	2 and 4				1				1				
Lennox	2 and 4				1				1				
Rancho Dominguez	2 and 4				1		1		1				
West Carson	2 and 4				1		1		1				
Marina del Rey	2, 3, and 4	1	1		1		1	1	1	1			
Kagel/Lopez Canyons	3 and 5				1	1	1		1		1		1

Table C-2: Animal Care & Control Facility Hazard Impacts

Facility Name	3 Ft Sea Level Rise	6 Ft Sea Level Rise	Dam Failure Inundation	Violent EQ Shaking	Extreme EQ Shaking	0.2% Annual Chance Flooding	1% Annual Chance Flooding	Deep Seated Landslide Class IX & X	Max Tsunami Inundation	Very High Wildfire LRA	High Wildfire SRA	Very High Wildfire SRA
Agoura Animal Care Center				1						1		
Baldwin Park Animal Care Center				1								
Carson Animal Care Center				1								
Castaic Animal Care Center (Castaic)			1	1								1
Downey Animal Care Center				1		1						
Lancaster County Animal Care Center				1								
Palmdale Animal Care Center					1	1						

Table C-3: Fire Department Facility Hazard Impacts

Facility Name	3 Ft Sea Level Rise	6 Ft Sea Level Rise	Dam Failure Inundation	Violent EQ Shaking	Extreme EQ Shaking	0.2% Annual Chance Flooding	1% Annual Chance Flooding	Deep Seated Landslide Class IX & X	Max Tsunami Inundation	Very High Wildfire LRA	High Wildfire SRA	Very High Wildfire SRA
Bob Hope Airport Fire Department				1								
City of Alhambra Fire Department - Training Facility				1								
City of Alhambra Fire Department Station 71 - Headquarters				1								
City of Alhambra Fire Department Station 72 - Southeast District				1								
City of Alhambra Fire Department Station 73 - Northwest				1								
City of Alhambra Fire Department Station 74 - Southwest				1								
City of Arcadia Fire Department Station 105				1								
City of Arcadia Fire Department Station 106 - Headquarters				1								
City of Arcadia Fire Department Station 107				1								
City of Avalon Fire Department										1		
City of Beverly Hills Fire Department Station 1 - Headquarters				1								
City of Beverly Hills Fire Department Station 2				1						1		
City of Beverly Hills Fire Department Station 3				1								

Table C-3: Fire Department Facility Hazard Impacts

Facility Name	3 Ft Sea Level Rise	6 Ft Sea Level Rise	Dam Failure Inundation	Violent EQ Shaking	Extreme EQ Shaking	0.2% Annual Chance Flooding	1% Annual Chance Flooding	Deep Seated Landslide Class IX & X	Max Tsunami Inundation	Very High Wildfire LRA	High Wildfire SRA	Very High Wildfire SRA
City of Burbank Fire Department Station 11 - Headquarters				1								
City of Burbank Fire Department Station 12				1								
City of Burbank Fire Department Station 13				1								
City of Burbank Fire Department Station 14				1								
City of Burbank Fire Department Station 15				1								
City of Burbank Fire Department Station 16				1						1		
City of Compton Fire Department Station 1 - Headquarters				1		1						
City of Compton Fire Department Station 2				1		1						
City of Compton Fire Department Station 3				1								
City of Compton Fire Department Station 4				1								
City of Downey Fire Department Station 1 - Headquarters				1		1						
City of Downey Fire Department Station 2				1		1						
City of Downey Fire Department Station 3				1		1						
City of Downey Fire Department Station 4				1		1						

Table C-3: Fire Department Facility Hazard Impacts

Facility Name	3 Ft Sea Level Rise	6 Ft Sea Level Rise	Dam Failure Inundation	Violent EQ Shaking	Extreme EQ Shaking	0.2% Annual Chance Flooding	1% Annual Chance Flooding	Deep Seated Landslide Class IX & X	Max Tsunami Inundation	Very High Wildfire LRA	High Wildfire SRA	Very High Wildfire SRA
City of Glendale Fire Department Station 21				1								
City of Glendale Fire Department Station 22				1								
City of Glendale Fire Department Station 23				1						1		
City of Glendale Fire Department Station 24				1						1		
City of Glendale Fire Department Station 25				1								
City of Glendale Fire Department Station 26				1								
City of Glendale Fire Department Station 27				1								
City of Glendale Fire Department Station 28				1								
City of Long Beach Fire Department - Beach Operations				1					1			
City of Long Beach Fire Department - Headquarters				1								
City of Long Beach Fire Department Station 1				1								
City of Long Beach Fire Department Station 10				1								
City of Long Beach Fire Department Station 11				1		1						
City of Long Beach Fire Department Station 12				1		1						

Table C-3: Fire Department Facility Hazard Impacts

Facility Name	3 Ft Sea Level Rise	6 Ft Sea Level Rise	Dam Failure Inundation	Violent EQ Shaking	Extreme EQ Shaking	0.2% Annual Chance Flooding	1% Annual Chance Flooding	Deep Seated Landslide Class IX & X	Max Tsunami Inundation	Very High Wildfire LRA	High Wildfire SRA	Very High Wildfire SRA
City of Long Beach Fire Department Station 13				1		1						
City of Long Beach Fire Department Station 14		1		1					1			
City of Long Beach Fire Department Station 15				1					1			
City of Long Beach Fire Department Station 16				1								
City of Long Beach Fire Department Station 17				1								
City of Long Beach Fire Department Station 18				1		1						
City of Long Beach Fire Department Station 19				1		1						
City of Long Beach Fire Department Station 2				1								
City of Long Beach Fire Department Station 20		1		1					1			
City of Long Beach Fire Department Station 21		1		1		1			1			
City of Long Beach Fire Department Station 22				1		1						
City of Long Beach Fire Department Station 24				1					1			
City of Long Beach Fire Department Station 3				1								
City of Long Beach Fire Department Station 4				1								
City of Long Beach Fire Department Station 5				1		1						

Table C-3: Fire Department Facility Hazard Impacts

Facility Name	3 Ft Sea Level Rise	6 Ft Sea Level Rise	Dam Failure Inundation	Violent EQ Shaking	Extreme EQ Shaking	0.2% Annual Chance Flooding	1% Annual Chance Flooding	Deep Seated Landslide Class IX & X	Max Tsunami Inundation	Very High Wildfire LRA	High Wildfire SRA	Very High Wildfire SRA
City of Long Beach Fire Department Station 6				1					1			
City of Long Beach Fire Department Station 7				1		1						
City of Long Beach Fire Department Station 8	1	1		1					1			
City of Long Beach Fire Department Station 9				1								
City of Los Angeles Fire Department Station 1				1								
City of Los Angeles Fire Department Station 10				1								
City of Los Angeles Fire Department Station 108				1						1		
City of Los Angeles Fire Department Station 109				1						1		
City of Los Angeles Fire Department Station 11				1								
City of Los Angeles Fire Department Station 12				1								
City of Los Angeles Fire Department Station 13				1								
City of Los Angeles Fire Department Station 14				1								
City of Los Angeles Fire Department Station 15				1								
City of Los Angeles Fire Department Station 16				1								
City of Los Angeles Fire Department Station 17				1								

Table C-3: Fire Department Facility Hazard Impacts

Facility Name	3 Ft Sea Level Rise	6 Ft Sea Level Rise	Dam Failure Inundation	Violent EQ Shaking	Extreme EQ Shaking	0.2% Annual Chance Flooding	1% Annual Chance Flooding	Deep Seated Landslide Class IX & X	Max Tsunami Inundation	Very High Wildfire LRA	High Wildfire SRA	Very High Wildfire SRA
City of Los Angeles Fire Department Station 19				1						1		
City of Los Angeles Fire Department Station 2				1								
City of Los Angeles Fire Department Station 20				1								
City of Los Angeles Fire Department Station 21				1								
City of Los Angeles Fire Department Station 25				1								
City of Los Angeles Fire Department Station 26				1								
City of Los Angeles Fire Department Station 27				1								
City of Los Angeles Fire Department Station 29				1		1						
City of Los Angeles Fire Department Station 3				1								
City of Los Angeles Fire Department Station 33				1								
City of Los Angeles Fire Department Station 34				1								
City of Los Angeles Fire Department Station 35				1								
City of Los Angeles Fire Department Station 37				1								
City of Los Angeles Fire Department Station 4				1								
City of Los Angeles Fire Department Station 41				1								

Table C-3: Fire Department Facility Hazard Impacts

Facility Name	3 Ft Sea Level Rise	6 Ft Sea Level Rise	Dam Failure Inundation	Violent EQ Shaking	Extreme EQ Shaking	0.2% Annual Chance Flooding	1% Annual Chance Flooding	Deep Seated Landslide Class IX & X	Max Tsunami Inundation	Very High Wildfire LRA	High Wildfire SRA	Very High Wildfire SRA
City of Los Angeles Fire Department Station 42				1								
City of Los Angeles Fire Department Station 43				1								
City of Los Angeles Fire Department Station 44				1								
City of Los Angeles Fire Department Station 46				1								
City of Los Angeles Fire Department Station 47				1						1		
City of Los Angeles Fire Department Station 5				1								
City of Los Angeles Fire Department Station 50				1								
City of Los Angeles Fire Department Station 51				1								
City of Los Angeles Fire Department Station 52				1								
City of Los Angeles Fire Department Station 56				1						1		
City of Los Angeles Fire Department Station 57				1								
City of Los Angeles Fire Department Station 58				1								
City of Los Angeles Fire Department Station 59				1								
City of Los Angeles Fire Department Station 6				1								
City of Los Angeles Fire Department Station 61				1								

Table C-3: Fire Department Facility Hazard Impacts

Facility Name	3 Ft Sea Level Rise	6 Ft Sea Level Rise	Dam Failure Inundation	Violent EQ Shaking	Extreme EQ Shaking	0.2% Annual Chance Flooding	1% Annual Chance Flooding	Deep Seated Landslide Class IX & X	Max Tsunami Inundation	Very High Wildfire LRA	High Wildfire SRA	Very High Wildfire SRA
City of Los Angeles Fire Department Station 62				1								
City of Los Angeles Fire Department Station 64				1								
City of Los Angeles Fire Department Station 65				1								
City of Los Angeles Fire Department Station 66				1								
City of Los Angeles Fire Department Station 67				1								
City of Los Angeles Fire Department Station 68				1								
City of Los Angeles Fire Department Station 7					1							
City of Los Angeles Fire Department Station 71				1								
City of Los Angeles Fire Department Station 76				1						1		
City of Los Angeles Fire Department Station 80				1								
City of Los Angeles Fire Department Station 82				1								
City of Los Angeles Fire Department Station 9				1								
City of Los Angeles Fire Department Station 92				1								
City of Los Angeles Fire Department Station 94				1								
City of Los Angeles Fire Department Station 95				1								

Table C-3: Fire Department Facility Hazard Impacts

Facility Name	3 Ft Sea Level Rise	6 Ft Sea Level Rise	Dam Failure Inundation	Violent EQ Shaking	Extreme EQ Shaking	0.2% Annual Chance Flooding	1% Annual Chance Flooding	Deep Seated Landslide Class IX & X	Max Tsunami Inundation	Very High Wildfire LRA	High Wildfire SRA	Very High Wildfire SRA
City of Los Angeles Fire Department Station 97				1						1		
City of Los Angeles Fire Department Station 99				1						1		
City of Monterey Park Fire Department Station 61 - Headquarters				1								
City of Monterey Park Fire Department Station 62				1								
City of Monterey Park Fire Department Station 63				1								
City of Santa Fe Springs Fire Department Station 1 - Headquarters				1								
City of Santa Fe Springs Fire Department Station 2				1								
City of Santa Fe Springs Fire Department Station 3				1								
City of Santa Fe Springs Fire Department Station 4				1		1						
City of Santa Monica Fire Department - Training Facility				1								
City of Santa Monica Fire Department Station 1 - Headquarters				1								
City of Santa Monica Fire Department Station 2				1								

Table C-3: Fire Department Facility Hazard Impacts

Facility Name	3 Ft Sea Level Rise	6 Ft Sea Level Rise	Dam Failure Inundation	Violent EQ Shaking	Extreme EQ Shaking	0.2% Annual Chance Flooding	1% Annual Chance Flooding	Deep Seated Landslide Class IX & X	Max Tsunami Inundation	Very High Wildfire LRA	High Wildfire SRA	Very High Wildfire SRA
City of Santa Monica Fire Department Station 3				1								
City of Santa Monica Fire Department Station 5				1								
City of Vernon Fire Department Station 2				1								
City of Vernon Fire Department Station 3				1								
City of Vernon Fire Department Station 4				1								
City of West Covina Fire Department Station 1				1		1						
City of West Covina Fire Department Station 2				1		1						
City of West Covina Fire Department Station 3				1		1						
City of West Covina Fire Department Station 4				1		1				1		
City of West Covina Fire Department Station 5				1								
Culver City Fire Department Station 1 - Headquarters				1								
Culver City Fire Department Station 2				1								
Culver City Fire Department Station 3				1								
La Verne Fire Department Station 1 - Headquarters				1								

Table C-3: Fire Department Facility Hazard Impacts

Facility Name	3 Ft Sea Level Rise	6 Ft Sea Level Rise	Dam Failure Inundation	Violent EQ Shaking	Extreme EQ Shaking	0.2% Annual Chance Flooding	1% Annual Chance Flooding	Deep Seated Landslide Class IX & X	Max Tsunami Inundation	Very High Wildfire LRA	High Wildfire SRA	Very High Wildfire SRA
La Verne Fire Department Station 2				1								
Los Angeles County Fire Department - Hq/Heliport/Training Facility				1								
Los Angeles County Fire Department Station 1				1								
Los Angeles County Fire Department Station 10				1		1						
Los Angeles County Fire Department Station 101				1								
Los Angeles County Fire Department Station 102				1								
Los Angeles County Fire Department Station 103				1		1						
Los Angeles County Fire Department Station 104				1						1		
Los Angeles County Fire Department Station 105				1		1						
Los Angeles County Fire Department Station 106				1				1		1		
Los Angeles County Fire Department Station 107					1							
Los Angeles County Fire Department Station 11				1								
Los Angeles County Fire Department Station 110				1					1			
Los Angeles County Fire Department Station 111				1								

Table C-3: Fire Department Facility Hazard Impacts

Facility Name	3 Ft Sea Level Rise	6 Ft Sea Level Rise	Dam Failure Inundation	Violent EQ Shaking	Extreme EQ Shaking	0.2% Annual Chance Flooding	1% Annual Chance Flooding	Deep Seated Landslide Class IX & X	Max Tsunami Inundation	Very High Wildfire LRA	High Wildfire SRA	Very High Wildfire SRA
Los Angeles County Fire Department Station 112				1		1						
Los Angeles County Fire Department Station 114												
Los Angeles County Fire Department Station 115				1		1						
Los Angeles County Fire Department Station 116				1								
Los Angeles County Fire Department Station 117				1		1						
Los Angeles County Fire Department Station 118				1								
Los Angeles County Fire Department Station 119				1				1				
Los Angeles County Fire Department Station 12				1								
Los Angeles County Fire Department Station 120				1								
Los Angeles County Fire Department Station 121				1				1				
Los Angeles County Fire Department Station 122				1								
Los Angeles County Fire Department Station 123					1					1		
Los Angeles County Fire Department Station 124				1				1				
Los Angeles County Fire Department Station 125				1						1		
Los Angeles County Fire Department Station 126					1							

Table C-3: Fire Department Facility Hazard Impacts

Facility Name	3 Ft Sea Level Rise	6 Ft Sea Level Rise	Dam Failure Inundation	Violent EQ Shaking	Extreme EQ Shaking	0.2% Annual Chance Flooding	1% Annual Chance Flooding	Deep Seated Landslide Class IX & X	Max Tsunami Inundation	Very High Wildfire LRA	High Wildfire SRA	Very High Wildfire SRA
Los Angeles County Fire Department Station 127				1		1						
Los Angeles County Fire Department Station 129					1							
Los Angeles County Fire Department Station 130				1		1						
Los Angeles County Fire Department Station 131					1							
Los Angeles County Fire Department Station 132				1				1		1		
Los Angeles County Fire Department Station 134					1							
Los Angeles County Fire Department Station 135				1		1						
Los Angeles County Fire Department Station 14				1								
Los Angeles County Fire Department Station 140					1							1
Los Angeles County Fire Department Station 141				1				1				
Los Angeles County Fire Department Station 144			1	1						1		
Los Angeles County Fire Department Station 145				1								
Los Angeles County Fire Department Station 146				1								
Los Angeles County Fire Department Station 147				1								
Los Angeles County Fire Department Station 148				1		1						

Table C-3: Fire Department Facility Hazard Impacts

Facility Name	3 Ft Sea Level Rise	6 Ft Sea Level Rise	Dam Failure Inundation	Violent EQ Shaking	Extreme EQ Shaking	0.2% Annual Chance Flooding	1% Annual Chance Flooding	Deep Seated Landslide Class IX & X	Max Tsunami Inundation	Very High Wildfire LRA	High Wildfire SRA	Very High Wildfire SRA
Los Angeles County Fire Department Station 149			1	1						1		
Los Angeles County Fire Department Station 15				1								
Los Angeles County Fire Department Station 151				1								
Los Angeles County Fire Department Station 152				1								
Los Angeles County Fire Department Station 153				1								
Los Angeles County Fire Department Station 154				1								
Los Angeles County Fire Department Station 155												1
Los Angeles County Fire Department Station 156				1				1				1
Los Angeles County Fire Department Station 157					1	1						1
Los Angeles County Fire Department Station 158				1								
Los Angeles County Fire Department Station 159				1								
Los Angeles County Fire Department Station 16				1								
Los Angeles County Fire Department Station 160				1								
Los Angeles County Fire Department Station 161				1								
Los Angeles County Fire Department Station 162				1								

Table C-3: Fire Department Facility Hazard Impacts

Facility Name	3 Ft Sea Level Rise	6 Ft Sea Level Rise	Dam Failure Inundation	Violent EQ Shaking	Extreme EQ Shaking	0.2% Annual Chance Flooding	1% Annual Chance Flooding	Deep Seated Landslide Class IX & X	Max Tsunami Inundation	Very High Wildfire LRA	High Wildfire SRA	Very High Wildfire SRA
Los Angeles County Fire Department Station 163				1								
Los Angeles County Fire Department Station 164				1								
Los Angeles County Fire Department Station 165				1								
Los Angeles County Fire Department Station 166				1								
Los Angeles County Fire Department Station 167				1								
Los Angeles County Fire Department Station 168				1								
Los Angeles County Fire Department Station 169				1								
Los Angeles County Fire Department Station 17				1								
Los Angeles County Fire Department Station 170				1								
Los Angeles County Fire Department Station 171				1								
Los Angeles County Fire Department Station 172				1								
Los Angeles County Fire Department Station 173				1								
Los Angeles County Fire Department Station 18				1								
Los Angeles County Fire Department Station 181				1								
Los Angeles County Fire Department Station 182				1								

Table C-3: Fire Department Facility Hazard Impacts

Facility Name	3 Ft Sea Level Rise	6 Ft Sea Level Rise	Dam Failure Inundation	Violent EQ Shaking	Extreme EQ Shaking	0.2% Annual Chance Flooding	1% Annual Chance Flooding	Deep Seated Landslide Class IX & X	Max Tsunami Inundation	Very High Wildfire LRA	High Wildfire SRA	Very High Wildfire SRA
Los Angeles County Fire Department Station 183				1								
Los Angeles County Fire Department Station 184				1								
Los Angeles County Fire Department Station 185				1								
Los Angeles County Fire Department Station 186				1								
Los Angeles County Fire Department Station 187				1								
Los Angeles County Fire Department Station 188				1								
Los Angeles County Fire Department Station 19				1						1		
Los Angeles County Fire Department Station 2				1						1		
Los Angeles County Fire Department Station 20				1								
Los Angeles County Fire Department Station 21				1								
Los Angeles County Fire Department Station 22				1								
Los Angeles County Fire Department Station 23				1		1						
Los Angeles County Fire Department Station 24					1							
Los Angeles County Fire Department Station 25				1		1						
Los Angeles County Fire Department Station 26				1								

Table C-3: Fire Department Facility Hazard Impacts

Facility Name	3 Ft Sea Level Rise	6 Ft Sea Level Rise	Dam Failure Inundation	Violent EQ Shaking	Extreme EQ Shaking	0.2% Annual Chance Flooding	1% Annual Chance Flooding	Deep Seated Landslide Class IX & X	Max Tsunami Inundation	Very High Wildfire LRA	High Wildfire SRA	Very High Wildfire SRA
Los Angeles County Fire Department Station 27				1								
Los Angeles County Fire Department Station 28				1								
Los Angeles County Fire Department Station 29				1								
Los Angeles County Fire Department Station 3				1								
Los Angeles County Fire Department Station 30				1		1						
Los Angeles County Fire Department Station 31				1		1						
Los Angeles County Fire Department Station 32				1								
Los Angeles County Fire Department Station 33				1		1						
Los Angeles County Fire Department Station 34				1		1						
Los Angeles County Fire Department Station 35				1								
Los Angeles County Fire Department Station 36				1								
Los Angeles County Fire Department Station 37					1	1						
Los Angeles County Fire Department Station 38				1								
Los Angeles County Fire Department Station 39				1								
Los Angeles County Fire Department Station 4				1								

Table C-3: Fire Department Facility Hazard Impacts

Facility Name	3 Ft Sea Level Rise	6 Ft Sea Level Rise	Dam Failure Inundation	Violent EQ Shaking	Extreme EQ Shaking	0.2% Annual Chance Flooding	1% Annual Chance Flooding	Deep Seated Landslide Class IX & X	Max Tsunami Inundation	Very High Wildfire LRA	High Wildfire SRA	Very High Wildfire SRA
Los Angeles County Fire Department Station 40				1		1						
Los Angeles County Fire Department Station 41				1								
Los Angeles County Fire Department Station 42				1								
Los Angeles County Fire Department Station 43				1								
Los Angeles County Fire Department Station 44				1								
Los Angeles County Fire Department Station 45				1		1						
Los Angeles County Fire Department Station 47				1								
Los Angeles County Fire Department Station 48				1								
Los Angeles County Fire Department Station 49				1								
Los Angeles County Fire Department Station 5				1								
Los Angeles County Fire Department Station 50				1								
Los Angeles County Fire Department Station 51				1						1		
Los Angeles County Fire Department Station 53				1						1		
Los Angeles County Fire Department Station 54				1		1						
Los Angeles County Fire Department Station 55										1		

Table C-3: Fire Department Facility Hazard Impacts

Facility Name	3 Ft Sea Level Rise	6 Ft Sea Level Rise	Dam Failure Inundation	Violent EQ Shaking	Extreme EQ Shaking	0.2% Annual Chance Flooding	1% Annual Chance Flooding	Deep Seated Landslide Class IX & X	Max Tsunami Inundation	Very High Wildfire LRA	High Wildfire SRA	Very High Wildfire SRA
Los Angeles County Fire Department Station 56				1						1		
Los Angeles County Fire Department Station 57				1		1						
Los Angeles County Fire Department Station 58				1								
Los Angeles County Fire Department Station 59				1								
Los Angeles County Fire Department Station 6				1								
Los Angeles County Fire Department Station 60				1								
Los Angeles County Fire Department Station 61				1								
Los Angeles County Fire Department Station 62				1						1		
Los Angeles County Fire Department Station 63				1								
Los Angeles County Fire Department Station 64				1								
Los Angeles County Fire Department Station 65				1								1
Los Angeles County Fire Department Station 66				1								
Los Angeles County Fire Department Station 67				1								1
Los Angeles County Fire Department Station 68				1						1		
Los Angeles County Fire Department Station 69				1								1

Table C-3: Fire Department Facility Hazard Impacts

Facility Name	3 Ft Sea Level Rise	6 Ft Sea Level Rise	Dam Failure Inundation	Violent EQ Shaking	Extreme EQ Shaking	0.2% Annual Chance Flooding	1% Annual Chance Flooding	Deep Seated Landslide Class IX & X	Max Tsunami Inundation	Very High Wildfire LRA	High Wildfire SRA	Very High Wildfire SRA
Los Angeles County Fire Department Station 7				1								
Los Angeles County Fire Department Station 70				1						1		
Los Angeles County Fire Department Station 71				1						1		
Los Angeles County Fire Department Station 72				1								1
Los Angeles County Fire Department Station 73					1							
Los Angeles County Fire Department Station 74					1							1
Los Angeles County Fire Department Station 75				1						1		
Los Angeles County Fire Department Station 76			1	1							1	
Los Angeles County Fire Department Station 77					1							1
Los Angeles County Fire Department Station 78					1							1
Los Angeles County Fire Department Station 79					1							
Los Angeles County Fire Department Station 8				1								
Los Angeles County Fire Department Station 80					1							1
Los Angeles County Fire Department Station 81				1								1
Los Angeles County Fire Department Station 82				1						1		

Table C-3: Fire Department Facility Hazard Impacts

Facility Name	3 Ft Sea Level Rise	6 Ft Sea Level Rise	Dam Failure Inundation	Violent EQ Shaking	Extreme EQ Shaking	0.2% Annual Chance Flooding	1% Annual Chance Flooding	Deep Seated Landslide Class IX & X	Max Tsunami Inundation	Very High Wildfire LRA	High Wildfire SRA	Very High Wildfire SRA
Los Angeles County Fire Department Station 83				1						1		
Los Angeles County Fire Department Station 84					1	1						
Los Angeles County Fire Department Station 85				1								
Los Angeles County Fire Department Station 86				1								
Los Angeles County Fire Department Station 87				1								
Los Angeles County Fire Department Station 88				1					1	1		
Los Angeles County Fire Department Station 89				1								
Los Angeles County Fire Department Station 90				1								
Los Angeles County Fire Department Station 91				1								1
Los Angeles County Fire Department Station 92					1							
Los Angeles County Fire Department Station 94				1		1						
Los Angeles County Fire Department Station 95				1								
Los Angeles County Fire Department Station 96				1								
Los Angeles County Fire Department Station 97				1						1		
Los Angeles County Fire Department Station 98				1		1						

Table C-3: Fire Department Facility Hazard Impacts

Facility Name	3 Ft Sea Level Rise	6 Ft Sea Level Rise	Dam Failure Inundation	Violent EQ Shaking	Extreme EQ Shaking	0.2% Annual Chance Flooding	1% Annual Chance Flooding	Deep Seated Landslide Class IX & X	Max Tsunami Inundation	Very High Wildfire LRA	High Wildfire SRA	Very High Wildfire SRA
Los Angeles County Fire Department Station 99				1						1		
Manhattan Beach Fire Department Station 1 - Headquarters				1								
Manhattan Beach Fire Department Station 2				1								
Montebello Fire Department Station 1 - Headquarters				1								
Montebello Fire Department Station 2				1								
Montebello Fire Department Station 3				1								
Pasadena Fire Department Station 31				1								
Pasadena Fire Department Station 32				1								
Pasadena Fire Department Station 33				1								
Pasadena Fire Department Station 34				1								
Pasadena Fire Department Station 36				1								
Pasadena Fire Department Station 37				1								
Pasadena Fire Department Station 38				1						1		
Pasadena Fire Department Station 39				1						1		

Table C-3: Fire Department Facility Hazard Impacts

Facility Name	3 Ft Sea Level Rise	6 Ft Sea Level Rise	Dam Failure Inundation	Violent EQ Shaking	Extreme EQ Shaking	0.2% Annual Chance Flooding	1% Annual Chance Flooding	Deep Seated Landslide Class IX & X	Max Tsunami Inundation	Very High Wildfire LRA	High Wildfire SRA	Very High Wildfire SRA
Redondo Beach Fire Department Station 1 - Headquarters				1								
Redondo Beach Fire Department Station 2				1								
Redondo Beach Fire Department Station 3		1		1					1			
San Gabriel Fire Department Station 1 - Headquarters				1								
San Gabriel Fire Department Station 2				1								
San Marino Fire Department				1								
Sierra Madre Volunteer Fire Department				1								
South Pasadena Fire Department				1								
The City of El Segundo Fire Department Station 1 - Headquarters				1								
The City of El Segundo Fire Department Station 2				1								
Torrance Fire Department Fire Station 1 - Headquarters				1								
Torrance Fire Department Fire Station 2				1								
Torrance Fire Department Fire Station 3				1								

Table C-3: Fire Department Facility Hazard Impacts

Facility Name	3 Ft Sea Level Rise	6 Ft Sea Level Rise	Dam Failure Inundation	Violent EQ Shaking	Extreme EQ Shaking	0.2% Annual Chance Flooding	1% Annual Chance Flooding	Deep Seated Landslide Class IX & X	Max Tsunami Inundation	Very High Wildfire LRA	High Wildfire SRA	Very High Wildfire SRA
Torrance Fire Department Fire Station 4				1								
Torrance Fire Department Fire Station 5				1								
Torrance Fire Department Fire Station 6				1								
Vernon Fire Department				1								

Table C-4: Health Services Facility Hazard Impacts

Facility Name	3 Ft Sea Level Rise	6 Ft Sea Level Rise	Dam Failure Inundation	Violent EQ Shaking	Extreme EQ Shaking	0.2% Annual Chance Flooding	1% Annual Chance Flooding	Deep Seated Landslide Class IX & X	Max Tsunami Inundation	Very High Wildfire LRA	High Wildfire SRA	Very High Wildfire SRA
Antelope Valley Health Center				1								
Bellflower Health Center				1		1						
Central Public Health Center				1								
Curtis R. Tucker Health Center				1								
Dollarhide Health Center				1		1						
East Los Angeles Health Center				1								
East San Gabriel Valley Health Center				1								
Edward R. Roybal Comprehensive Helath Center				1								
El Monte Comprehensive Health Center				1								
Glendale Health Center				1								
H. Claude Hudson Comprehensive Health Center				1								
Harbor-UCLA Medical Center				1								
High Desert Regional Health Center				1								
Hubert H. Humphrey Comprehensive Health Center				1								
La Puente Health Center				1								
LAC + USC Medical Center				1								

Table C-4: Health Services Facility Hazard Impacts

Facility Name	3 Ft Sea Level Rise	6 Ft Sea Level Rise	Dam Failure Inundation	Violent EQ Shaking	Extreme EQ Shaking	0.2% Annual Chance Flooding	1% Annual Chance Flooding	Deep Seated Landslide Class IX & X	Max Tsunami Inundation	Very High Wildfire LRA	High Wildfire SRA	Very High Wildfire SRA
Lake Los Angeles Community Clinic				1								
Littlerock Community Clinic					1	1						
Long Beach Comphrehensive Health Center				1								
Martin Luther King, Jr. Outpatient Center				1								
Mid Valley Comprehensive Health Center			1	1								
Olive View-UCLA Medical Center					1					1		
Rancho Los Amigos National Rehabilitation Center				1		1						
San Fernando Health Center					1							
South Valley Health Center			1		1	1						
Torrance Health Center				1								
Vaughn School Based Health Center					1							
West Valley Health Center				1								
Wilmington Health Center				1								

Table C-5: Library Hazard Impacts

Facility Name	3 Ft Sea Level Rise	6 Ft Sea Level Rise	Dam Failure Inundation	Violent EQ Shaking	Extreme EQ Shaking	0.2% Annual Chance Flooding	1% Annual Chance Flooding	Deep Seated Landslide Class IX & X	Max Tsunami Inundation	Very High Wildfire LRA	High Wildfire SRA	Very High Wildfire SRA
A C Bilbrew Library				1								
Acton Agua Dulce Library					1							1
Agoura Hills Library				1						1		
Alondra Library				1		1						
Angelo M. Iacoboni Library				1		1						
Anthony Quinn Library				1								
Artesia Library				1		1						
Avalon Library										1		
Baldwin Park Library				1								
Bell Gardens Library				1								
Bell Library				1								
Carson Library				1								
Castaic Library				1						1		
Charter Oak Library				1								
Chet Holifield Library				1								
City Terrace Library				1								
Claremont Helen Renwick Library				1								
Clifton M. Brakensiek Library				1		1						
Compton Library				1		1						
Cudahy Library				1		1						

Table C-5: Library Hazard Impacts

Facility Name	3 Ft Sea Level Rise	6 Ft Sea Level Rise	Dam Failure Inundation	Violent EQ Shaking	Extreme EQ Shaking	0.2% Annual Chance Flooding	1% Annual Chance Flooding	Deep Seated Landslide Class IX & X	Max Tsunami Inundation	Very High Wildfire LRA	High Wildfire SRA	Very High Wildfire SRA
Culver City Julian Dixon Library				1								
Diamond Bar Library				1								
Dr. Martin Luther King, Jr. Library				1								
Duarte Library				1								
East Los Angeles Library				1								
East Rancho Dominguez Library				1		1						
El Camino Real Library				1								
El Monte Library				1								
Florence Express Library				1								
Gardena Mayme Dear Library				1								
George Nye Jr. Library				1		1						
Graham Library				1								
Hacienda Heights Library				1								
Hawaiian Gardens Library				1		1						
Hawthorne Library				1								
Hermosa Beach Library				1								
Hollydale Library				1		1						
Huntington Park Library				1								

Table C-5: Library Hazard Impacts

Facility Name	3 Ft Sea Level Rise	6 Ft Sea Level Rise	Dam Failure Inundation	Violent EQ Shaking	Extreme EQ Shaking	0.2% Annual Chance Flooding	1% Annual Chance Flooding	Deep Seated Landslide Class IX & X	Max Tsunami Inundation	Very High Wildfire LRA	High Wildfire SRA	Very High Wildfire SRA
La Canada Flintridge Library				1						1		
La Crescenta Library				1								
La Mirada Library				1								
La Puente Library				1								
La Verne Library				1								
Lake Los Angeles Library				1								
Lancaster Library				1		1						
Lawndale Library				1								
Leland R. Weaver Library				1								
Lennox Library				1								
Littlerock Library					1						1	
Live Oak Library				1								
Lloyd Taber-Marina del Rey Library				1					1			
Lomita Library				1								
Los Nietos Library				1								
Lynwood Library				1								
Malibu Library			1	1						1		
Manhattan Beach Library				1								
Masao W. Satow Library				1								
Maywood Cesar Chavez Library				1								
Montebello Library				1								

Table C-5: Library Hazard Impacts

Facility Name	3 Ft Sea Level Rise	6 Ft Sea Level Rise	Dam Failure Inundation	Violent EQ Shaking	Extreme EQ Shaking	0.2% Annual Chance Flooding	1% Annual Chance Flooding	Deep Seated Landslide Class IX & X	Max Tsunami Inundation	Very High Wildfire LRA	High Wildfire SRA	Very High Wildfire SRA
Norwalk Library				1								
Norwood Library				1								
Paramount Library				1		1						
Pico Rivera Library				1		1						
Quartz Hill Library					1							
Rivera Library				1		1						
Rosemead Library				1								
Rowland Heights Library				1								
San Dimas Library				1								
San Fernando Library					1							
San Gabriel Library				1								
Sorensen Library				1								
South El Monte Library				1								
South Whittier Library				1								
Stevenson Ranch Library					1					1		
Sunkist Library				1								
Temple City Library				1								
Topanga Library				1								1
View Park Bebe Moore Campbell Library				1								
Walnut Library				1								
West Covina Library				1		1						

Table C-5: Library Hazard Impacts

Facility Name	3 Ft Sea Level Rise	6 Ft Sea Level Rise	Dam Failure Inundation	Violent EQ Shaking	Extreme EQ Shaking	0.2% Annual Chance Flooding	1% Annual Chance Flooding	Deep Seated Landslide Class IX & X	Max Tsunami Inundation	Very High Wildfire LRA	High Wildfire SRA	Very High Wildfire SRA
West Hollywood Library				1								
Westlake Village Library				1						1		
Willowbrook Library				1								
Wiseburn Library				1								
Woodcrest Library				1								

Table C-6: LACMA+MNH Hazard Impacts

Facility Name	3 Ft Sea Level Rise	6 Ft Sea Level Rise	Dam Failure Inundation	Violent EQ Shaking	Extreme EQ Shaking	0.2% Annual Chance Flooding	1% Annual Chance Flooding	Deep Seated Landslide Class IX & X	Max Tsunami Inundation	Very High Wildfire LRA	High Wildfire SRA	Very High Wildfire SRA
La Brea Tarpits				1								
Los Angeles County Museum of Art				1								
Natural History Museum				1								
William S. Hart Museum					1					1		

Table C-7: Office of Education Hazard Impacts

Facility Name	3 Ft Sea Level Rise	6 Ft Sea Level Rise	Dam Failure Inundation	Violent EQ Shaking	Extreme EQ Shaking	0.2% Annual Chance Flooding	1% Annual Chance Flooding	Deep Seated Landslide Class IX & X	Max Tsunami Inundation	Very High Wildfire LRA	High Wildfire SRA	Very High Wildfire SRA
Afflerbaugh-Paige Camp				1								1
Alma Fuerte Public				1								
Animo City of Champions Charter High				1								
Aspire Antonio Maria Lugo Academy				1								
Aspire Ollin University Preparatory Academy				1								
Central Juvenile Hall				1								
Da Vinci RISE High				1								
Environmental Charter Middle				1								
Environmental Charter Middle - Inglewood				1								
Intellectual Virtues Academy				1								
International Polytechnic High				1								
Jardin de la Infancia				1								
Kirby, Dorothy Camp				1								
L.A. County High School for the Arts				1								
LA's Promise Charter High #1				1								
LA's Promise Charter Middle #1				1		1						
Lashon Academy			1	1								
Los Angeles County Special Education				1		1						

Table C-7: Office of Education Hazard Impacts

Facility Name	3 Ft Sea Level Rise	6 Ft Sea Level Rise	Dam Failure Inundation	Violent EQ Shaking	Extreme EQ Shaking	0.2% Annual Chance Flooding	1% Annual Chance Flooding	Deep Seated Landslide Class IX & X	Max Tsunami Inundation	Very High Wildfire LRA	High Wildfire SRA	Very High Wildfire SRA
Los Angeles International Charter High				1						1		
Los Padrinos Juvenile Hall				1		1						
Magnolia Science Academy			1	1								
Magnolia Science Academy 2				1								
Magnolia Science Academy 3				1		1						
Magnolia Science Academy 5				1								
McNair Camp					1							
Nidorf, Barry J.					1							
North Valley Military Institute College Preparatory Academy					1							
Odyssey Charter				1								
Onizuka Camp					1							
Optimist Charter				1						1		
Phoenix Academy Residential Education Center					1							
Renaissance County Community				1								
Road to Success Academy at Campus Kilpatrick				1								1
Rockey, Glenn Camp				1				1		1		
Scott, Joseph Camp				1								1
Soleil Academy Charter				1		1						
Valiente College				1								

Table C-7: Office of Education Hazard Impacts

Facility Name	3 Ft Sea Level Rise	6 Ft Sea Level Rise	Dam Failure Inundation	Violent EQ Shaking	Extreme EQ Shaking	0.2% Annual Chance Flooding	1% Annual Chance Flooding	Deep Seated Landslide Class IX & X	Max Tsunami Inundation	Very High Wildfire LRA	High Wildfire SRA	Very High Wildfire SRA
Preparatory Charter												

Table C-7: Other (Office) Facility Hazard Impacts

Facility Name	3 Ft Sea Level Rise	6 Ft Sea Level Rise	Dam Failure Inundation	Violent EQ Shaking	Extreme EQ Shaking	0.2% Annual Chance Flooding	1% Annual Chance Flooding	Deep Seated Landslide Class IX & X	Max Tsunami Inundation	Very High Wildfire LRA	High Wildfire SRA	Very High Wildfire SRA
1000 S. Fremont Ave.				1								
1055 Wilshire Blvd.				1								
1100 North Eastern Ave.				1								
1104 N. Mission Rd.				1								
12300 Lower Azusa Rd.				1								
12400 Imperial Highway				1								
12860 Crossroads Parkway South				1								
1320 North Eastern Ave.				1								
13837 Fiji Way				1					1			
1816 S. Figueroa				1								
210 W. Temple St.				1								
211 W. Temple St.				1								
313 N Figueroa St.				1								
3175 West Sixth St.				1								
320 West Temple St.				1								
425 Shatto Place				1								
550 South Vermont Ave.				1								
5770 S. Eastern Ave.				1								

Table C-7: Other (Office) Facility Hazard Impacts

Facility Name	3 Ft Sea Level Rise	6 Ft Sea Level Rise	Dam Failure Inundation	Violent EQ Shaking	Extreme EQ Shaking	0.2% Annual Chance Flooding	1% Annual Chance Flooding	Deep Seated Landslide Class IX & X	Max Tsunami Inundation	Very High Wildfire LRA	High Wildfire SRA	Very High Wildfire SRA
5898 Cherry Ave.				1		1						
5905 Wilshire Blvd.				1								
700 W. Main St.				1								
7400 East Imperial Highway				1		1						
900 South Fremont Ave.				1								
Kenneth Hahn Hall of Administration				1								

Table C-8: Parks & Recreation Facility Hazard Impacts

Facility Name	3 Ft Sea Level Rise	6 Ft Sea Level Rise	Dam Failure Inundation	Violent EQ Shaking	Extreme EQ Shaking	0.2% Annual Chance Flooding	1% Annual Chance Flooding	Deep Seated Landslide Class IX & X	Max Tsunami Inundation	Very High Wildfire LRA	High Wildfire SRA	Very High Wildfire SRA
Acton Park				1								1
Adventure Park				1								
Adventure Park				1								
Allen J. Martin Park				1								
Alondra Community Regional Park				1								
Alondra Community Regional Park				1								
Amelia Mayberry Park				1								
Amelia Mayberry Park				1								
Amigo Park				1		1						
Arcadia Community Regional Park				1								
Arcadia Community Regional Park				1								
Athens Park				1								
Athens Park				1								
Bassett Park				1								
Bassett Park				1								
Bassett Park				1								
Belvedere Community Regional Park				1								
Belvedere Community Regional Park				1								
Bodger Park				1								
Carolyn Rosas Park				1								
Castaic Regional Sports Complex			1	1								1
Castaic Regional Sports Complex			1	1								1

Table C-8: Parks & Recreation Facility Hazard Impacts

Facility Name	3 Ft Sea Level Rise	6 Ft Sea Level Rise	Dam Failure Inundation	Violent EQ Shaking	Extreme EQ Shaking	0.2% Annual Chance Flooding	1% Annual Chance Flooding	Deep Seated Landslide Class IX & X	Max Tsunami Inundation	Very High Wildfire LRA	High Wildfire SRA	Very High Wildfire SRA
Charles S. Farnsworth Park				1						1		
Charles S. Farnsworth Park				1								
Charles S. Farnsworth Park				1								
Charles S. Farnsworth Park				1								
Charter Oak Park				1								
City Terrace Park				1								
City Terrace Park				1								
Col. Leon H. Washington Park				1								
Col. Leon H. Washington Park				1								
Crescenta Valley Community Regional Park				1						1		
Crescenta Valley Community Regional Park				1						1		
Dalton Park				1								
Del Aire Park				1								
Del Aire Park				1								
Devil's Punchbowl Natural Area and Nature Center					1						1	
Dexter Park					1			1				1
Dexter Park					1			1				1
Don Knabe Community Regional Park				1								

Table C-8: Parks & Recreation Facility Hazard Impacts

Facility Name	3 Ft Sea Level Rise	6 Ft Sea Level Rise	Dam Failure Inundation	Violent EQ Shaking	Extreme EQ Shaking	0.2% Annual Chance Flooding	1% Annual Chance Flooding	Deep Seated Landslide Class IX & X	Max Tsunami Inundation	Very High Wildfire LRA	High Wildfire SRA	Very High Wildfire SRA
Don Knabe Community Regional Park				1								
Don Knabe Community Regional Park				1								
East Rancho Dominguez Park				1		1						
East Rancho Dominguez Park				1		1						
East Rancho Dominguez Park				1		1						
El Cariso Community Regional Park					1							
El Cariso Community Regional Park					1							
El Cariso Community Regional Park					1							
Enterprise Park				1								
Eugene A. Obregon Park				1								
Eugene A. Obregon Park				1								
Franklin D. Roosevelt Park				1								
Franklin D. Roosevelt Park				1								
George Lane Park					1	1						
George Lane Park					1	1						
George Washington Carver Park				1								

Table C-8: Parks & Recreation Facility Hazard Impacts

Facility Name	3 Ft Sea Level Rise	6 Ft Sea Level Rise	Dam Failure Inundation	Violent EQ Shaking	Extreme EQ Shaking	0.2% Annual Chance Flooding	1% Annual Chance Flooding	Deep Seated Landslide Class IX & X	Max Tsunami Inundation	Very High Wildfire LRA	High Wildfire SRA	Very High Wildfire SRA
Hacienda Heights Community and Rec Center				1								
Hacienda Heights Community and Rec Center				1								
Hacienda Heights Community and Rec Center				1								
Helen Keller Park				1								
Hollywood Bowl				1						1		
Jackie Robinson Park					1	1						
Jackie Robinson Park					1	1						
Jesse Owens Community Regional Park				1								
Jesse Owens Community Regional Park				1								
John Anson Ford Amphitheatre				1						1		
John Anson Ford Amphitheatre				1						1		
Kenneth Hahn State Recreation Area				1						1		
Ladera Park				1								
Ladera Park				1								
Ladera Park				1								
Lennox Park				1								
Lennox Park				1								
Lennox Park				1								

Table C-8: Parks & Recreation Facility Hazard Impacts

Facility Name	3 Ft Sea Level Rise	6 Ft Sea Level Rise	Dam Failure Inundation	Violent EQ Shaking	Extreme EQ Shaking	0.2% Annual Chance Flooding	1% Annual Chance Flooding	Deep Seated Landslide Class IX & X	Max Tsunami Inundation	Very High Wildfire LRA	High Wildfire SRA	Very High Wildfire SRA
Loma Alta Park				1								1
Loma Alta Park				1								1
Los Angeles County Arboretum and Botanic Garden				1								
Manzanita Park				1								
Mary M. Bethune Park				1								
Mary M. Bethune Park				1								
Mona Park				1								
Mona Park				1								
Pamela County Park				1								
Pamela County Park				1								
Pathfinder Community Regional Park				1						1		1
Pearblossom County Park					1							
Peter F Schabarum Regional County Park				1						1		
Rimgrove Park				1								
Rowland Heights Park				1								
Roy Campanella Park				1								
Ruben F Salazar Park				1								
Ruben F Salazar Park				1								
Ruben F Salazar Park				1								
San Angelo Park				1								
San Fernando Recreation Park and Aquatic Center					1							
Saybrook Park				1								
Sorensen Park				1								

Table C-8: Parks & Recreation Facility Hazard Impacts

Facility Name	3 Ft Sea Level Rise	6 Ft Sea Level Rise	Dam Failure Inundation	Violent EQ Shaking	Extreme EQ Shaking	0.2% Annual Chance Flooding	1% Annual Chance Flooding	Deep Seated Landslide Class IX & X	Max Tsunami Inundation	Very High Wildfire LRA	High Wildfire SRA	Very High Wildfire SRA
South Coast Botanic Garden				1						1		
Stephen Sorensen Park				1								
Sunshine Park				1								
Ted Watkins Memorial Park				1								
Ted Watkins Memorial Park				1								
Tesoro Adobe Historic Park				1						1		1
Val Verde Community Regional Park				1								1
Val Verde Community Regional Park				1								1
Valleydale Park				1								
Valleydale Park				1								
Vasquez Rocks Natural Area and Nature Center				1								1
Veterans Memorial Community Regional Park					1					1		
Victoria Community Regional Park				1								
Victoria Community Regional Park				1								
Walnut Nature Park				1								
Whittier Narrows Recreation Area				1								
William S. Hart Regional Park					1					1		
William Steinmetz Park				1								

Table C-8: Parks & Recreation Facility Hazard Impacts

Facility Name	3 Ft Sea Level Rise	6 Ft Sea Level Rise	Dam Failure Inundation	Violent EQ Shaking	Extreme EQ Shaking	0.2% Annual Chance Flooding	1% Annual Chance Flooding	Deep Seated Landslide Class IX & X	Max Tsunami Inundation	Very High Wildfire LRA	High Wildfire SRA	Very High Wildfire SRA
William Steinmetz Park				1								
William Steinmetz Park				1								

Table C-9: Public Health Facility Hazard Impacts

Facility Name	3 Ft Sea Level Rise	6 Ft Sea Level Rise	Dam Failure Inundation	Violent EQ Shaking	Extreme EQ Shaking	0.2% Annual Chance Flooding	1% Annual Chance Flooding	Deep Seated Landslide Class IX & X	Max Tsunami Inundation	Very High Wildfire LRA	High Wildfire SRA	Very High Wildfire SRA
Antelope Valley Health Center				1								
Central Public Health Center				1								
Curtis R. Tucker Health Center				1								
Glendale Health Center				1								
Hollywood/Wilshire Public Health Center				1								
Martin Luther King, Jr. Center for Public Health				1								
Monrovia Public Health Center				1								
North Hollywood Public Health Center				1								
Pacoima Public Helath Center					1							
Pomona Public Health Center				1								
Ruth-Temple Public Health Center				1								
Simms/Mann Health and Wellness Center				1								
Torrance Public Helath Center				1								
Whittier Public Health Center				1								

Table C-10: Public Works Facility Hazard Impacts

Facility Name	3 Ft Sea Level Rise	6 Ft Sea Level Rise	Dam Failure Inundation	Violent EQ Shaking	Extreme EQ Shaking	0.2% Annual Chance Flooding	1% Annual Chance Flooding	Deep Seated Landslide Class IX & X	Max Tsunami Inundation	Very High Wildfire LRA	High Wildfire SRA	Very High Wildfire SRA
Brackett Field Airport				1								
Compton/Woodley Airport				1								
San Gabriel Valley Airport				1								
General Wm. J. Fox Airfield				1								
Whiteman Airport					1							
Big Dalton Dam								1		1		
Big Tujunga Dam				1				1				
Cogswell Dam				1				1				
Devil's Gate Dam				1						1		
Eaton Wash Dam				1								
Live Oak Dam				1								1
Morris Dam				1				1				1
Pacoima Dam								1				1
Puddingstone Dam				1								
Puddingstone Diversion Dam				1								
San Dimas Dam				1								1
San Gabriel Dam				1								
Santa Anita Dam				1				1				
Thompson Creek Dam				1						1		
PW ITD – Mount Wilson Radio Antenna Tower				1								
PW ITD – Mount Wilson Radio Facility Bldg.				1								
PW WWD - 37-1 Well				1								1
PW WWD - 37-3 Well				1								1

Table C-10: Public Works Facility Hazard Impacts

Facility Name	3 Ft Sea Level Rise	6 Ft Sea Level Rise	Dam Failure Inundation	Violent EQ Shaking	Extreme EQ Shaking	0.2% Annual Chance Flooding	1% Annual Chance Flooding	Deep Seated Landslide Class IX & X	Max Tsunami Inundation	Very High Wildfire LRA	High Wildfire SRA	Very High Wildfire SRA
PW WWD - 37-4 Well				1								1
PW Headquarters Building				1								
PW RMD – Div. #116 Maintenance Yard				1								
PW RMD – Div. #142 Maintenance Yard				1								
PW RMD – Div. #417 Maintenance Yard				1								
PW RMD – Baldwin Park Maintenance Yard				1								
PW RMD - Lower Central Yard – Division Administration				1								
PW RMD - Upper Central Yard				1								
PW RMD – Van Pelt Bridge Maintenance Yard				1								
PW SWMD – Imperial Yard				1		1						
PW SWMD – Longden Yard				1								
PW SWMD – Rio Hondo Yard				1								
PW SWMD – Riverview Maintenance Yard				1		1						
PW RMD – Div. #141/241 Maintenance Yard				1								

Table C-10: Public Works Facility Hazard Impacts

Facility Name	3 Ft Sea Level Rise	6 Ft Sea Level Rise	Dam Failure Inundation	Violent EQ Shaking	Extreme EQ Shaking	0.2% Annual Chance Flooding	1% Annual Chance Flooding	Deep Seated Landslide Class IX & X	Max Tsunami Inundation	Very High Wildfire LRA	High Wildfire SRA	Very High Wildfire SRA
PW RMD – Div. #232 Maintenance Yard				1								
PW RMD – Maint. District 3 Yard				1								
PW SWMD – 83rd St. Maintenance Yard				1								
PW RMD – Div. #336 Maint. Yd.				1						1		
PW RMD – Div. #339/539 Agoura Maintenance Yard				1								1
PW SWMD – Saticoy Yard				1			1					
PW WWD #29 - 20858 Regulating Station				1		1				1		
PW WWD #29 - Big Rock 900 Pump Station				1				1				1
PW WWD #29 - Big Rock 1010 Tank				1				1				1
PW WWD #29 - Big Rock 1200 Tank				1				1				1
PW WWD #29 - Broad Beach Regulating Station				1				1		1		
PW WWD #29 - Carbon Mesa Tank				1						1		
PW WWD #29 - Entrada Pump Station				1				1				1
PW WWD #29 - Entrada Tank				1				1				1

Table C-10: Public Works Facility Hazard Impacts

Facility Name	3 Ft Sea Level Rise	6 Ft Sea Level Rise	Dam Failure Inundation	Violent EQ Shaking	Extreme EQ Shaking	0.2% Annual Chance Flooding	1% Annual Chance Flooding	Deep Seated Landslide Class IX & X	Max Tsunami Inundation	Very High Wildfire LRA	High Wildfire SRA	Very High Wildfire SRA
PW WWD #29 - Fernwood Tank				1				1				1
PW WWD #29 - Guernsey Regulating Station				1						1		
PW WWD #29 - Heather Cliff Regulating Station				1						1		
PW WWD #29 - Horizon Tank				1						1		
PW WWD #29 - Hume Tank				1								1
PW WWD #29 - La Chusa Feeder Regulating Station				1						1		
PW WWD #29 - La Costa				1						1		
PW WWD #29 - La Costa Regulating Station				1				1		1		
PW WWD #29 - Las Flores Pump Station				1						1		
PW WWD #29 - Las Flores Tank				1						1		
PW WWD #29 - Latigo Tank				1				1				1
PW WWD #29 - Lower Big Rock 195 Pump Station				1				1		1		
PW WWD #29 - LVMWD, Hume Connection				1				1				1

Table C-10: Public Works Facility Hazard Impacts

Facility Name	3 Ft Sea Level Rise	6 Ft Sea Level Rise	Dam Failure Inundation	Violent EQ Shaking	Extreme EQ Shaking	0.2% Annual Chance Flooding	1% Annual Chance Flooding	Deep Seated Landslide Class IX & X	Max Tsunami Inundation	Very High Wildfire LRA	High Wildfire SRA	Very High Wildfire SRA
PW WWD #29 - LVMWD, Latigo Connection				1				1				1
PW WWD #29 - LVMWD , Saddle Peak Interconnection				1								1
PW WWD #29 - Lower Busch Pump Station				1						1		
PW WWD #29 - Malibu Beach Pump Station				1						1		
PW WWD #29 - Malibu Knolls Tank				1						1		
PW WWD #29 - New Summit Tank				1								1
PW WWD #29 - Nicholas Beach Tank				1				1		1		
PW WWD #29 - Old Summit Tank				1						1		
PW WWD #29 - Owen Pump Station				1								1
PW WWD #29 - Pepperdine 545 Pump Station				1						1		
PW WWD #29 - Pepperdine 812 Tank				1								1
PW WWD #29 - Pepperdine 907 Tank				1				1				1
PW WWD #29 - Philip Tank				1						1		

Table C-10: Public Works Facility Hazard Impacts

Facility Name	3 Ft Sea Level Rise	6 Ft Sea Level Rise	Dam Failure Inundation	Violent EQ Shaking	Extreme EQ Shaking	0.2% Annual Chance Flooding	1% Annual Chance Flooding	Deep Seated Landslide Class IX & X	Max Tsunami Inundation	Very High Wildfire LRA	High Wildfire SRA	Very High Wildfire SRA
PW WWD #29 - Point Dume Pump Station and Tank				1						1		
PW WWD #29 - Portshead Tank				1								
PW WWD #29 - Saddle Peak Tank				1				1				1
PW WWD #29 - Santa Maria Tank				1						1		
PW WWD #29 - Serra Pump Station				1						1		
PW WWD #29 - Sumac Ridge Tank				1						1		
PW WWD #29 - Sweetwater Hydro Pump Station				1						1		
PW WWD #29 - Sweetwater Mesa Tank				1				1		1		
PW WWD #29 - Topanga Beach Pump Station				1				1				1
PW WWD #29 - Topanga Beach Tank				1						1		
PW WWD #29 - Topanga Forks Tank				1				1				1
PW WWD #29 - Topanga Oaks Tank				1				1				1
PW WWD #29 - Topanga Park Pump Station				1								1

Table C-10: Public Works Facility Hazard Impacts

Facility Name	3 Ft Sea Level Rise	6 Ft Sea Level Rise	Dam Failure Inundation	Violent EQ Shaking	Extreme EQ Shaking	0.2% Annual Chance Flooding	1% Annual Chance Flooding	Deep Seated Landslide Class IX & X	Max Tsunami Inundation	Very High Wildfire LRA	High Wildfire SRA	Very High Wildfire SRA
PW WWD #29 - Trancas Tank				1						1		
PW WWD #29 - Upper Big Rock 730 Pump Station				1				1		1		
PW WWD #29 - Upper Encinal Tank				1				1		1		
PW WWD #29 - Winding Wy Tank				1				1				1
PW RMD - Div 446 Maintenance Yard				1		1						
PW RMD – Div. #446 Sub Maintenance Yard				1								
PW RMD – Maintenance District No.4 Yard				1		1						
PW SWMD – Alamitos Maintenance Yard				1		1						
PW SWMD – El Segundo Yard				1								
PW SWMD – Redondo Yard Office				1								
PW WWD #29 LADWP Emergency Via Dolce Connection				1		1			1			
PW WWD #29 – LADWP Emergency Mindanao Connection				1								
PW OSD - Eaton Yard – Maintenance Office				1				1				

Table C-10: Public Works Facility Hazard Impacts

Facility Name	3 Ft Sea Level Rise	6 Ft Sea Level Rise	Dam Failure Inundation	Violent EQ Shaking	Extreme EQ Shaking	0.2% Annual Chance Flooding	1% Annual Chance Flooding	Deep Seated Landslide Class IX & X	Max Tsunami Inundation	Very High Wildfire LRA	High Wildfire SRA	Very High Wildfire SRA
PW RMD – 518-B Maintenance Yard				1						1		
PW RMD – Div. #523 Maintenance Yard				1						1		
PW RMD – Div. #524 Maintenance Yard				1						1		
PW RMD – Div. #518 Maintenance Yard				1								
PW RMD – Div. #519 Maintenance Yard				1								
PW RMD – Div. #526 Maint. Yd.			1	1		1				1		
PW RMD – Div. #551 Maintenance Yard					1	1						
PW RMD – Div. #555 Maintenance Yard				1								
PW RMD – Div. #558 Maint. Yard					1							
PW RMD – Div. #558a Jackson Lake Maintenance Yd.					1							
PW RMD – Div. #559b Maintenance Yard				1								
PW RMD – Palmdale Maintenance Dist. No. 5 Bldg. Yard					1	1						
PW SWMD – Eaton Maintenance Yard				1								
PW SWMD – Pickens Yard				1						1		

Table C-10: Public Works Facility Hazard Impacts

Facility Name	3 Ft Sea Level Rise	6 Ft Sea Level Rise	Dam Failure Inundation	Violent EQ Shaking	Extreme EQ Shaking	0.2% Annual Chance Flooding	1% Annual Chance Flooding	Deep Seated Landslide Class IX & X	Max Tsunami Inundation	Very High Wildfire LRA	High Wildfire SRA	Very High Wildfire SRA
PW SWMD – Rubio Yard				1						1		
PW SWMD – Santa Clara Flood Maintenance Yard				1						1		
PW WWD #04 – North Administration Building				1		1						
PW SWMD – San Dimas Maintenance Yard				1								
PW SMD - Balfour				1		1						
PW SMD - Bradhurst				1		1						
PW SMD - Broadway				1								
PW SMD - Muscatel				1								
PW SMD - Painter				1								
PW SMD - Surrey Drive				1				1		1		
PW SMD - 132ND STREET				1								
PW SMD - Centinela				1								
PW SMD - Davids Road				1						1		
PW SMD - Ulmus				1				1		1		
PW SMD - Viewridge				1				1		1		
PW SMD - 213TH STREET				1								
PW SMD - AGAVE				1								
PW SMD - HEATHERFIELD				1				1		1		
PW SMD - MAYBROOK				1								

Table C-10: Public Works Facility Hazard Impacts

Facility Name	3 Ft Sea Level Rise	6 Ft Sea Level Rise	Dam Failure Inundation	Violent EQ Shaking	Extreme EQ Shaking	0.2% Annual Chance Flooding	1% Annual Chance Flooding	Deep Seated Landslide Class IX & X	Max Tsunami Inundation	Very High Wildfire LRA	High Wildfire SRA	Very High Wildfire SRA
PW WWD - 116th street pump station					1							
PW WWD - P-10 Pump station					1							
PW WWD - Tierra Subida Pump Station				1								
PW SMD - CAPALLERO				1								1
PW SMD - COMMERCE CENTER DRIVE				1				1				
PW SMD - LAKE HUGHES - NEWVALE					1							1
PW SMD - LAKE HUGHES - TRAIL K					1							1
PW SMD - LOWRIDGE				1						1		
PW SMD - MARINA DEL REY				1					1			
PW SMD - TYLER				1								
PW WWD - Crown Valley Pump station				1								1
PW WWD - Hasley Pump Station				1								1
PW SWMD - 120th St. Pump Station				1								
PW SWMD - Alameda Street 3B Pump Station				1		1						
PW SWMD - Alameda Street 3C Pump Station				1		1						

Table C-10: Public Works Facility Hazard Impacts

Facility Name	3 Ft Sea Level Rise	6 Ft Sea Level Rise	Dam Failure Inundation	Violent EQ Shaking	Extreme EQ Shaking	0.2% Annual Chance Flooding	1% Annual Chance Flooding	Deep Seated Landslide Class IX & X	Max Tsunami Inundation	Very High Wildfire LRA	High Wildfire SRA	Very High Wildfire SRA
PW SWMD - Avalon Pump Station				1		1						
PW SWMD - Compton Creek Pump Station #1				1		1						
PW SWMD - Compton Creek Pump Station #2				1		1						
PW SWMD - Dominger Pump Station				1		1						
PW SWMD - Lennox Blvd Pump Station				1								
PW SWMD - Oxford Pump Station				1					1			
PW SWMD - Redondo Beach Blvd Pump Station				1								
PW SWMD - Boone Olive Pump Station				1		1			1			
PW SWMD - Electric Ave Pump Station				1								
PW SWMD - 17th St Pump Station				1								
PW SWMD - Alamitos Bay Pump Station		1		1					1			
PW SWMD - Alondra Pump Station				1		1						
PW SWMD - Anaheim St. Pump Station		1		1		1			1			

Table C-10: Public Works Facility Hazard Impacts

Facility Name	3 Ft Sea Level Rise	6 Ft Sea Level Rise	Dam Failure Inundation	Violent EQ Shaking	Extreme EQ Shaking	0.2% Annual Chance Flooding	1% Annual Chance Flooding	Deep Seated Landslide Class IX & X	Max Tsunami Inundation	Very High Wildfire LRA	High Wildfire SRA	Very High Wildfire SRA
PW SWMD - Appian Way Pump Station		1		1		1			1			
PW SWMD - Arena Pump Station				1								
PW SWMD - Belmont Pump Station	1	1		1					1			
PW SWMD - Century Frwy Pump Station				1		1						
PW SWMD - Cerritos Pump Station				1		1						
PW SWMD - Claretta Pump Station				1		1						
PW SWMD - Cordova Walk Pump Station									1			
PW SWMD - Dominguez Pump Station				1		1						
PW SWMD - Doris Pump Station				1								
PW SWMD - East Toledo Pump Station									1			
PW SWMD - El Dorado Pump Station				1		1						
PW SWMD - El Segundo Pump Station				1								
PW SWMD - Garnet Avenue Pump Station				1		1						
PW SWMD - Hamilton Bowl South Pump Station				1		1						
PW SWMD - Hamilton Bowl West				1		1						

Table C-10: Public Works Facility Hazard Impacts

Facility Name	3 Ft Sea Level Rise	6 Ft Sea Level Rise	Dam Failure Inundation	Violent EQ Shaking	Extreme EQ Shaking	0.2% Annual Chance Flooding	1% Annual Chance Flooding	Deep Seated Landslide Class IX & X	Max Tsunami Inundation	Very High Wildfire LRA	High Wildfire SRA	Very High Wildfire SRA
Pump Station												
PW SWMD - Hill St. Pump Station				1		1						
PW SWMD - Johnson Pump Station				1								
PW SWMD - Lakewood Pump Station				1		1						
PW SWMD - Los Altos Pump Station				1								
PW SWMD - Lynwood Pump Station				1		1						
PW SWMD - Manhattan Beach Pump Station				1								
PW SWMD - Market St. Pump Station				1		1						
PW SWMD - Naples Pump Station									1			
PW SWMD - Paramount Pump Station				1		1						
PW SWMD - Seaside Pump Station				1		1			1			
PW SWMD - Walteria Lake Pump Station				1								
PW SWMD - West Long Beach Pump Station	1	1		1					1			
PW SWMD - West Neapolitan Pump Station	1	1		1					1			

Table C-10: Public Works Facility Hazard Impacts

Facility Name	3 Ft Sea Level Rise	6 Ft Sea Level Rise	Dam Failure Inundation	Violent EQ Shaking	Extreme EQ Shaking	0.2% Annual Chance Flooding	1% Annual Chance Flooding	Deep Seated Landslide Class IX & X	Max Tsunami Inundation	Very High Wildfire LRA	High Wildfire SRA	Very High Wildfire SRA
PW SWMD - West Toledo Pump Station									1			
PW SWMD - Wilmington Unit 2 Pump Station				1								
PW SMD – Malibu Mesa WWTP				1						1		
PW SMD – Malibu TP				1						1		
PW SMD - Trancas WWTP				1		1				1		
PW SMD – LAKE HUGHES					1							
PW WWD - 27 Tank					1						1	
PW WWD - 39 Tank					1						1	
PW WWD - 116th street Tank				1							1	
PW WWD - Adobe Tank												
PW WWD - Blue Rock Tank				1								
PW WWD - Butte's Tank												
PW WWD - City Ranch Tanks					1							
PW WWD - Ft. Tejon Tank					1						1	
PW WWD - Joshua Ranch Tank				1						1		
PW WWD - Kohl's tank					1	1						
PW WWD - M & 7th west Tank site					1							

Table C-10: Public Works Facility Hazard Impacts

Facility Name	3 Ft Sea Level Rise	6 Ft Sea Level Rise	Dam Failure Inundation	Violent EQ Shaking	Extreme EQ Shaking	0.2% Annual Chance Flooding	1% Annual Chance Flooding	Deep Seated Landslide Class IX & X	Max Tsunami Inundation	Very High Wildfire LRA	High Wildfire SRA	Very High Wildfire SRA
PW WWD - Q-9 Tanks					1							
PW WWD - Rancho Vista tanks				1				1		1		
PW WWD - Tierra Subida Tanks				1								
PW WWD #04 – M/5e Water Tank					1							
PW WWD #04-M8/75w Water Tank					1							
PW WWD - Cuyama Tank				1				1				1
PW WWD - Hasley Tank				1								1
PW WWD - North Tank				1								1
PW WWD - McCennery Tank					1			1				1
PW WWD - South Tank				1								1
PW WWD - 168th and G Pump station				1								
PW WWD - Anaverde Tanks and pump station				1						1		
PW WWD - Old timers tank and pump station				1								
PW WWD - Los Valles Pump station and Well				1								1
PW WWD - Vincent Pump station					1							1

Table C-10: Public Works Facility Hazard Impacts

Facility Name	3 Ft Sea Level Rise	6 Ft Sea Level Rise	Dam Failure Inundation	Violent EQ Shaking	Extreme EQ Shaking	0.2% Annual Chance Flooding	1% Annual Chance Flooding	Deep Seated Landslide Class IX & X	Max Tsunami Inundation	Very High Wildfire LRA	High Wildfire SRA	Very High Wildfire SRA
PW WWD - Bev martin tank and Pump Station				1		1						
PW SMD – East Yard				1								
PW SMD - Lawndale				1								
PW SMD – South Yard				1								
PW SMD – Central Yard				1								
PW SMD – North Yard				1		1						

Table C-11: Sheriff's Department Facility Hazard Impacts

Facility Name	3 Ft Sea Level Rise	6 Ft Sea Level Rise	Dam Failure Inundation	Violent EQ Shaking	Extreme EQ Shaking	0.2% Annual Chance Flooding	1% Annual Chance Flooding	Deep Seated Landslide Class IX & X	Max Tsunami Inundation	Very High Wildfire LRA	High Wildfire SRA	Very High Wildfire SRA
Altadena Sheriff's Station				1								
Avalon Sheriff's Station										1		
Carson Sheriff's Station				1		1						
Century Regional Detention Facility				1								
Century Sheriff's Station				1								
Cerritos Sheriff's Station				1								
Compton Sheriff's Station				1		1						
Crescenta Valley Sheriff's Station				1						1		
East Los Angeles Sheriff's Station				1								
Industry Sheriff's Station				1								
Inmate Reception Center				1								
Lakewood Sheriff's Station				1		1						
Lancaster Sheriff's Station				1		1						
Lomita Sheriff's Station				1								
Malibu/Lost Hills Sheriff's Station				1						1		
Marina Del Rey Sheriff's Station				1					1			
Men's Central Jail				1								
North County Correctional Facility			1	1							1	
Norwalk Sheriff's Station				1								
Palmdale Sheriff's Station					1							
Pico Rivera Sheriff's Station				1		1						
Pitchess Detention Center East Facility				1				1				1

Table C-11: Sheriff's Department Facility Hazard Impacts

Facility Name	3 Ft Sea Level Rise	6 Ft Sea Level Rise	Dam Failure Inundation	Violent EQ Shaking	Extreme EQ Shaking	0.2% Annual Chance Flooding	1% Annual Chance Flooding	Deep Seated Landslide Class IX & X	Max Tsunami Inundation	Very High Wildfire LRA	High Wildfire SRA	Very High Wildfire SRA
Pitchess Detention Center North Facility			1	1								1
Pitchess Detention Center South Facility			1	1								1
San Dimas Sheriff's Station				1								
Santa Clarita Valley Sheriff's Station					1							
South Los Angeles Sheriff's Station				1								
Temple Sheriff's Station				1								
Twin Towers Correctional Facility				1								
Walnut/Diamond Bar Sheriff's Station				1								
West Hollywood Sheriff's Station				1								


SUBURBAN WATER SYSTEMS